Safety data sheets

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Cupboards

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Cabinet 1 — 21 sheet(s)

2Work Pine Disinfectant — Warning [Irritant] p. 5

Gloves: yes (Wear protective gloves.) · Eye protection

Bartoline Clean Spirit — — p. 13

Gloves: yes · Eye protection · Respirator

Groove Air Duster — Danger [Flammable] p. 25

Gloves: yes · Eye protection

Harlequin Vinyl Heavy Duty Cleaner — Warning [Irritant] p. 35

Gloves: yes · Respirator

Helium Canister — Warning [Pressurised gas] p. 46

Gloves: yes · Respirator · CAS 7440-59-7

Hexeal Isopropyl Alcohol — Danger [Flammable, Irritant] p. 59

Gloves: yes · Eye protection · Respirator · CAS 67-63-0

ICO 16g threaded CO2 Cartridges — — [Pressurised gas] p. 68

Gloves: not stated · Respirator · CAS 124-38-9

MB Fibreglass Acetone — Danger [Flammable, Irritant] p. 73

Gloves: yes · Eye protection · Respirator · CAS 67-64-1

Power-R-Wash — Warning [Irritant] p. 176

Gloves: yes · Eye protection · Respirator

Pro-Power Air Duster — Danger [Flammable] p. 191

Gloves: yes · Eye protection · Respirator · CAS 68476-85-7

Pro-Power Butane Gas — — [Irritant, Flammable, Pressurised gas] p. 202

Gloves: not stated · CAS 68512-91-4

Pro-Power Glass Cleaner — Danger [Flammable, Irritant] p. 203

Gloves: yes · Eye protection · Respirator

Ronsonol Lighter Fluid p. 219

Danger [Flammable, Irritant, Health hazard, Environment]

Gloves: yes · Eye protection · Respirator · CAS 64742-49-0

Rosco Lens Cleaner — — [Flammable, Irritant] p. 230

Gloves: yes (Chemical Resistant gloves) · Eye protection · Respirator · CAS 64-17-5

RS Pro Isopropyl Alcohol Cleaner — Danger [Flammable, Irritant] p. 238

Gloves: yes · Eye protection · Respirator · CAS 67-63-0

Stage Step Slip Nomor — — p. 248

Gloves: not stated

Strongarm Hard Surface Cleaner — Danger [Corrosive] p. 251

Gloves: yes · Eye protection

Swan Gas Lighter Refill — Danger [Flammable, Pressurised gas] p. 262

Gloves: yes · Eye protection · Respirator · CAS 106-97-8

UVEX Cleaner — — [Flammable] p. 278

Gloves: yes · Eye protection · Respirator

WD40 — Danger [Flammable, Irritant, Health hazard] p. 293

Gloves: yes · Eye protection · Respirator

Zippo Lighter Fluid p. 309

Danger [Flammable, Irritant, Health hazard, Environment]

Gloves: yes · Respirator

Cabinet 2 — 16 sheet(s)

Carr & Day & Martin TLD Suede & Nubuck Cleaner p. 326

— [Irritant, Corrosive]

Gloves: yes · Eye protection · Respirator

Dirty Down Spray Paint - Black — Danger [Flammable, Irritant] p. 332

Gloves: yes · Eye protection · Respirator

Dirty Down Spray Paint - Dark Brown — Danger [Flammable, Irritant] p. 345

Gloves: yes · Eye protection · Respirator

Dirty Down Spray Paint - Khaki — Danger [Flammable, Irritant] p. 358

Gloves: yes · Eye protection · Respirator

Dirty Down Spray Paint - Nicotine Yellow p. 371

Danger [Flammable, Irritant]

Gloves: yes · Eye protection · Respirator

Dirty Down Spray Paint - Rust — Danger [Flammable, Irritant] p. 384

Gloves: yes · Eye protection · Respirator

Dr. Scholls Shoe Spray — Danger [Flammable, Irritant] p. 397

Gloves: not stated · Respirator

Flambar — — p. 412

Gloves: yes · Respirator

Flints Blaza Block — Warning [Irritant] p. 422

Gloves: yes · Eye protection · Respirator

Kryolan Fixer Spray — Danger [Flammable, Irritant] p. 429

Gloves: yes · Eye protection · Respirator

Mastix Spirit Gum — Danger [Flammable, Irritant] p. 438

Gloves: yes · Eye protection · Respirator

MME Spirit Gum Remover — Danger [Flammable, Irritant] p. 446

Gloves: yes · Eye protection · Respirator · CAS 67-63-0

MSL Fire Check — — p. 454

Gloves: yes · Eye protection · Respirator

No Nonsense Brush Cleaner p. 459

Danger [Flammable, Irritant, Health hazard]

Gloves: yes · Eye protection · Respirator

Tensospray — — [Flammable, Pressurised gas] p. 477

Gloves: yes · Eye protection · Respirator

Wella Silvikrin Maximum Hold Hairspray — Danger [Flammable, Irritant] p. 483

Gloves: yes · Eye protection · Respirator · CAS 64-17-5

Cabinet 3 — 15 sheet(s)

Beamz Super Density Smoke — — p. 491

Gloves: yes · Eye protection · Respirator

Chalk Bottle — — [Irritant] p. 497

Gloves: not stated · Eye protection · Respirator · CAS 1317-65-3

Chauvet Bubble — Warning [Irritant] p. 507

Gloves: not stated

Chauvet High Performance Haze — — p. 515

Gloves: yes (Protective gloves) · Respirator · CAS 112-27-6

Chauvet Low Fog — — p. 521

Gloves: yes · Respirator

DI Water — — p. 527

Gloves: not stated · CAS 7732-18-5

Hexeal Vegetable Glycerin — — p. 536

Gloves: yes (Protective gloves) · Eye protection · Respirator · CAS 56-81-5

Le Mark Pal Cleaner with Pump Spray Applicator — — p. 544

Gloves: yes · Eye protection · Respirator · CAS 34590-94-8

Martin C-Plus Haze Fluid — — p. 551

Gloves: not stated · Eye protection · Respirator

Martin Gem Low Fog — — p. 561

Gloves: not stated · Eye protection · Respirator

Martin Pro Smoke Super — — p. 571

Gloves: not stated · Eye protection · Respirator

QTX Bubble Fluid — Danger [Corrosive] p. 581

Gloves: yes · Eye protection · Respirator

QTX Fog Fluid — — p. 588

Gloves: yes (Wear PVC coated or rubber gloves) · Eye protection · Respirator

Unique Haze Fluid — — p. 593

Gloves: not stated

Unique Tiny Fluid Haze — — p. 599

Gloves: not stated

Pyro Cabinet — 7 sheet(s)

Flash Paper — Danger [Irritant, Flammable] p. 605

Gloves: not stated · Respirator · CAS 9004-70-0

Robotic Medium — Warning [Explosive] p. 610

Gloves: not stated · Eye protection · Respirator

Robotic Small — Warning [Explosive] p. 615

Gloves: not stated · Eye protection · Respirator

Silver Jet Reduced Height — Warning [Explosive] p. 620

Gloves: not stated · Eye protection

Smoke Puff Pyropot — Warning [Explosive] p. 625

Gloves: not stated · Eye protection · Respirator

Theatrical Flash Medium — Warning [Explosive] p. 630

Gloves: not stated · Eye protection · Respirator

Theatrical Flash Small — Warning [Explosive] p. 635

Gloves: not stated · Eye protection · Respirator

No location recorded — 1 sheet(s)

Nitric Acid — Danger [Oxidising, Corrosive, Acute toxicity] p. 640

Gloves: yes · Eye protection · Respirator · CAS 7697-37-2

2WORK PINE DISINFECTANT

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date first issue: 01/08/2008 Review date: 18/11/2020 Supersedes: 01/12/2017 Version: 5.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name : 2WORK PINE DISINFECTANT

Product code : 2W03986

Type of product : Detergent

Product group : Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only

Use of the substance/mixture : Cleaner
Disinfectant

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

VOW EUROPE LTD
1ST FLOOR
1 EUROPA DRIVE
SHEFFIELD, S9 1XT
T: 0844 980 8000
WWW.VOWEUROPE.COM

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Eye Irrit. 2 H319

Aquatic Chronic 3 H412

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

CLP Signal word : Warning

Hazard statements (CLP) : H319 - Causes serious eye irritation.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP) : P102 - Keep out of reach of children.
P264 - Wash hands thoroughly after handling.
P280 - Wear eye protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.

EUH-statements : EUH208 - Contains Pine Oil. May produce an allergic reaction.

2.3. Other hazards
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients
3.1. Substances
Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Isotridecanol, ethoxylated	(CAS-no) 69011-36-5 (Einecs nr) 931-138-8 (EG annex nr) / (REACH-no) Exempted	1 – 3	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides	(CAS-no) 68424-85-1 (Einecs nr) 270-325-2	0.875	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410
Pine Oil	(CAS-no) 8002-09-3 (REACH-no) 01-2119553062-49	0.1 – 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Full text of H-statements: see section 16

SECTION 4: First aid measures
4.1. Description of first aid measures
General advice : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation : Allow affected person to breathe fresh air. Allow the victim to rest.

Skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

Eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get immediate medical advice/attention.

Ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed
Acute effects skin : mild skin irritation.

Acute effects eyes : Causes serious eye irritation. Redness.

Acute effects oral route : May cause irritation to the digestive tract.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures
5.1. Extinguishing media
Suitable extinguishing media : Water.

5.2. Special hazards arising from the substance or mixture
Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon dioxide. Carbon monoxide.

5.3. Advice for firefighters
Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.

Hygiene measures : Wash hands, forearms and face thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions : Keep container tightly closed.

Packaging materials : polyethylene.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
No additional information available

8.2. Exposure controls
Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:
Wear protective gloves.

Eye protection:
Chemical goggles or safety glasses

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties
9.1. Information on basic physical and chemical properties
Physical state : Liquid

Physical state/form : Liquid.

Colour : Green.

Odour : Pine. Fresh.

Odour threshold : No data available

pH : 6 – 8

Relative evaporation rate (butylacetate=1) : No data available

Melting point/range : 0 °C

Freezing point : No data available

Boiling point/Boiling range : 100 °C

Flash point : No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : Non flammable.

Vapour pressure : No data available

Relative vapour density at 20 °C : No data available

Relative density : 1

Solubility : Soluble in water.

Log Pow : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : No data available

9.2. Other information
VOC content : 7 g/l

SECTION 10: Stability and reactivity
10.1. Reactivity
No additional information available
10.2. Chemical stability
Stable under normal conditions.
10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.
10.4. Conditions to avoid
No additional information available
10.5. Incompatible materials
No additional information available
10.6. Hazardous decomposition products
fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information
11.1. Information on toxicological effects
Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Isotridecanol, ethoxylated (69011-36-5)	
LD50 oral rat	> 300 (≤ 2000) mg/kg
LD50 dermal rabbit	> 2000 mg/kg
ATE CLP (oral)	500 mg/kg

Pine Oil (8002-09-3)	
LD50 oral rat	> 3200 mg/kg
LD50 dermal rabbit	> 5000 mg/kg

Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides (68424-85-1)	
LD50 oral rat	795 mg/kg
ATE CLP (oral)	795 mg/kg bodyweight

Skin corrosion/irritation : Not classified
pH: 6 – 8
Additional information : Based on available data, the classification criteria are not met
Serious eye damage/irritation : Causes serious eye irritation.
pH: 6 – 8
Respiratory or skin sensitisation : Not classified
Additional information : Based on available data, the classification criteria are not met
Germ cell mutagenicity : Not classified
Additional information : Based on available data, the classification criteria are not met
Carcinogenicity : Not classified
Additional information : Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified
Additional information : Based on available data, the classification criteria are not met

STOT-single exposure : Not classified
Additional information : Based on available data, the classification criteria are not met

Isotridecanol, ethoxylated (69011-36-5)	
NOAEL (oral, rat)	> 250 mg/kg bodyweight

STOT-repeated exposure : Not classified
Additional information : Based on available data, the classification criteria are not met

Aspiration hazard : Not classified
Additional information : Based on available data, the classification criteria are not met

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.

Isotridecanol, ethoxylated (69011-36-5)	
LC50 fish 1	> 1 mg/l
EC50 Daphnia 1	> 1 mg/l
ErC50 (algae)	1 – 10 mg/l

Pine Oil (8002-09-3)	
LC50 fish 1	68 – 80 mg/l
EC50 Daphnia 1	73 mg/l
EC50 72h algae (1)	68 mg/l

Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides (68424-85-1)	
LC50 fish 1	0.85 mg/l
EC50 Daphnia 1	0.016 mg/l
EC50 72h algae (1)	0.02 mg/l
NOEC chronic crustacea	0.025 mg/l

12.2. Persistence and degradability

FRESH MOUNTAIN PINE	
Persistence and degradability	The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Isotridecanol, ethoxylated (69011-36-5)	
Persistence and degradability	Readily biodegradable, according to appropriate OECD test. Not established.

Pine Oil (8002-09-3)	
Persistence and degradability	May cause long-term adverse effects in the environment.

Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides (68424-85-1)	
Persistence and degradability	Biodegradable.
Biodegradation	> 90 %

12.3. Bioaccumulative potential

FRESH MOUNTAIN PINE	
Bioaccumulative potential	No bioaccumulation.

Isotridecanol, ethoxylated (69011-36-5)	
Bioaccumulative potential	No bioaccumulation. Not established.

Pine Oil (8002-09-3)	
Bioaccumulative potential	Not established.

Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides (68424-85-1)	
Partition coefficient n-octanol/water (Log Kow)	2.88
Bioaccumulative potential	No bioaccumulation.

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment

FRESH MOUNTAIN PINE
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component	
Isotridecanol, ethoxylated (69011-36-5)	PBT: not relevant – no registration required vPvB: not relevant – no registration required
Pine Oil (8002-09-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides (68424-85-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects
Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Waste / unused products : Avoid release to the environment.

SECTION 14: Transport information
In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA
14.1. UN number		
Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name		
Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)		
Not regulated	Not regulated	Not regulated
14.4. Packing group		
Not regulated	Not regulated	Not regulated
14.5. Environmental hazards		
Not regulated	Not regulated	Not regulated
No supplementary information available		

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.
Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

VOC content : 7 g/l

Allergenic fragrances > 0,01%:
D-LIMONENE

Detergent Regulation (648/2004/EC): Labelling of contents:	
Component	**%**
non-ionic surfactants	<5%
disinfectants	

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Skin Sens. 1	Skin sensitisation, Category 1
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains Pine Oil. May produce an allergic reaction.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Eye Irrit. 2	H319	Calculation method
Aquatic Chronic 3	H412	Calculation method

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Bartoline Clean Spirit

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by UK REACH Regulations SI 2019/758
Issue date: 23/06/2023 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Bartoline Clean Spirit

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Cleaning agent

1.2.2. Uses advised against

Restrictions on use : Not to be used for cleaning skin as this may lead to skin disorders. Not to be used for thinning oil based paints. Reason: product is water based and will not work.

1.3. Details of the supplier of the safety data sheet

GB Supplier
Bartoline Limited
Barmston Close
HU17 0LW Beverley
United Kingdom
T 01482 678710 - F 01482 872606
infor@bartoline.co.uk - www.bartoline.co.uk

1.4. Emergency telephone number

Emergency number : +44(0)1482 678710
8.30am - 4.45pm Monday to Friday
NHS 111 - General Public (24 Hour service)

Also, in the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Precautionary statements (CLP) : P101 – If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 – Read carefully and follow all instructions.
EUH-statements : EUH210: Safety data sheet available on request.
Extra labelling phrases : Contains less than 5%: non-Ionic surfactants.
EU/VOC content limit for this product (Cat B/a) is 850g/L. This product contains max. 70 g/L VOC.
To avoid spillage risk, always ensure the cap is secure and container is upright during transportation & storage.

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
(2-methoxymethylethoxy)propanol ((substance with a UK and EU Community workplace exposure limit)	CAS-No.: 34590-94-8 EC-No.: 252-104-2 EU REACH Registration No.: 01-2119450011-60-XXXX	5 - 10	Not classified
Sodium hydroxide (substance with a UK workplace exposure limit)	CAS-No.: 1310-73-2 EC-No.: 215-185-5 Index-No.: 011-002-00-6 EU REACH Registration No.: 01-2119457892-27-XXXX	< 0.1	Met. Corr. 1 - H290 Skin Corr. 1A - H314

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Sodium hydroxide	CAS-No.: 1310-73-2 EC-No.: 215-185-5 Index-No.: 011-002-00-6 EU REACH Registration No.: 01-2119457892-27-XXXX	(0.5 ≤C < 2) Eye Irrit. 2, H319 (5 ≤C ≤ 100) Skin Corr. 1A, H314 (2 ≤C < 5) Skin Corr. 1B, H314 (0.5 ≤C < 2) Skin Irrit. 2, H315

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell. Non hazardous mixture.

First-aid measures after inhalation : Inhalation unlikely. Get medical advice/attention. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should give oxygen.

First-aid measures after skin contact : Take off contaminated clothing. Gently wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Remove any contact lenses and open eyelids wide apart. Rinse opened eye for several minutes under running water. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth out with water. If the person is fully conscious, make him/her drink plenty of water. Never give an unconscious person anything to drink. Do not induce vomiting. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation : None under normal use.

Symptoms/effects after skin contact	:	None under normal conditions. Prolonged or repeated contact may dry skin and cause irritation.
Symptoms/effects after eye contact	:	May cause slight irritation, redness, itching and tears.
Symptoms/effects after ingestion	:	May cause irritation to the digestive tract.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Water spray, foam, dry powder. The product is non-combustible. Use extinguishing agent suitable for surrounding fire.
Unsuitable extinguishing media	:	None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	Control run-off water by containing and keeping it out of sewers and watercourses.
Explosion hazard	:	None known.
Hazardous decomposition products in case of fire	:	Toxic fumes may be released.

5.3. Advice for firefighters

Precautionary measures fire	:	Avoid breathing (dust, vapor, mist, gas).
Firefighting instructions	:	Cool laterally with water containers exposed to flames, even after the fire is extinguished.
Protection during firefighting	:	Wear fire/flame resistant/retardant clothing. In confined space use self-contained breathing apparatus. Full face piece respirator.
Other information	:	Keep run-off water out of sewers and water sources. Containers close to fire should be removed or cooled with water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	:	See section 8 of the SDS for more information on personal protective equipment.
General Procedures	:	Clean up any spills as soon as possible, using an absorbent material to collect it. Stop leak if safe to do so.

6.1.2. For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	For further information refer to section 8: "Exposure controls/personal protection". More detailed information: See section 11. For disposal of residues refer to section 13 : Disposal considerations" ".

6.2. Environmental precautions

Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. Turn leaking containers leak-side up to prevent the escape of liquid.

6.3. Methods and material for containment and cleaning up

For containment	:	Turn leaking containers leak-side up to prevent the escape of liquid.
Methods for cleaning up	:	Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Wash contaminated area with large amounts of water.
Other information	:	See Section 13 for disposal information.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Read label before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid contact with skin and eyes.

Hygiene measures : Do not eat, drink or smoke when using this product. Take off immediately all contaminated clothing and wash it before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep cool. Keep only in original container. Protect from freezing. Keep out of direct sunlight.

Storage temperature : 5 – 30 °C

Special rules on packaging : Keep only in original container.

7.3. Specific end use(s)

Section 1.3

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

(2-methoxymethylethoxy)propanol (34590-94-8)		
EU - Indicative Occupational Exposure Limit (IOEL)		
IOEL 8h TWA	50 ppm, 308 mg/m³	(Commission Directive 2000/39/EC)
Repblic of Ireland – Occupational Exposure Limit (OEL)		
OEL 8h	50 ppm, 308 mg/m³	(Chemical Agents Code of Practice 2020)
United Kingdom – Occupational Exposure Limit (OEL)		
OEL 8h TWA	50 ppm, 308 mg/m³	(EH40/2005)
France – Occupational Exposure Limit (OEL)		
OEL 8h	50 ppm, 308 mg/m³	(INRS ED 984 octobre 2016)

Sodium hydroxide (1310-73-2)		
Repblic of Ireland – Occupational Exposure Limit (OEL)		
OEL STEL (15 min)	2 mg/m³	(Chemical Agents Code of Practice 2020)
United Kingdom – Occupational Exposure Limit (OEL)		
OEL STEL (15 min)	2 mg/m³ (can be absorbed through the skin)	(EH40/2005)

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

(2-methoxymethylethoxy)propanol (34590-94-8)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	283 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	308 mg/kg
DNEL/DMEL (General population)	
Long-term - systemic effects, dermal	1.75 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	37.2 mg/m³
Long-term - systemic effects, oral	36 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	19 mg/l
PNEC aqua (marine water)	1.9 mg/l
PNEC aqua (intermittent, freshwater)	190 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	70.2 mg/kg dw
PNEC sediment (marine water)	7.02 m/kg dw
PNEC (Soil)	
PNEC soil	2.74 mg/kg dw
PNEC (STP)	
PNEC sewage treatment plant	4168 mg/l

Sodium hydroxide (1310-73-2)	
DNEL/DMEL (Workers)	
Short-term - local effects, dermal	2 mg/kg bodyweight/day
Short-term - local effects, inhalation	2 mg/m³
Long-term - local effects, inhalation	1 mg/m³
Short-term - systemic effects, inhalation	9.6 mg/m³
Long-term - systemic effects, inhalation	3.2 mg/m³
DNEL/DMEL (General population)	
Short-term - systemic effects, inhalation	2.4 mg/m³
Short-term – systemic effects, oral	0.9 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0.8 mg/m³
Long-term – systemic effects, oral	0.3 mg/kg bodyweight/day
Long-term - local effects, inhalation	1 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	930 µg/l
PNEC aqua (marine water)	93 µg/l
PNEC aqua (intermittent, freshwater)	800 µg/l

Sodium hydroxide (1310-73-2)	
PNEC (STP)	
PNEC sewage treatment plant	270 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
General ventilation.

8.2.2. Personal protection equipment

Personal protective equipment:
Do not attempt to take action without suitable protective equipment. Appropriate engineering controls.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses

Eye protection			
Type	**Field of application**	**Characteristics**	**Standard**
Use splash goggles when eye contact due to splashing is possible	Droplet	With side shields	EN 166

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to EN374 and provide employee skin care programmes. Although the product is not classified as a skin irritant, the wearing of gloves (tested to EN374) is recommended for people with sensitive skin or for prolonged or repeated use. Wear protective gloves made of the following material: Butyl rubber. Nitrile rubber. Polyvinyl chloride (PVC). Rubber(natural, latex).

Other skin protection

Materials for protective clothing:
Not required for normal conditions of use

8.2.2.3. Respiratory protection

Respiratory protection:
No respiratory protection needed under normal use conditions

8.2.2.4. Thermal hazards

Thermal hazard protection:
Not applicable.

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment. Keep container closed when not in use.

Other information:

Always wash hands after handling the product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Clear
Appearance	:	Clear liquid.
Odour	:	Slight Detergent
Odour threshold	:	Not available
Melting point	:	Not applicable.
Freezing point	:	Not available
Boiling point	:	100 °C (water)
Flammability	:	Not available
Explosive properties	:	This product is not considered explosive based on chemical structure considerations.
Oxidising properties	:	This product is not considered oxidising based on chemical structure considerations.
Explosive limits	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable.
Decomposition temperature	:	Not available.
pH	:	10.5 – 11.0
Viscosity, kinematic	:	Not available
Viscosity, dynamic	:	Not available
Solubility	:	soluble in water.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not applicable.
Vapour pressure at 50 °C	:	Not available
Density	:	1.010 g/cm^3
Relative density	:	Not available
Relative vapour density at 20 °C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

VOC content	:	70 g/L
Volatility	:	Water based.

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

High temperature. Direct sunlight. Freezing.

10.5. Incompatible materials

No dangerous reactions known under normal conditions of use.

10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature. In case of fire, irritating fumes come free.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Based on available data, the classification criteria are not met.
Acute toxicity (dermal) : Based on available data, the classification criteria are not met.
Acute toxicity (inhalation) : Based on available data, the classification criteria are not met.

(2-methoxymethylethoxy)propanol (34590-94-8)	
LD50 oral	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal	9510 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 inhalation (vapour)	> 275 ppm Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation : Based on available data, the classification criteria are not met..
pH: 10.5 - 11

Sodium hydroxide (1310-73-2)
Causes severe skin burns and eye damage (from Part 3 of Annex VI from CLP)

Serious eye damage/irritation : Based on available data, the classification criteria are not met.
pH: 10.5 – 11

Sodium hydroxide (1310-73-2)
Causes severe skin burns and eye damage (from Part 3 of Annex VI from CLP)

Respiratory or skin sensitisation : Based on available data, the classification criteria are not met.
Germ cell mutagenicity : Based on available data, the classification criteria are not met.
Carcinogenicity : Based on available data, the classification criteria are not met.
Reproductive toxicity : Based on available data, the classification criteria are not met.
STOT-single exposure : Based on available data, the classification criteria are not met.
STOT-repeated exposure : Based on available data, the classification criteria are not met.
Aspiration hazard : Based on available data, the classification criteria are not met.

11.2. Information on other hazards

11.2.1 Endocrine Disrupting Properties

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

11.2.2 Other Information
No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Based on available data, the classification criteria are not met.
Hazardous to the aquatic environment, long–term (chronic) : Based on available data, the classification criteria are not met.

(2-methoxymethylethoxy)propanol (34590-94-8)	
LC50 96h- Fish	> 1000 mg/l Test organisms (species): Poecilia reticulata, Guideline: OECD Guideline 203
EC50 48h - Daphnia magna	1919 mg/l Test organisms (species): Daphnia magna, Guideline: OECD Guideline 202
ErC50 96h - Algae	> 969 mg/l Test organisms (species): Pseudokirchneriella subcapitata, Guideline: OECD Guideline 201 (Alga, Growth Inhibition Test)
NOEC 22d - Daphnia magna	> 0.5 mg/l Test organisms (species): Daphnia magna, Guideline: OECD Guideline 211

12.2. Persistence and degradability

Bartoline Clean Spirit	
Persistence and degradability of Mixture	No information available
Persistence and degradability of (2-methoxymethylethoxy)propanol (34590-94-8)	75% degradation (O_2 Consumption) at 10 d and 96% degradation (DOC Removal) at 28 d Guideline: OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) Conclusion; (2-methoxymethylethoxy)propanol is readily biodegradable
Persistence and degradability of Surfactants	The 3 surfactants contained in this product comply with the biodegradability criteria as laid down in The Detergents Regulations (as amended).

12.3. Bioaccumulative potential

No additional information available on mixture

(2-methoxymethylethoxy)propanol (34590-94-8)
Has a low log Kow (log Kow< 1) and is readily biodegradable, which suggests that this substance is not expected to accumulate in biological tissues or bioaccumulate in foodwebs

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

12.6. Endocrine disrupting properties

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

12.7. Other adverse effects

No other adverse effects are known as of yet for this mixture or any substances contained in this mixture.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

This product is not classified as Hazardous Waste as it is supplied.
Waste generation should be avoided or minimised where possible. When handling waste, the safety precautions applying to handling of the product should be considered. Label the containers containing waste and remove from the area as soon as possible. Label the containers containing waste contaminated material and remove from the area as soon as possible.
Used packaging waste should be reused or recycled, if uncontaminated. Contaminated packaging should be cleaned on site, if appropriate facilities exist, including any relevant rules or permits, or offsite by a specialist provider. Contaminated packaging which cannot be safely cleaned must be treated in the same way as the product, and should only be disposed of as a last resort.
List of waste code is 20 01 30 - detergents other than those mentioned in 20 01 29. These codes have been assigned based on the actual composition of the product as supplied. Seek advice from a hazardous/non-hazardous waste specialist for waste classification.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport
Not applicable

Transport by sea
Not applicable

Air transport
Not applicable

Inland waterway transport
Not applicable

Rail transport
Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. UK-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the GB PIC list ((EU) No 649/2012 as amended by the Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc) (EU Exit) Regulations 2019 and 2020 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (The Persistent Organic Pollutants Regulations 2007 As Amended by UK Regulations S.I 2018/1405, S.I 2019/1099, S.I 2019/1340, S.I 2020/1358 and S.I 2022/1293)

Ozone Depleting Substances Regulation

Contains no substance(s) listed on the Ozone Depletion list (The Ozone-Depleting Substances Regulations 2015 As Amended by UK Regulations S.I 2019/281, S.I 2019/583, S.I 2020/304, S.I. 2020/1616, S.I 2021/1397 and S.I 2023/336 on substances that deplete the ozone layer)

The Volatile Organic Compounds in Paints, Varnishes and Vehicle Refinishing Products Regulations 2012 (S.I 2012/1715)

VOC content : 70 g/l

Poisons and Explosive Precursors Regulations

Contains no substance(s) listed on the Poisons and Explosive Precursors Precursors list (The Poisons Act 1972 as amended by S.I 2015/968, The Control of Poisons and Explosives Precursors Regulations 2015 (S.I 2015/966) and The Control of Explosives Precursors and Poisons Regulations 2023 (S.I 2023/63) on the marketing and use of explosives precursors)
Sodium hydroxide is listed as GB Reportable Poison with a concentration limit of 12% of total caustic alkalinity. The concentration of sodium hydroxide in this product is < 0.1%, hence this product is exempted.

Drug Precursors Regulation (273/2004 & 111/2005)

Contains no substance(s) listed on the Drug Precursors list ((EC) No 273/2004 and (EC) No 111/2005 as amended by the UK Regulations S.I 2019/742 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances).

Detergent Regulation ((EC) No 648/2004 as amended by UK Regulations S.I 2019/672, S.I 2019/671 and S.I 2020/1617.

Product is under the scope of this regulation.

15.2. Chemical safety assessment

No Chemical Safety Assessment has taken place for this product.

SECTION 16: Other information

Indication of changes:
Due to change of classification database the revision numbering has been reset. You should therefore look at the revision date rather than the revision number to ensure you have the most up to date version.

Full text of H- and EUH-statements:	
Met. Corr. 1	May be corrosive to metals
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1A

Full text of H- and EUH-statements:	
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
EUH210	Safety data sheet available on request.
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation.
H318	Causes serious eye damage
H319	Causes serious eye irritation

Indication of changes:
Due to change of classification database the revision numbering has been reset. You should therefore look at the revision date rather than the revision number to ensure you have the most up to date version.

Safety Data Sheet (SDS), UK

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : POWER/AIR DUSTER FLAMMABLE

Product code : 005449-A.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Provides quick and effective computer and electronic maintenance. Only use the product as directed on the aerosol.

1.3. Details of the supplier of the safety data sheet

Registered company name : Volcke Aerosol Company NV.

Address : Industrielaan 15. B-8520. Kuurne. Belgium.

Telephone : +32 (0) 56 35 17 23. Fax : +32 (0) 56 35 30 69.

info@volcke-aerosol-connection.com

http://www.volcke-aerosol-connection.com

1.4. Emergency telephone number : +32 (0) 56 35 17 23.

Association/Organisation : http://www.volcke-aerosol-connection.com.

Hours of operation : Monday - Thursday : 8:00-17:00; Friday : 8:00-13:00

Other emergency numbers

United Kingdom : National Poisons Information Service : +44 (0)844 892 0111. Ireland : Poisons Information Centre of Ireland : +353 1 809 2166. Malta : Emergency number : 112 ; Medicines & Poisons info Office : 2545 6508.

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Aerosol, Category 1 (Aerosol 1, H222 - H229).

This mixture does not present a health hazard with the exception of possible occupational exposure thresholds (see paragraphs 3 and 8).

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

The propellant gas is not taken into account when determining the health and environmental classification of the mixture.

2.2. Label elements

Mixture for aerosol application.

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms :



GHS02

Signal Word :

DANGER

Hazard statements :

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.

Precautionary statements - General :

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.

Precautionary statements - Prevention :

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.

Precautionary statements - Storage :

P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) >= 0.1% published by the European CHemicals Agency (ECHA) under article 57 of REACH: http://echa.europa.eu/fr/candidate-list-table

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

The mixture does not contain substances> = 0.1% with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

Intentional misuse of the preparation by concentrating and inhaling the vapours can be harmful or fatal.

Rapid evaporation of the liquid may cause frostbite.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Composition :

Identification	(EC) 1272/2008	Note	%
CAS: 106-97-8 EC: 203-448-7 REACH: 01-2119474691-32-XXXX BUTANE (< 0,1 % 1,3-BUTADIENE)	GHS02 Dgr Flam. Gas 1, H220 Press. Gas, H280	C [1] [7]	25 <= x % < 50
CAS: 74-98-6 EC: 200-827-9 REACH: 01-2119486944-21-XXXX PROPANE	GHS02 Dgr Flam. Gas 1, H220 Press. Gas, H280	[1] [7]	25 <= x % < 50

Information on ingredients :

(Full text of H-phrases: see section 16)

[1] Substance for which maximum workplace exposure limits are available.

[7] Propellant gas

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. description of first aid measures

In the event of exposure by inhalation :

Remove the affected person to fresh air. If recovery is not rapid, obtain medical attention. If breathing has stopped, begin artificial respiration immediately. Obtain medical attention without delay.

In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

In the case of cold burns involving the eye, obtain medical attention without delay.

In the event of splashes or contact with skin :

In the event of cold burns obtain medical advice. Cover the wounds with sterile dressings only. Do not apply ointments or powders.

In the event of swallowing :

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

As this product is a gas, refer to the inhalation section.

4.2. Most important symptoms and effects, both acute and delayed

See section 11.

4.3. Indication of any immediate medical attention and special treatment needed

If you feel unwell, seek medical advice (show the label if possible). If symptoms persist, always call a doctor.

SECTION 5 : FIREFIGHTING MEASURES

Flammable.

Chemical powders, carbon dioxide and other extinguishing gas are suitable for small fires.

5.1. Extinguishing media

If the aerosols are exposed to a fire : keep containers cool by spraying with water from a protected position.

Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist
- water with AFFF (Aqueous Film Forming Foam) additive
- foam
- multipurpose ABC powder
- BC powder
- carbon dioxide (CO2)

Prevent the effluent of fire-fighting measures from entering drains or waterways.

Unsuitable methods of extinction

In the event of a fire, do not use :

- water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO2)

In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from a fire at high speed. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

5.3. Advice for firefighters

Fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

If possible, stop the product stream. Spray from a protected position till the containers are cool. If possible, take the aerosols outside. Keep public at a distance.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non first aid worker

Because of the organic solvents contained in the mixture, eliminate sources of ignition and ventilate the area.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

Evacuate area. Stop flow. Eliminate all sources of ignition.

6.3. Methods and material for containment and cleaning up

Not applicable.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions for safe handling

Always wash hands after handling.

Ensure that there is adequate ventilation, especially in confined areas.

Fire prevention :

Handle in well-ventilated areas.

Vapours are heavier than air. They can spread along the ground and form mixtures that are explosive with air.

Prevent the formation of flammable or explosive concentrations in air and avoid vapor concentrations higher than the occupational exposure limits.

Do not spray on a naked flame or any incandescent material.

Do not pierce or burn, even after use.

Use the mixture in premises free of naked flames or other sources of ignition and ensure that electrical equipment is suitably protected.

Keep packages tightly closed and away from sources of heat, sparks and naked flames.

Do not use tools which may produce sparks. Do not smoke.

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Do not breathe in aerosols.

Packages which have been opened must be reclosed carefully and stored in an upright position.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep out of reach of children.

Keep away from all sources of ignition - do not smoke.

Keep well away from all sources of ignition, heat and direct sunlight.

The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C.

Storage in a dry, frost-free and well ventilated place.

Store upright.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- UK / WEL (Workplace exposure limits, EH40/2005, Fourth Edition 2020) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
106-97-8	600 ppm 1450 mg/m3	750 ppm 1810 mg/m3		Carc	

- Ireland (Code of practice for the Chemical Agents Regulations, 2021) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
106-97-8		1000 ppm			
74-98-6				Asphx.	

8.2. Exposure controls

Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles in accordance with standard EN166.

Do not spray in the direction of the eyes.

- Hand protection

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

Type of gloves recommended :

- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- PVA (Polyvinyl alcohol)

Not necessary at efficient use. Wash your hands after contact with skin.

- Body protection

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

Not necessary at efficient use. Product in contact with skin may cause frostbite. Wash skin that has been in contact with the product, with water and soap.

- Respiratory protection

Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387 :

- A1 (Brown)

Do not breathe spray. Use only in well-ventilated areas.

Exposure controls linked to environmental protection

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	
Physical state :	Fluid liquid. Spray.
Colour	
Colourless, clear	
Odour	
Odour threshold :	Not stated.
Odour :	Specific
Freezing point	
Freezing point / Freezing range :	Not stated.
Boiling point or initial boiling point and boiling range	
Boiling point/boiling range :	Not relevant.
Flammability	
Flammability (solid, gas) :	Not stated.
Flammability :	Extremely flammable
Lower and upper explosion limit	
Explosive properties, lower explosivity limit (%) :	Not stated.
Explosive properties, upper explosivity limit (%) :	Not stated.
Flash point	
Flash point interval :	Not relevant.
Auto-ignition temperature	
Self-ignition temperature :	Not relevant.
Decomposition temperature	
Decomposition point/decomposition range :	Not relevant.
pH	
pH (aqueous solution) :	Not stated.
pH :	Not relevant.
Kinematic viscosity	
Viscosity :	Not stated.
Solubility	
Water solubility :	Insoluble.
Fat solubility :	Not stated.
Partition coefficient n-octanol/water (log value)	
Partition coefficient: n-octanol/water :	Not stated.
Vapour pressure	
Vapour pressure (50°C) :	Not relevant.

Density and/or relative density

Density :	0.545

Relative vapour density

Vapour density :	Not stated.

9.2. Other information

VOC (g/l) :	545.00
Pressure at 20°C :	± 5.0 bar
Pressure at 50°C :	< 10 bar
Water content :	< 0.3 % w/w

9.2.1. Information with regard to physical hazard classes

No data available.

Aerosols

Chemical combustion heat :	>= 30 kJ/g.

9.2.2. Other safety characteristics

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4. Conditions to avoid

Any apparatus likely to produce a flame or to have a metallic surface at high temperature (burners, electric arcs, furnaces etc.) must not be allowed on the premises.

Avoid :

- heat
- flames and hot surfaces
- frost

Protect from sunlight and do not expose to temperatures exceeding 50°C. Keep away from heat and sources of ignition. Storage in a dry, frost-free and well ventilated place.

10.5. Incompatible materials

Keep away from :

- oxidising agents

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO2)

The product is stable. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Splashes in the eyes may cause irritation and reversible damage

11.1.1. Substances

Acute toxicity :

PROPANE (CAS: 74-98-6)

Inhalation route (Dusts/mist) :	LC50 > 10 mg/l

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)

Inhalation route (Vapours) :	LC50 > 10 mg/l

Skin corrosion/skin irritation :

Butane/Isobutane/Propane : Based on available data, the classification criteria are not met.

Serious damage to eyes/eye irritation :

Butane/Isobutane/Propane : Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation :

Butane/Isobutane/Propane : Based on available data, the classification criteria are not met.

Germ cell mutagenicity :

PROPANE (CAS: 74-98-6)

No mutagenic effect.

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)

No mutagenic effect.

Carcinogenicity :

PROPANE (CAS: 74-98-6)

Carcinogenicity Test : Negative.
No carcinogenic effect.

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)

Carcinogenicity Test : Negative.
No carcinogenic effect.

Reproductive toxicant :

PROPANE (CAS: 74-98-6)

No toxic effect for reproduction

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)

No toxic effect for reproduction

Specific target organ systemic toxicity - single exposure :

Butane/Isobutane/Propane : Based on available data, the classification criteria are not met.

Specific target organ systemic toxicity - repeated exposure :

Butane/Isobutane/Propane : Based on available data, the classification criteria are not met.

Aspiration hazard :

Butane/Isobutane/Propane : Not applicable to gases and gas mixtures.

11.1.2. Mixture

Skin corrosion/skin irritation :

Unlikely to cause skin irritation. Rapid evaporation of the liquid may cause frostbite.

Serious damage to eyes/eye irritation :

Unlikely to cause eye irritation. Rapid evaporation of the liquid may cause frostbite.

Aspiration hazard :

The vapours can be absorbed into the body through inhalation and at high concentrations may cause dizziness, drowsiness and headache.

11.2. Information on other hazards

Other information

Information published in the literature shows a very low order of toxicity. Exposures to very high concentrations have an anaesthetic effect.

SECTION 12 : ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.2. Mixtures

Not expected to be dangerous for the aquatic environment.

12.2. Persistence and degradability

Butane/Isobutane/Propane : Expected to be readily biodegradable.

12.2.1. Substances

PROPANE (CAS: 74-98-6)

Biodegradability : Rapidly degradable.

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)

Biodegradability : Rapidly degradable.

12.3. Bioaccumulative potential

Butane/Isobutane/Propane : Not expected to be dangerous for the aquatic environment.

12.4. Mobility in soil

Butane/Isobutane/Propane : If released into the environment, the product will rapidly disperse into the atmosphere where it will undergo photochemical degradation.

12.5. Results of PBT and vPvB assessment

Butane/Isobutane/Propane : Not considered to be a PBT or a vPvB.

12.6. Endocrine disrupting properties

No data available.

12.7. Other adverse effects

Butane/Isobutane/Propane : Not applicable.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Recycle or dispose of waste in complaince with current legislation, namely the Ordinance on the Avoidance and Disposal of Waste (Waste Ordinance, VVEA, SR 814.600), the Ordinance on Waste from June 22, 2005 (VeVA, SR 814, 610) and DETEC Ordinance on Waste Lists.

Disposal of the product (the unused product, residual quantities, the cured product, emptied but uncleaned packaging) : preferably by an approved waste collector or a specialist disposal company. Suitable containers and methods of waste treatment should be used.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

Codes of wastes (Decision 2014/955/EC, Directive 2008/98/EEC on hazardous waste) :

15 01 10 * packaging containing residues of or contaminated by dangerous substances

SECTION 14 : TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2021 - IMDG 2020 [40-20] - ICAO/IATA 2022 [63]).

14.1. UN number or ID number

1950

14.2. UN proper shipping name

UN1950=AEROSOLS, flammable

14.3. Transport hazard class(es)

- Classification :

2.1

ADR/RID Label : Limited Quantity : 2.1 is not applicable.

14.4. Packing group

-

14.5. Environmental hazards

-

14.6. Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	2	5F	-	2.1	-	1 L	190 327 344 625	E0	2	D
IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage Handling	Segregation	
	2	See SP63	-	See SP277	F-D. S-U	63 190 277 327 344 381 959	E0	- SW1 SW22	SG69	
IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ	
	2.1	-	-	203	75 kg	203	150 kg	A145 A167 A802	E0	

	2.1	-	-	Y203	30 kg G	-	-	A145 A167 A802	E0

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

- Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2022/692 (ATP 18)

- Container information:

No data available.

-Restrictions applied under Title VIII of Regulation (EC) No. 1907/2006 (REACH):

The mixture does not contain any substance restricted under Annex XVII of Regulation (EC) No. 1907/2006 (REACH): https://echa.europa.eu/substances-restricted-under-reach.

- Particular provisions :

No data available.

15.2. Chemical safety assessment

The product does not contain substances for which a chemical safety assessment has been performed.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Wording of the phrases mentioned in section 3 :

H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.

Abbreviations :

LC50 : The concentration of a test substance resulting in 50% lethality in a given period.

REACH : Registration, Evaluation, Authorization and Restriction of Chemical Substances.

STEL : Short-term exposure limit

TWA : Time Weighted Averages

TLV : Threshold Limit Value (exposure)

AEV : Average Exposure Value.

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

WGK : Wassergefahrdungsklasse (Water Hazard Class).

GHS02 : Flame

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.

Difference Report

Revision: N°9 (27/01/2023) / GHS n°5 / HCS n°) / Version: N°1 (27/01/2023)

~~Revision: N°8 (18/11/2021) / GHS n°4 / HCS n°) / Version: N°1 (18/11/2021)~~

SECTION 2 : HAZARDS IDENTIFICATION

In compliance with EC regulation No. 1272/2008 and its amendments.

The propellant gas is not taken into account when determining the health and environmental classification of the mixture.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.3. Methods and material for containment and cleaning up

~~Clean preferably with a detergent, do not use solvents.~~

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Physical state

Spray.

SECTION 12 : ECOLOGICAL INFORMATION

12.7. Other adverse effects

Butane/Isobutane/Propane : Not applicable.

SECTION 14 : TRANSPORT INFORMATION

~~Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2021 - IMDG 2020 - ICAO/IATA 2021).~~

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2021 - IMDG 2020 [40-20] - ICAO/IATA 2022 [63]).

SECTION 15: Regulatory information

- Classification and labelling information included in section 2:

~~- EU Regulation No. 1272/2008 amended by EU Regulation No. 2021/643 (ATP 16)~~

~~- EU Regulation No. 1272/2008 amended by EU Regulation No. 2021/849 (ATP 17)~~

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2022/692 (ATP 18)

-Restrictions applied under Title VIII of Regulation (EC) No. 1907/2006 (REACH):

The mixture does not contain any substance restricted under Annex XVII of Regulation (EC) No. 1907/2006 (REACH): https://echa.europa.eu/substances-restricted-under-reach.

SAFETY DATA SHEET

Vinyl Heavy Duty Cleaner

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name

Vinyl Heavy Duty Cleaner

Product no.

-

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture

Cleaning product

▼Product code (A.I.S.E.)

Code
AISE-P301 / General purpose cleaner. Manual process.

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

British Harlequin PLC
Festival House, Chapman Way, Tunbridge Wells, Kent
TN2 3EF
01892 514888
https://uk.harlequinfloors.com/en/

E-mail

enquiries@harlequinfloors.com

Revision

24/05/2023

SDS Version

1.0

Date of previous version

24/05/2023 (1.0)

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).
See section 4 “First aid measures”.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Skin Irrit. 2; H315, Causes skin irritation.
Eye Irrit. 2; H319, Causes serious eye irritation.
Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.2. Label elements

Hazard pictogram(s)



Signal word

Warning

Hazard statement(s)

Causes skin irritation. (H315)
Causes serious eye irritation. (H319)

Precautionary statement(s)

General

-

Prevention

Wash hands thoroughly after handling. (P264)
Wear eye protection/protective gloves/protective clothing. (P280)

Response

If eye irritation persists: Get medical advice/attention. (P337+P313)

Storage

-

Disposal

-

Hazardous substances

None known.

Additional labelling

Not applicable.

2.3. Other hazards

Additional warnings

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.
This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
2-(2-butoxyethoxy)ethanol	CAS No.: 112-34-5 EC No.: 203-961-6 UK-REACH: Index No.: 603-096-00-8	1-3%	Eye Irrit. 2, H319	[1], [3]
2-aminoethanol	CAS No.: 141-43-5 EC No.: 205-483-3 UK-REACH: Index No.: 603-030-00-8	1-3%	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Acute Tox. 4, H332 STOT SE 3, H335	[1]
ethanol	CAS No.: 64-17-5 EC No.: 200-578-6 UK-REACH: Index No.: 603-002-00-5	1-3%	Flam. Liq. 2, H225	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

[1] European occupational exposure limit.
[3] According to UK REACH, Annex XVII, the substance is subject to restrictions.

Labelling of contents according to Detergents Regulation (EC) No 648/2004

< 5%
· Amphoteric surfactants
· Non-ionic surfactants

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

IF ON SKIN: Wash with plenty of water/water and soap.
Remove contaminated clothing and shoes. Ensure to wash exposed skin thoroughly with water and soap. DO NOT use solvents or thinners.
If skin irritation occurs: Get medical advice/attention.

Eye contact

Upon irritation of the eye: Remove contact lenses. Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.
In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns

Not applicable.

4.2. Most important symptoms and effects, both acute and delayed

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs.
Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

4.3. Indication of any immediate medical attention and special treatment needed

If eye irritation persists: Get medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.
If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:
Nitrogen oxides (NO_x)
Carbon oxides (CO / CO2)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.
See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers and store protected from moisture and light. Containers should be dated when opened and tested periodically for the presence of peroxides. Do not exceed storage time limits.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material

Keep only in original packaging.

Storage temperature

6 - 40°C
Dry, cool and well ventilated

Incompatible materials

No specific requirements

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2-(2-butoxyethoxy)ethanol
Long term exposure limit (8 hours) (ppm): 10
Long term exposure limit (8 hours) (mg/m³): 67,5
Short term exposure limit (15 minutes) (ppm): 15
Short term exposure limit (15 minutes) (mg/m³): 101,2

2-aminoethanol
Long term exposure limit (8 hours) (ppm): 1
Long term exposure limit (8 hours) (mg/m³): 2,5
Short term exposure limit (15 minutes) (ppm): 3
Short term exposure limit (15 minutes) (mg/m³): 7,6
Annotations:
Sk = Can be absorbed through the skin and lead to systemic toxicity.

ethanol
Long term exposure limit (8 hours) (ppm): 1000
Long term exposure limit (8 hours) (mg/m³): 1920

propan-2-ol
Long term exposure limit (8 hours) (ppm): 400
Long term exposure limit (8 hours) (mg/m³): 999
Short term exposure limit (15 minutes) (ppm): 500
Short term exposure limit (15 minutes) (mg/m³): 1250

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.
EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

2-(2-butoxyethoxy)ethanol

Duration:	Route of exposure:	DNEL:
Long term – Local effects - Workers	Inhalation	67.5 mg/m³
Short term – Local effects - Workers	Inhalation	101.2 mg/m³
Long term – Systemic effects - General population	Oral	6.25 mg/kg bw/day

2-aminoethanol

Duration:	Route of exposure:	DNEL:

Long term – Systemic effects - General population	Dermal	1.5 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	3 mg/kg bw/day
Long term – Local effects - General population	Inhalation	280 µg/m³
Long term – Local effects - Workers	Inhalation	510 µg/m³
Long term – Systemic effects - General population	Inhalation	180 µg/m³
Long term – Systemic effects - Workers	Inhalation	1 mg/m³
Long term – Systemic effects - General population	Oral	1.5 mg/kg bw/day

ethanol

Duration:	**Route of exposure:**	**DNEL:**
Long term – Systemic effects - General population	Dermal	206 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	343 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	114 mg/m³
Long term – Systemic effects - Workers	Inhalation	380 mg/m³
Short term – Local effects - General population	Inhalation	950 mg/m³
Short term – Local effects - Workers	Inhalation	1900 mg/m³
Long term – Systemic effects - General population	Oral	87 mg/kg bw/day

propan-2-ol

Duration:	**Route of exposure:**	**DNEL:**
Long term – Systemic effects - General population	Dermal	319 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	888 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	89 mg/m³
Long term – Systemic effects - Workers	Inhalation	500 mg/m³
Short term – Systemic effects - General population	Inhalation	178 mg/m³
Short term – Systemic effects - Workers	Inhalation	1000 mg/m³
Long term – Systemic effects - General population	Oral	26 mg/kg bw/day
Short term – Systemic effects - General population	Oral	51 mg/kg bw/day

PNEC

2-(2-butoxyethoxy)ethanol

Route of exposure:	**Duration of Exposure:**	**PNEC:**
Freshwater		1.1 mg/L
Freshwater sediment		4.4 mg/kg
Intermittent release (freshwater)		11 mg/L
Marine water		110 µg/L
Marine water sediment		440 µg/kg
Predators		56 mg/kg
Soil		320 µg/kg

2-aminoethanol

Route of exposure:	**Duration of Exposure:**	**PNEC:**
Freshwater		70 µg/L
Freshwater sediment		357 µg/kg
Intermittent release (freshwater)		28 µg/L
Marine water		7 µg/L
Marine water sediment		35.7 µg/kg
Sewage treatment plant		100 mg/L
Soil		1.29 mg/kg

ethanol

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		960 µg/L
Freshwater sediment		3.6 mg/kg
Intermittent release (freshwater)		2.75 mg/L
Marine water		790 µg/L
Marine water sediment		2.9 mg/kg
Predators		380-720 mg/kg
Sewage treatment plant		580 mg/L
Soil		630 µg/kg

propan-2-ol

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		140.9 mg/L
Freshwater sediment		552 mg/kg
Intermittent release (freshwater)		140.9 mg/L
Marine water		140.9 mg/L
Marine water sediment		552 mg/kg
Predators		160 mg/kg
Sewage treatment plant		2.251 g/L
Soil		28 mg/kg

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

Hygiene measures

Take off contaminated clothing and wash it before reuse.

Measures to avoid environmental exposure

No specific requirements.

Individual protection measures, such as personal protective equipment

Generally

Use only UKCA marked protective equipment.

Respiratory Equipment

Type	Class	Colour	Standards
No special when used as intended.			

Skin protection

Recommended	Type/Category	Standards
Dedicated work clothing should be worn.	-	-



Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Gloves	-	> 360	EN374



Eye protection

Work situation	Type	Standards
In the event of prolonged exposure or high concentrations	Safety glasses	EN166



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state
Liquid

Colour
Yellow

Odour / Odour threshold
Faint

pH
11 - 11.5

Density (g/cm³)
Testing not relevant or not possible due to the nature of the product.

Relative density
1 (20 °C)

Kinematic viscosity
Testing not relevant or not possible due to the nature of the product.

Particle characteristics
Does not apply to liquids.

Phase changes

Melting point/Freezing point (°C)
Testing not relevant or not possible due to the nature of the product.

Softening point/range (waxes and pastes) (°C)
Does not apply to liquids.

Boiling point (°C)
Testing not relevant or not possible due to the nature of the product.

Vapour pressure
Testing not relevant or not possible due to the nature of the product.

Relative vapour density
Testing not relevant or not possible due to the nature of the product.

Decomposition temperature (°C)
Testing not relevant or not possible due to the nature of the product.

Data on fire and explosion hazards

Flash point (°C)
Testing not relevant or not possible due to the nature of the product.

Flammability (°C)
Testing not relevant or not possible due to the nature of the product.

Auto-ignition temperature (°C)
Testing not relevant or not possible due to the nature of the product.

Lower and upper explosion limit (% v/v)
Testing not relevant or not possible due to the nature of the product.

Solubility

Solubility in water
Testing not relevant or not possible due to the nature of the product.

n-octanol/water coefficient
Testing not relevant or not possible due to the nature of the product.

Solubility in fat (g/L)
Testing not relevant or not possible due to the nature of the product.

9.2. Other information

Other physical and chemical parameters
No data available.

Oxidizing properties
Testing not relevant or not possible due to the nature of the product.

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available.

10.2. Chemical stability
The product is stable under the conditions, noted in section 7 “Handling and storage”.

10.3. Possibility of hazardous reactions
None known.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
No specific requirements

10.6. Hazardous decomposition products
The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity
Based on available data, the classification criteria are not met.

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/irritation
Causes serious eye irritation.

Respiratory sensitisation
Based on available data, the classification criteria are not met.

Skin sensitisation
Based on available data, the classification criteria are not met.

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

Carcinogenicity
Based on available data, the classification criteria are not met.

Reproductive toxicity
Based on available data, the classification criteria are not met.

STOT-single exposure
Based on available data, the classification criteria are not met.

STOT-repeated exposure
Based on available data, the classification criteria are not met.

Aspiration hazard
Based on available data, the classification criteria are not met.

11.2. Information on other hazards

Long term effects
Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Endocrine disrupting properties
Not applicable.

Other information
propan-2-ol has been classified by IARC as a group 3 carcinogen.

SECTION 12: Ecological information

12.1. Toxicity
No data available.

12.2. Persistence and degradability
No data available.

12.3. Bioaccumulative potential
No data available.

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. Endocrine disrupting properties
Not applicable.

12.7. Other adverse effects
None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Product is not covered by regulations on dangerous waste.
Dispose of contents/container to an approved waste disposal plant.
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code
Not applicable.

Contaminated packing
Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group
** Environmental hazards

Additional information
Not dangerous goods according to ADR, IATA and IMDG.

14.6. Special precautions for user
Not applicable.

14.7. Maritime transport in bulk according to IMO instruments
No data available.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Restrictions for application
Restricted to professional users.

Demands for specific education
No specific requirements.

SEVESO - Categories / dangerous substances
Not applicable.

REACH, Annex XVII
2-(2-butoxyethoxy)ethanol is subject to restrictions, UK-REACH annex XVII (entry 55).

Additional information
Not applicable.

Sources

The Health and Safety at Work etc. Act 1974 Regulations 2013.
Regulation (EC) No 648/2004 on detergents as retained and amended in UK law.
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.
Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.
Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H225, Highly flammable liquid and vapour.
H302, Harmful if swallowed.
H312, Harmful in contact with skin.
H314, Causes severe skin burns and eye damage.
H319, Causes serious eye irritation.
H332, Harmful if inhaled.
H335, May cause respiratory irritation.

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

▼The safety data sheet is validated by

Regulatory Chemist

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
Country-language: GB-en

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier : Helium

CAS No. : 7440-59-7

Chemical formula : He

Synonyms : Helium, Helium gas, Gaseous helium, Balloon gas

REACH Registration Number: Listed in Annex IV / V REACH, exempted from registration.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Industrial and professional use. Perform risk assessment prior to use.
Inflation of balloons.
Restrictions on Use : None.

1.3. Details of the supplier of the safety data sheet : Air Products Plc
2 Millennium Gate
Westmere Drive
Crewe
Cheshire

Email Address – Technical Information : GASTECH@airproducts.com

Telephone : +44(0)3457 020202

1.4. Emergency telephone number : +44(0)8085 020202
NHS Direct in England or Wales 0845 46 47 or NHS 24 in Scotland 08454 24 24 24

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Gases under pressure - Compressed gas. H280:Contains gas under pressure; may explode if heated.

2.2. Label elements

Hazard pictograms/symbols



Signal Word: Warning

Hazard Statements:

H280:Contains gas under pressure; may explode if heated.

Precautionary Statements:

Storage : P403:Store in a well-ventilated place.

2.3. Other hazards

Use a back flow preventative device in the piping.
Use only with equipment rated for cylinder pressure.
Read and follow the Safety Data Sheet (SDS) before use.
High pressure gas.
Can cause rapid suffocation.
Substance does not meet the criteria for PBT and vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

Environmental Effects

Not harmful.

SECTION 3: Composition/information on ingredients

3.1. Substances

Components	EINECS / ELINCS Number	CAS Number	Concentration (Volume)
Helium	231-168-5	7440-59-7	100 %

Components	Classification (CLP)	REACH Reg. #
Helium	Press. Gas (Comp.) ;H280	*1

*1:Listed in Annex IV / V REACH, exempted from registration.
*2:Registration not required: substance manufactured or imported < 1 t/y.
*3:Registration not required: substance manufactured or imported < 1 t/y for non-intermediate uses.

Concentration is nominal. For the exact product composition, please refer to technical specifications.

3.2. Mixtures : Not applicable.

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice : Remove victim to uncontaminated area wearing self-contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

Eye contact : In case of direct contact with eyes, seek medical advice.

Skin contact	:	Adverse effects not expected from this product.
Ingestion	:	Ingestion is not considered a potential route of exposure.
Inhalation	:	Remove to fresh air. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. In case of shortness of breath, give oxygen.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	:	Exposure to oxygen deficient atmosphere may cause the following symptoms: Dizziness. Salivation. Nausea. Vomiting. Loss of mobility/consciousness.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment	:	If exposed or concerned: Get medical attention/advice.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	The product itself does not burn. Use extinguishing media appropriate for surrounding fire.
Extinguishing media which must not be used for safety reasons.	:	Do not use water jet to extinguish.

5.2. Special hazards arising from the substance or mixture

: Upon exposure to intense heat or flame, cylinder will vent rapidly and or rupture violently. Product is nonflammable and does not support combustion. Move away from container and cool with water from a protected position. Keep containers and surroundings cool with water spray.

5.3. Advice for firefighters

: Wear self contained breathing apparatus for fire fighting if necessary. Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask. Standard EN 469 - Protective clothing for firefighters. Standard - EN 659: Protective gloves for firefighters.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

: Evacuate personnel to safe areas. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Monitor oxygen level. Ventilate the area.

6.2. Environmental precautions

: Do not discharge into any place where its accumulation could be dangerous. Prevent further leakage or spillage if safe to do so.

6.3. Methods and material for containment and cleaning up

: Ventilate the area.

Additional advice	:	If possible, stop flow of product. Increase ventilation to the release area and monitor oxygen level. If leak is from cylinder or cylinder valve, call the emergency telephone number. If the leak is in the user's system, close the cylinder valve and safely vent the pressure before attempting repairs.
6.4. Reference to other sections	:	For more information refer to Sections 8 & 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protect cylinders from physical damage; do not drag, roll, slide or drop. Do not allow storage area temperature to exceed 50°C (122°F). Only experienced and properly instructed persons should handle compressed gases/cryogenic liquids. Before using the product, determine its identity by reading the label. Know and understand the properties and hazards of the product before use. When doubt exists as to the correct handling procedure for a particular gas, contact the supplier. Do not remove or deface labels provided by the supplier for the identification of the cylinder contents. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use. Use an adjustable strap wrench to remove over-tight or rusted caps. Before connecting the container, check the complete gas system for suitability, particularly for pressure rating and materials. Before connecting the container for use, ensure that back feed from the system into the container is prevented. Ensure the complete gas system is compatible for pressure rating and materials of construction. Ensure the complete gas system has been checked for leaks before use. Employ suitable pressure regulating devices on all containers when the gas is being emitted to systems with lower pressure rating than that of the container. Never insert an object (e.g. wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage valve, causing a leak to occur. Open valve slowly. If user experiences any difficulty operating cylinder valve discontinue use and contact supplier. Close container valve after each use and when empty, even if still connected to equipment. Never attempt to repair or modify container valves or safety relief devices. Damaged valves should be reported immediately to the supplier. Close valve after each use and when empty. Replace outlet caps or plugs and container caps as soon as container is disconnected from equipment. Do not subject containers to abnormal mechanical shock. Never attempt to lift a cylinder by its valve protection cap or guard. Do not use containers as rollers or supports or for any other purpose than to contain the gas as supplied. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit. Do not smoke while handling product or cylinders. Never re-compress a gas or a gas mixture without first consulting the supplier. Never attempt to transfer gases from one cylinder/container to another. Always use backflow protective device in piping. When returning cylinder install valve outlet cap or plug leak tight. Never use direct flame or electrical heating devices to raise the pressure of a container. Containers should not be subjected to temperatures above 50°C (122°F).

7.2. Conditions for safe storage, including any incompatibilities

Full containers should be stored so that oldest stock is used first. Containers should be stored in a purpose build compound which should be well ventilated, preferably in the open air. Stored containers should be periodically checked for general condition and leakage. Observe all regulations and local requirements regarding storage of containers. Protect containers stored in the open against rusting and extremes of weather. Containers should not be stored in conditions likely to encourage corrosion. Containers should be stored in the vertical position and properly secured to prevent toppling. The container valves should be tightly closed and where appropriate valve outlets should be capped or plugged. Container valve guards or caps should be in place. Keep containers tightly closed in a cool, well-ventilated place. Store containers in location free from fire risk and away from sources of heat and ignition. Full and empty cylinders should be segregated. Do not allow storage temperature to exceed 50°C (122°F). Return empty containers in a timely manner.

Technical measures/Precautions

Containers should be segregated in the storage area according to the various categories (e.g. flammable, toxic, etc.) and in accordance whit local regulations. Keep away from combustible material.

7.3. Specific end use(s)

Refer to section 1 or the extended SDS if applicable.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

If applicable, refer to the extended section of the SDS for further information on CSA.

DNEL: Derived no effect level (Workers)
None available.

PNEC: predicted no effect concentration
None available.

8.2. Exposure controls

Engineering measures

Provide natural or mechanical ventilation to prevent oxygen deficient atmospheres below 19.5% oxygen.

Personal protective equipment

Respiratory protection	:	Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmosphere. Air purifying respirators will not provide protection. Users of breathing apparatus must be trained.
Hand protection	:	Wear work gloves when handling gas containers. Standard EN 388 - Protective gloves against mechanical risk.
Eye/face Protection	:	Safety glasses recommended when handling cylinders. Standard EN 166 - Personal eye-protection.
Skin and body protection	:	Safety shoes are recommended when handling cylinders. Standard EN ISO 20345 - Personal protective equipment - Safety footwear.
Special instructions for protection and hygiene	:	Ensure adequate ventilation, especially in confined areas.
Environmental Exposure Controls	:	If applicable, refer to the extended section of the SDS for further information on CSA.
Remarks	:	Simple asphyxiant.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

(a/b) Physical state/Colour	:	Compressed gas. Colorless.

(c) Odour	:	No odor warning properties.
(d) Density	:	0.0002 g/cm3 (0.012 lb/ft3) at 21 °C (70 °F) Note: (as vapor)
(e) Relative Density	:	Not applicable.
(f) Melting point / freezing point	:	-458 °F (-272 °C)
(g) Boiling point/range	:	-452 °F (-269 °C)
(h) Vapor pressure	:	Not applicable.
(i) Water solubility	:	0.0015 g/l
(j) Partition coefficient: n-octanol/water [log Kow]	:	Not applicable for inorganic gases.
(k) pH	:	Not applicable for gases and gas mixtures.
(l) Viscosity	:	No reliable data available.
(m) Particle characteristics	:	Not applicable for gases and gas mixtures.
(n) Upper and lower explosion / flammability limits	:	No data available.
(o) Flash point	:	Not applicable for gases and gas mixtures.
(p) Autoignition temperature	:	Not known.
(q) Decomposition temperature	:	Not applicable.

9.2. Other information

Explosive properties	:	Not applicable.
Oxidizing properties	:	Not applicable.
Molecular Weight	:	4 g/mol
Odor threshold	:	Odour threshold is subjective and inadequate to warn of overexposure.
Evaporation rate	:	Not applicable for gases and gas mixtures.
Flammability (solid, gas)	:	Refer to product classification in Section 2
Specific Volume	:	6.0349 m3/kg (96.68 ft3/lb) at 21 °C (70 °F)
Upper flammability limit	:	Not applicable.

Lower flammability limit	:	Not applicable.
Relative vapor density	:	0.138 (air = 1) Lighter or similar to air.

SECTION 10: Stability and reactivity

10.1. Reactivity	:	No reactivity hazard other than the effects described in sub-sections below.
10.2. Chemical stability	:	Stable under normal conditions.
10.3. Possibility of hazardous reactions	:	No data available.
10.4. Conditions to avoid	:	None under recommended storage and handling conditions (see section 7).
10.5. Incompatible materials	:	No data available.
10.6. Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure

Effects on Eye	:	In case of direct contact with eyes, seek medical advice.
Effects on Skin	:	Adverse effects not expected from this product.
Inhalation Effects	:	In high concentrations may cause asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themselves.
Ingestion Effects	:	Ingestion is not considered a potential route of exposure.
Symptoms	:	Exposure to oxygen deficient atmosphere may cause the following symptoms: Dizziness. Salivation. Nausea. Vomiting. Loss of mobility/consciousness.

Acute toxicity

Acute Oral Toxicity	:	No data is available on the product itself.
Acute Inhalation Toxicity	:	No data is available on the product itself.
Acute Dermal Toxicity	:	No data is available on the product itself.
Skin corrosion/irritation	:	No data available.
Serious eye damage/eye	:	No data available.

irritation

Sensitization. : No data available.

Chronic toxicity or effects from long term exposures

Carcinogenicity : No data available.

Reproductive toxicity : No data is available on the product itself.

Germ cell mutagenicity : No data is available on the product itself.

Specific target organ systemic toxicity (single exposure) : No data available.

Specific target organ systemic toxicity (repeated exposure) : No data available.

Aspiration hazard : No data available.

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity : No data is available on the product itself.

Toxicity to other organisms : No data is available on the product itself.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

Refer to Section 9 "Partition Coefficient (n-octanol/water)".

12.4. Mobility in soil

Because of its high volatility, the product is unlikely to cause ground pollution.

12.5. Results of PBT and vPvB assessment

If applicable, refer to the extended section of the SDS for further information on CSA.

12.6. Other adverse effects

This product has no known eco-toxicological effects.

Effect on the ozone layer : No known effects from this product.
Ozone Depleting Potential : None

Effect on global warming : No known effects from this product.

Global Warming Potential : None

SECTION 13: Disposal considerations

13.1. Waste treatment methods : Contact supplier if guidance is required. Return unused product in original cylinder to supplier. Refer to the EIGA code of practice Doc. 30 "Disposal of Gases", downloadable at http://www.eiga.org for more guidance on suitable disposal methods. List of hazardous waste codes: 16 05 05: Gases in pressure containers other than those mentioned in 16 05 04.

Contaminated packaging : Return cylinder to supplier.

SECTION 14: Transport information

14.1. UN number

UN/ID No. : UN1046

14.2. UN proper shipping name

Transport by road/rail (ADR/RID) : HELIUM, COMPRESSED
Transport by air (ICAO-TI / IATA-DGR) : Helium, compressed
Transport by sea (IMDG) : HELIUM, COMPRESSED

14.3. Transport hazard class(es)

Label(s) : 2.2

Transport by road/rail (ADR/RID)
Class or Division : 2
ADR/RID Hazard ID no. : 20
Tunnel Code : (E)

Transport by air (ICAO-TI / IATA-DGR)
Class or Division : 2.2

Transport by sea (IMDG)
Class or Division : 2.2

14.4. Packing group

Transport by road/rail (ADR/RID) : Not applicable.
Transport by air (ICAO-TI / IATA-DGR) : Not applicable.
Transport by sea (IMDG) : Not applicable.

14.5. Environmental hazards

Transport by road/rail (ADR/RID)
Marine Pollutant : No

Transport by air (ICAO-TI / IATA-DGR)
Marine Pollutant : No

Transport by sea (IMDG)

Marine Pollutant : No
Segregation Group : None

14.6. Special precautions for user

Transport by air (ICAO-TI / IATA-DGR)
Passenger and Cargo Aircraft : Transport allowed
Cargo Aircraft only : Transport allowed

Further Information
Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. The transportation information is not intended to convey all specific regulatory data relating to this material. For complete transportation information, contact customer service.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Country	Regulatory list	Notification
USA	TSCA	Included on Inventory.
EU	EINECS	Included on Inventory.
Canada	DSL	Included on Inventory.
Australia	AICS	Included on Inventory.
Japan	ENCS	Included on Inventory.
South Korea	ECL	Included on Inventory.
China	SEPA	Included on Inventory.
Philippines	PICCS	Included on Inventory.

Other Regulations
REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Regulation (EC) No 1272/2008 the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Control of Substances Hazardous to Health Regulations 2002 (as amended)

Health and Safety at Work etc. Act 1974

Management of Health and Safety at Work Regulations (Northern Ireland) 2000 c.388, and as amended

Management of Health and Safety at Work Regulations 1999 (S.I. number 3242)

The Health and Safety at Work etc. Act 1974 (Application to Environmentally Hazardous Substances) Regulations 2002 (England and Wales and Scotland) 11 March 2002 c.282, and as amended

Health and Safety at Work Order (Application to Environmentally Hazardous Substances) Regulations (Northern Ireland) 2003 (Northern Ireland) 14 March 2003 c52, and as amended

The Control of Major Accident Hazards Regulations 2015 c483

The Control of Major Accident Hazards Regulations (Northern Ireland) 2015 c325

The Pressure Systems Safety Regulations 2000 (S.I. number 128) link to Pressure Equipment Directive (97/23/EC)

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2011 c1885, and as amended

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations with amendments (Northern Ireland) 2011 c365

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 c.407

The Water Environment Regulations (Northern Ireland) 2017 c.81

Pollution Prevention and Control Act 1999 c.24

The Fluorinated Greenhouse Gases Regulations 2015 c.310

The Fluorinated Greenhouse Gases Regulations (Northern Ireland) 2015 c.425

The Acetylene Safety (England and Wales and Scotland) Regulations 2014 c.1639

The Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972 c.917

The Highly Flammable Liquids and Liquefied Petroleum Gases Regulations (Northern Ireland) 1975 c.256

Dangerous Substances and Explosive Atmospheres Regulations (Northern Ireland) 2003 c.152

The Dangerous Substances and Explosive Atmospheres Regulations 2002 c.2776

Pollution Prevention and Control Act 1999

The Environmental Permitting (England and Wales) Regulations 2016

Ozone Depleting Substances Regulations 2015

15.2. Chemical safety assessment

A CSA does not need to be carried out for this product.

SECTION 16: Other information

Ensure all national/local regulations are observed.

Hazard Statements:
H280 Contains gas under pressure; may explode if heated.

Indication of Method:
Gases under pressure Compressed gas. Contains gas under pressure; may explode if heated. Calculation method

Abbreviations and acronyms:
ATE - Acute Toxicity Estimate
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
EINECS - European Inventory of Existing Commercial Chemical Substances
ELINCS - European List of Notified Chemical Substances
CAS# - Chemical Abstract Service number
PPE - Personal Protection Equipment
Kow - octanol-water partition coefficient
DNEL - Derived No Effect Level
LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
NOEC - No Observed Effect Concentration
PNEC - Predicted No Effect Concentration
RMM - Risk Management Measure
OEL - Occupational Exposure Limit
PBT - Persistent, Bioaccumulative and Toxic
vPvB - Very Persistent and Very Bioaccumulative
STOT - Specific Target Organ Toxicity
CSA - Chemical Safety Assessment
EN - European Standard
UN - United Nations
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
IATA - International Air Transport Association
IMDG - International Maritime Dangerous Goods
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
WGK - Water Hazard Class

Key literature references and sources for data:
ECHA - Guidance on the compilation of safety data sheets
ECHA - Guidance on the application of the CLP Criteria
ARIEL database

Prepared by : Air Products and Chemicals, Inc. Global EH&S Department

For additional information, please visit our Product Stewardship web site at
http://www.airproducts.com/productstewardship/

This Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws. COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

SAFETY DATA SHEET

PROPAN-2-OL

Compilation date: 12/01/2023

Revision No: 1

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: PROPAN-2-OL

CAS number: 67-63-0

EINECS number: 200-661-7

Index number: 603-117-00-0

Synonyms: ISOPROPANOL

ISOPROPYL ALCOHOL

IPA

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of substance / mixture: Solvent.

1.3. Details of the supplier of the safety data sheet

Company name: Hexeal Chemicals Limited

Norwich Road

Great Plumstead

Norfolk

NR13 5FW

United Kingdom

Tel: 01603 720202

Email: info@hexchem.co.uk

1.4. Emergency telephone number

Emergency tel: 01603 720202

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Flam. Liq. 2: H225; Eye Irrit. 2: H319; STOT SE 3: H336

Classification under CHIP: F: R11; Xi: R36; -: R67

Most important adverse effects: Highly flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness.

2.2. Label elements

Label elements under CLP:

Hazard statements: H225: Highly flammable liquid and vapour.

H319: Causes serious eye irritation.

H336: May cause drowsiness or dizziness.

[cont...]

Signal words: Danger

Hazard pictograms: GHS02: Flame

GHS07: Exclamation mark



Precautionary statements: P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233: Keep container tightly closed.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312: Call a POISON CENTER or doctor if you feel unwell.

P240: Ground/Bond container and receiving equipment.

P241: Use explosion-proof electrical/ventilating/lighting equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.

P264: Wash thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P303+361+353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower.

P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P337+313: If eye irritation persists: Get medical advice/attention.

P370+378: In case of fire: Use for extinction.

P403+233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of contents/container to.

2.3. Other hazards

Section 3: Composition/information on ingredients

3.1. Substances

Chemical identity: PROPAN-2-OL

CAS number: 67-63-0

EINECS number: 200-661-7

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin.

[cont...]

Eye contact: Bathe the eye with running water for 15 minutes. Remove any contact lenses and open eyes wide apart.

Ingestion: Do not induce vomiting. Wash out mouth with water. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. If conscious, ensure the casualty sits or lies down. Consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness. There may be pain and redness.

Ingestion: Nausea and stomach pain may occur. There may be vomiting. The casualty may appear intoxicated. High doses may cause CNS depression (fatigue, dizziness and possibly loss of concentration, with collapse, coma and death in severe over-exposure).

Inhalation: There may be numbness or tingling in the limbs. Drowsiness or mental confusion may occur. Nausea and stomach pain may occur. May cause irritation of the mucous membranes and respiratory system. Exposure in high concentrations can cause a breakdown in the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confussion and srious cases, loss of concentration.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure. Delayed effects can be expected after long-term exposure. Drowsiness or mental confusion may occur. The casualty may appear intoxicated.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Show this safety data sheet to the doctor in attendance. First Aid may be required in case of accidental exposure, inhalation or ingestion of this chemical. if in doubt, Get Medical Attention Promptly!

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Carbon dioxide. Alcohol resistant foam. Dry chemical powder. Suitable extinguishing media for the surrounding fire should be used. Do not use high volume water jet.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Vapour may travel considerable distance to source of ignition and flash back. Forms explosive air-vapour mixture. In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes. Do not allow contaminated extinguishing water to enter the soil, ground-water or surface waters.

Section 6: Accidental release measures

[cont...]

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Eliminate all sources of ignition. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not attempt to take action without suitable protective clothing - see section 8 of SDS.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Inform the relevant authorities if the product has caused environmental pollution. (sewers, waterways, soil or air)

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb with inert, damp, non combustible material. Absorb into dry earth or sand. Do not contaminate water sources or sewer. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Refer to section 13 of SDS for suitable method of disposal.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS. Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air. Earth any equipment used in handling. Smoking is forbidden. Use non-sparking tools. Avoid direct contact with the substance. Wear suitable protective clothing. keep away from heat and sources of ignition. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep away from sources of ignition. Keep container tightly closed. Keep away from direct sunlight. Prevent the build up of electrostatic charge in the immediate area. Ensure lighting and electrical equipment are not a source of ignition. The floor of the storage room must be impermeable to prevent the escape of liquids. Store between 15°C and 28°C.

Suitable packaging: Must only be kept in original packaging. Store material in closed containers.

7.3. Specific end use(s)

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

DNEL / PNEC No data available.

[cont...]

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area. Ensure lighting and electrical equipment are not a source of ignition. The floor of the storage room must be impermeable to prevent the escape of liquids. Ensure all engineering measures mentioned in section 7 of SDS are in place.

Respiratory protection: wear suitable respiratory protection when aerosols or mist are present. If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. Gas/vapour filter, type A: organic vapours (EN141).

Hand protection: Butyl gloves. Nitrile gloves. Sufficient protection is given wearing suitable protective gloves checked according to i.e EN 374, in the event of risk of skin contact with the product. Replace gloves immediately if damaged.

Eye protection: Safety goggles.

Skin protection: Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Environmental: The floor of the storage room must be impermeable to prevent the escape of liquids. Ensure all engineering measures mentioned in section 7 of SDS are in place. Prevent from entering in public sewers or the immediate environment.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Colourless

Odour: Alcoholic

Evaporation rate: 1.2

Solubility in water: Miscible

Viscosity: 2.65 cSt 20c

Boiling point/range°C: 82

Melting point/range°C: -89

Flammability limits %: lower: 2.0

upper: 12.7

Flash point°C: 12

Part.coeff. n-octanol/water: log Pow: 0.05

Autoflammability°C: 425

Vapour pressure: 33mm Hg 20

Relative density: 0.786 20

pH: 7

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions. Reaction with acid chlorides, chlorine and phosphorus chlorides forms toxic chloroacetones. Water loss occurs over alumina sulphuric acid to form diisopropyl ether and propylene which are both flammable.

[cont...]

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions. Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid: Direct sunlight. Heat. Sources of ignition. Flames. Hot surfaces.

10.5. Incompatible materials

Materials to avoid: Acids. Halogenated compounds. Oxidising agents. Acid anhydrides. Aluminium.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

Route	Species	Test	Value	Units
IVN	RAT	LD50	1088	mg/kg
ORL	MUS	LD50	3600	mg/kg
ORL	RAT	LD50	5045	mg/kg
SCU	MUS	LDLO	6	gm/kg

Relevant hazards for substance:

Hazard	Route	Basis
Serious eye damage/irritation	OPT	Based on test data
STOT-single exposure	-	Based on test data

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness. There may be pain and redness.

Ingestion: Nausea and stomach pain may occur. There may be vomiting. The casualty may appear intoxicated. High doses may cause CNS depression (fatigue, dizziness and possibly loss of concentration, with collapse, coma and death in severe over-exposure).

Inhalation: There may be numbness or tingling in the limbs. Drowsiness or mental confusion may occur. Nausea and stomach pain may occur. May cause irritation of the mucous membranes and respiratory system. Exposure in high concentrations can cause a breakdown in the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion and serious cases, loss of concentration.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure. Delayed effects can be

[cont...]

expected after long-term exposure. Drowsiness or mental confusion may occur. The casualty may appear intoxicated.

Other information: Not applicable.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values:

Species	Test	Value	Units
FISH	96H LC50	9640	mg/l
DAPHNIA	24H EC50	1800	mg/l

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: No data available.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Disposal of packaging: Arrange for collection by specialised disposal company.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN1219

14.2. UN proper shipping name

Shipping name: ISOPROPANOL (ISOPROPYL ALCOHOL)

[cont...]

14.3. Transport hazard class(es)

Transport class: 3

14.4. Packing group

Packing group: II

14.5. Environmental hazards

Environmentally hazardous: No **Marine pollutant:** No

14.6. Special precautions for user

Tunnel code: D/E
Transport category: 2

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Specific regulations: The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716). Control of Substances Hazardous to Health. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Regulation, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency. Amending Directive 1999/45/EC and repealing Council Regulation(EEC) No 793/93 and Commission regulation(EC) No 1488/94 as well as Council Directive 76/769/ECC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC & 2000/21/EC, including amendments. Regulation(EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, Labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/ECC and 1999/45/EC and amending - Regulation(EC) No 1907/2006 with amendments.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: Please provide adequate information, instructions and training for operations.

Phrases used in s.2 and s.3: H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
R11: Highly flammable.
R36: Irritating to eyes.
R67: Vapours may cause drowsiness and dizziness.

Legend to abbreviations: PNEC = predicted no effect level

[cont...]

DNEL = derived no effect level

LD50 = median lethal dose

LC50 = median lethal concentration

EC50 = median effective concentration

IC50 = median inhibitory concentration

dw = dry weight

bw = body weight

cc = closed cup

oc = open cup

MUS = mouse

GPG = guinea pig

RBT = rabbit

HAM = hamster

HMN = human

MAM = mammal

PGN = pigeon

IVN = intravenous

SCU = subcutaneous

SKN = skin

DRM = dermal

OCC = ocular/corneal

PCP = phycico-chemical properties

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

Safety data sheet
058.040.3 CO2 cartridges 16 g

Responsible distributor:
Brouwland bvba Korspelsesteenweg 86, B-3581 Beverlo - Belgium
Tel. +32-(0)11-40.14.08 - Fax. +32-(0)11-34.73.59
info@brouwland.com - www.brouwland.com

1 Designation of material/mixture and company description

Product identifier

Trading name : Carbon dioxide

Safety datasheet no. :

Chemical description of gas : Carbon dioxide
CAS-No.: 000124-38-9
EC no. :204-696-9
Index no.: --

Chemical formula : CO_2

Usage : Preparation of foods and for industrial use.
Carry out risk assessment before industrial use.

2 Possible risks

Categorization of material or mixture

Risk class and category in accordance with EC 1272/2008 (CLP) : Capsules are exempted from EC 1272/2008, Section 1, Paragraph 5e, as a food additive.

Classification in accordance with EC 1907/2006 : Soda capsules are classified as a food or food additive in accordance with EC 178/2002 and fulfill all the specifications set out therein. These products set out in Title I/Chapter I/Section 2/Paragraph 5b and 6d of EC 178/2002 are exempted from this ordinance.

- **Hazard warnings** : H280: Contains gas under pressure; can explode if overheated.

- **Safety instructions** : P102: Keep out of reach of children.
P403: Keep in a well ventilated place.
P410: Protect from direct sunlight.

Other hazards

Other hazards : Can cause asphyxiation in high concentrations.

3 Composition/Information on components

Material/Composition : **Material**

Designation of material	Content	CAS no.	EC no.	Index no.	Registration no.	Classification
Carbon dioxide	**100%**	124-38-9	204-696-9	-----	**NOTE 1**	**Liq. gas (H280)**

Does not contain any other components or impurities which could affect the classification of this product. Notes:
Listed in Appendix IV/V REACH, exempt from registration.
For full text of R-sets, see Section 16.

4 First aid

– **Inhalation** : High concentrations can cause asphyxiation. Symptoms can include loss of mobility and consciousness. The victim does not notice the asphyxiation. Low concentration of CO2 can cause accelerated breathing and headaches. The victim should be made to wear respiratory equipment and brought into fresh air. Keep them warm and calm. Consult a doctor. Attempt artificial respiration if the victim stops breathing.

– **Contact with skin or eyes** : Rinse the eyes immediately in water for at least 15 minutes. Rinse any cold burns immediately in water for at least 15 minutes. Cover with a sterile dressing. Consult a doctor.

– **Ingestion** : Ingestion is not seen as a possible method of exposure.

5 Fire-fighting measures

Specific risks : The effect of fire can cause the container to burst/explode.

Hazardous combustion products : None.

Extinguishing agent

- **Suitable extinguishing agent** : All normal extinguishing agents can be used.

Specific methods : If possible, stop gas leakage. Move away from the container and cool with water from a safe position.

Special protective gear for the fire department : Use respiratory equipment in confined spaces.

6 Measures if released accidentally

Personnel-related precautions : Ensure adequate ventilation. Use respiratory gear to enter the area unless the atmosphere can be proven to be safe.

Environmental protection : Attempt to stop the gas leak. Prevent entry into sewer systems, basements, pits or other areas where accumulation could be hazardous.

Cleaning methods : Ventilate the area.

7 Handling and storage

Handling : Prevent ingress of water into the gas container.
Prevent back-flow into the gas container.
Only use equipment suitable for this product and the pressure and temperature specified. In case of doubt, consult the gas supplier.
Follow the instructions of the gas supplier.

Storage : Store the containers in a well ventilated place at less than 50°C.

8 Restricting and monitoring of exposure/personal protective gear

Personal protective gear : Ensure adequate ventilation.

Workplace limit : Carbon dioxide: ILV (EC) - 8 H - [mg/m³] : 9000
Carbon dioxide: ILV (EC) - 8 H - [ppm] : 5000
Carbon dioxide: TLV© -TWA [ppm] : 5000
Carbon dioxide: TLV© -TWA [ppm] : 5000
Carbon dioxide: TLV© -STEL [ppm] : 30000
Carbon dioxide: TLV© -STEL [ppm] : 30000

9 Physical and chemical characteristics

Physical state at 20 °C	: Gas.
Color	: Colorless.
Smell	: Odorless, so no warning signs.
Molecular weight	: 44
Melting point [°C]	: -56.6
Boiling point [°C]	: -78.5 (s)
Critical temperature [°C]	: 31
Vapor pressure [20°C]	: 57.3 bar
Relative density, gas (air=1)	: 1.52
Relative density, liquid (water=1)	: 0.82
Solubility in water [mg/l]	: 2000
Flash point [Vol.% in air]	: Non-flammable.
Other information	: Gas/vapors are heavier than air. They can accumulate in confined spaces, especially at floor level or in lower-level areas.

10 Stability and reactivity

Hazardous decomposition products : None.

Incompatible materials : Stable under normal conditions.

11 Information on toxicology

Toxicological information : There are no known toxic effects of the product.

12 Environmental information

Environment-specific information : Can contribute to the greenhouse effect if large quantities are emitted.
Greenhouse potential [CO2=1] : 1

13 Notes on disposal

General : Do not allow to flow into sewers, basements, pits and similar places where the accumulation of gas could be hazardous.
Release into the atmosphere in a well ventilated place.
Avoid releasing large quantities into the atmosphere.
Consult your gas supplier if you require advice.

14 Notes on transport

Land transport

UN number : 1013
Ordinary UN Shipping name : CARBON DIOXIDE
ADR/RID classification code : 2 A

Special regulation 584 : This gas is not subject to the regulations of the ADR if it contains a maximum of 0.5% air in a gaseous state, if it is contained in metallic capsules (Sodors, Sparklets) which are free of faults which could impact their rigidity, if the capsule seal is leak-proof and if the capsule contains a maximum of 25 g and a maximum of 0.75 g of this gas per cm3 (=0.75 kg/l).
Labeling and shipping papers : For capsules with a maximum content of 25g (max. 33 ml volume at FF 0.75 kg/l), no labeling of the transport packaging is required on the **shipping papers**. No UN number is required either. No special shipping papers are required.

Transport by ship

UN number : 2037
GGVSee/IMO-IMDG code : Containers, small, with gas (gas cartridges), with no removal device, non-refillable
Designation of material
ADR/RID classification code : 2 A

Special regulation 191 : This gas is not subject to the IMDG regulations if it is transported in packages with a maximum capacity of 50 ml in accordance with UN2037.
No special regulations.
Labeling and Shipping papers : For capsules with a maximum volume of 50 ml and shipped in accordance with UN2037 do not require labeling (no UN number either) on the transport packaging or any special shipping papers.

14 Notes on transport (continued)

Air transport

UN number	: 1013
Ordinary UN shipping name	: CARBON DIOXIDE
ADR/RID classification code	: 2 A

The following regulations are from the IATA 52 regulations on hazardous goods valid for 2011.
According to the list of hazardous goods in Section 4 of the regulations, all gases listed under Item 2 may be transported as hazardous goods in the quantities approved on cargo planes. The alphanumeric code E1 in column F defines the maximum net quantity per internal packaging as set out in table 2.6 A of the IATA. This can be 30 g/30 ml. The net quantity is defined as the water capacity of the internal container (cylinder).
The maximum net quantity that can be contained in an outer box as a single unit is 1000 ml.

15 Legal regulations

Health and safety regulations health and environmental legal regulations for the material or the mixture	: All national/local regulations apply.
Seveso regulations 96/82/EC	: Not listed.

16 Other information

Can cause asphyxiation in high concentrations.
Keep container in a well ventilated place.
Do not inhale gas.
Contact with liquid can cause cold burns/frost bite.
The risk of asphyxiation is often overlooked and must be made clear when training employees.
This safety data-sheet has been produced in accordance with valid European directives.
It applies to all countries which have adopted these directives as part of their national legislation.

WAIVER OF LIABILITY	: It is based on the latest knowledge. The information contained in this document does not constitute a contractual assurance of product qualities. Before the product can be used in any new process or trial, careful tests of the material compliance and safety should be carried out.

----------End of document----------

ConnectingChemistry

BRENNTAG

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

ACETONE

Version 7.1 Print Date 2021/10/04

Revision date / valid from 2021/10/04 **MSDS code: MACE001**

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name	:	ACETONE
Substance name	:	acetone
Index-No.	:	606-001-00-8
CAS-No.	:	67-64-1
EC-No.	:	200-662-2
EU REACH-Reg. No.	:	01-2119471330-49-xxxx

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture	:	Identified use: See table in front of appendix for a complete overview of identified uses.
Uses advised against	:	At this moment we have not identified any uses advised against

1.3. Details of the supplier of the safety data sheet

Company	:	Brenntag UK Limited Alpha House, Lawnswood Business Park GB LS16 6QY Leeds
Telephone	:	+44 (0) 113 3879 200
Telefax	:	+44 (0) 113 3879 280
E-mail address	:	msds@brenntag.co.uk

1.4. Emergency telephone number

Emergency telephone number	:	Emergency only telephone number (open 24 hours): +44 (0) 1865 407333 (N.C.E.C. Culham)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation S.I. 2019/720 (GB CLP)

Regulation S.I. 2019/720 (GB CLP)			
Hazard class	**Hazard category**	**Target Organs**	**Hazard statements**
Flammable liquids	Category 2	---	H225
Eye irritation	Category 2	---	H319

Specific target organ toxicity - single exposure	Category 3	---	H336

For the full text of the H-Statements mentioned in this Section, see Section 16.

Most important adverse effects

Human Health	:	See section 11 for toxicological information.
Physical and chemical hazards	:	See section 9/10 for physicochemical information.
Potential environmental effects	:	See section 12 for environmental information.

2.2. Label elements

Labelling according to Regulation S.I. 2019/720 (GB CLP)

Hazard symbols :



Signal word : Danger

Hazard statements :

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements

Prevention :

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243	Take action to prevent static discharges.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response :

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage :

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

Additional Labelling:

EUH066 Repeated exposure may cause skin dryness or cracking.

Hazardous components which must be listed on the label:

• acetone

2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.

SECTION 3: Composition/information on ingredients

3.1. Substances

Hazardous components	Amount [%]	Classification (Regulation S.I. 2019/720 (GB CLP))	
		Hazard class / Hazard category	Hazard statements
acetone Index-No. : 606-001-00-8 CAS-No. : 67-64-1 EC-No. : 200-662-2 EU REACH-Reg. No. : 01-2119471330-49-xxxx	>= 90 - <= 100	Flam. Liq.2 Eye Irrit.2 STOT SE3	H225 H319 H336
acetone Index-No. : 606-001-00-8 CAS-No. : 67-64-1 EC-No. : 200-662-2 EU REACH-Reg. No. : 01-2119471330-49-xxxx	<= 100	Flam. Liq.2 Eye Irrit.2 STOT SE3	H225 H319 H336

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice : Remove from exposure, lie down. Take off all contaminated clothing immediately. Wash contaminated clothing before re-use.

If inhaled : Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position. Consult a physician after significant exposure.

In case of skin contact	: Wash off immediately with plenty of water. Call a physician if irritation persists.
In case of eye contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.
If swallowed	: Rinse mouth with water. Immediately give plenty of water (if possible charcoal slurry). Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting - seek medical advice. If a person vomits when lying on his back, place him in the recovery position. Call a physician or poison control centre immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	: acidosis, Controle the alkaline reserve, Shortness of breath, Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. See Section 11 for more detailed information on health effects and symptoms.
Effects	: Aspiration hazard if swallowed - can enter lungs and cause damage. Aspiration may cause pulmonary oedema and pneumonitis.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment	: Treat symptomatically.Later control for pneumonia and lung oedema.In case of shortness of breath, give oxygen.Artificial respiration and/or oxygen may be necessary.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	:	High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Highly flammable, Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Flash back possible over considerable distance.
Hazardous combustion products	:	Carbon monoxide, Carbon dioxide (CO2)

5.3. Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.Wear appropriate body protection (full protective

		suit)
Further advice	:	Cool closed containers exposed to fire with water spray.Heating will cause a pressure rise - with risk of bursting.Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment. Keep away unprotected persons. Provide adequate ventilation. Keep away from heat and sources of ignition. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist.

6.2. Environmental precautions

Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Further information	:	Treat recovered material as described in the section "Disposal considerations".

6.4. Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on personal protective equipment.
See Section 13 for waste treatment information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	:	Keep container tightly closed. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.
Hygiene measures	:	Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Keep container tightly closed. Keep in an area equipped with solvent resistant flooring.
Advice on protection against fire and explosion	:	Combustible liquid. Keep away from sources of ignition - No smoking. Use only explosion-proof equipment. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Take measures to prevent the build up of electrostatic charge. Ensure all equipment is electrically grounded before beginning transfer operations.
Further information on storage conditions	:	Keep tightly closed in a dry and cool place. Keep away from direct sunlight. Keep in a well-ventilated place.
Advice on common storage	:	Keep away from food, drink and animal feedingstuffs. Incompatible with oxidizing agents. See section 10.5 - Incompatable materials.
Suitable packaging materials	:	Steel, Stainless steel
Unsuitable packaging materials	:	, Plastic, copper

7.3. Specific end use(s)

Specific use(s)	:	Identified use: See table in front of appendix for a complete overview of identified uses.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Component:	acetone	CAS-No. 67-64-1
Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)		

DNEL Workers, Long-term - systemic effects, Skin contact	:	186 mg/kg bw/day
DNEL Workers, Long-term - systemic effects, Inhalation	:	1210 mg/m3
DNEL Workers, Acute - local effects, Inhalation	:	2420 mg/m3
DNEL Consumers, Long-term - systemic effects, Skin contact	:	62 mg/kg bw/day
DNEL Consumers, Long-term - systemic effects, Inhalation	:	200 mg/m3

DNEL

Consumers, Long-term - systemic effects, Ingestion	:	62 mg/kg bw/day

Predicted No Effect Concentration (PNEC)		
Fresh water	:	10.6 mg/l
Marine water	:	1.06 mg/l
Intermittent releases	:	21 mg/l
Sewage treatment plant (STP)	:	100 mg/l
Fresh water sediment	:	30.4 mg/kg, 30.4 mg/kg d.w.
Marine sediment	:	3.04 mg/kg, 3.04 mg/kg d.w.
Soil	:	29.5 mg/kg

Component:	acetone	CAS-No. 67-64-1

Other Occupational Exposure Limit Values

UK. EH40 Workplace Exposure Limits (WELs), as amended, Time Weighted Average (TWA):
500 ppm, 1,210 mg/m3

EU. Indicative Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended, Time Weighted Average (TWA):
500 ppm, 1,210 mg/m3
Indicative

UK. EH40 Workplace Exposure Limits (WELs), as amended, Short Term Exposure Limit (STEL):
1,500 ppm, 3,620 mg/m3, (15 minutes)

ELV (IE), Time Weighted Average (TWA):
500 ppm, 1,210 mg/m3
Indicative OELV

8.2. Exposure controls

Appropriate engineering controls

Refer to protective measures listed in sections 7 and 8.

Provide sufficient air exchange and/or exhaust in work rooms.
Take measures to prevent the build up of electrostatic charge.

Personal protective equipment

Respiratory protection

Advice	:	Required, if exposure limit is exceeded (e.g. OEL). In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protection complying with EN 141. Recommended Filter type:AX In case of intensive or longer exposure use self-contained breathing apparatus.

Hand protection

Advice	:	Protective gloves complying with EN 374. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Protective gloves should be replaced at first signs of wear.
Material	:	butyl-rubber
Break through time	:	>= 4 h
Glove thickness	:	0.5 mm

Eye protection

Advice	:	Safety goggles Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection

Advice	:	Solvent resistant protective clothing

Environmental exposure controls

General advice	:	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	:	liquid
Colour	:	colourless
Odour	:	aromatic
Odour Threshold	:	ca. 13 ppm
pH	:	5 - 6 (10 g/l ; 20 °C)

Melting point/range	:	-94.7 °C
Boiling point/boiling range	:	55.8 - 56.6 °C
Flash point	:	-18 °C (closed cup
Evaporation rate	:	not determined
Flammability (solid, gas)	:	Highly flammable.
Upper explosion limit	:	13.0 %(V)
Lower explosion limit	:	2.1 %(V)
Vapour pressure	:	240 hPa (20 °C) 800 hPa (50 °C)
Relative vapour density	:	2.0
Density	:	0.791 g/cm3 (20 °C)
Water solubility	:	completely miscible
Partition coefficient: n-octanol/water	:	log Kow -0.24 (20 °C) (measured)
Auto-ignition temperature	:	465 °C
Thermal decomposition	:	no data available
Viscosity, dynamic	:	0.33 mPa.s (20 °C)
Explosivity	:	Formation of explosive air/vapour mixtures is possible.
Oxidizing properties	:	not oxidising

9.2. Other information

Molecular weight	:	58.09 g/mol
Refractive index	:	1.358 - 1.359

SECTION 10: Stability and reactivity

10.1. Reactivity

Advice : Combustibles vapours may form with air. Take measures to prevent the build up of electrostatic charge.
Vapours are heavier than air and may spread along floors.

10.2. Chemical stability

Advice : Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions : No information available.

10.4. Conditions to avoid

Conditions to avoid : Keep away from heat and sources of ignition.Keep away from direct sunlight.

Thermal decomposition : no data available

10.5. Incompatible materials

Materials to avoid : strong reducing agents, Oxidizing agents, Halogenated compounds, Alkali metals, Ethanolamine, Hydrogen peroxide, Attacks certain plastics and rubbers.

10.6. Hazardous decomposition products

Hazardous decomposition products : Carbon monoxide, Carbon dioxide (CO2)

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Data for the product		
Irritation		
Eyes		
Result	:	Causes serious eye irritation.
Specific Target Organ Toxicity		
Single exposure		
Remarks	:	May cause drowsiness or dizziness.
Component:	**acetone**	**CAS-No. 67-64-1**
Acute toxicity		
Oral		
LD50	:	5800 mg/kg (Rat) (OECD Test Guideline 401)Cause pain in mouth and throat, nausea, vomiting, dizziness, headache and risk of unconsciousness.
Inhalation		
LC50	:	ca. 76 mg/l (Rat; 4 h) May cause pain in nose and throat, nausea, dizziness, headache, deteriorate reactivity and at high concentration unconsciousness.

Dermal		
LD50	:	> 15800 mg/kg (Rat)

Irritation		
Skin		
Result	:	No skin irritation (Guinea pig) Repeated exposure may cause skin dryness or cracking.
Eyes		
Result	:	Irritating to eyes. (Rabbit) (OECD Test Guideline 405)May cause corneal damage.

Sensitisation		
Result	:	not sensitizing (Guinea pig) (OECD Test Guideline 406)

CMR effects		
Carcinogenicity		
		(negative, Mouse, female)(Dermal)(No guideline followed)

CMR Properties		
Carcinogenicity	:	Animal testing did not show any carcinogenic effects.
Mutagenicity	:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects. In vivo tests did not show mutagenic effects
Teratogenicity	:	Causes developmental effects in animals at high doses.
Reproductive toxicity	:	Animal testing did not show any effects on fertility.

Genotoxicity in vitro		
Result	:	negative (Chromosome aberration test in vitro; CHO (Chinese Hamster Ovary) cells; with and without metabolic activation) (OECD Test Guideline 473) negative (In vitro gene mutation study in mammalian cells; Mouse Lymphoma Cells; no) (OECD Test Guideline 476) negative (Bacterial Reverse Mutation Test; Salmonella typhimurium; with and without metabolic activation) (OECD Test Guideline 471)

Genotoxicity in vivo

Result	:	negative (In vivo micronucleus test; Mouse, male and female)

Teratogenicity

(Prenatal Developmental Toxicity Study; Rat)(Inhalation)(OECD Test Guideline 414)negative

Specific Target Organ Toxicity

Repeated exposure

Remarks	:	Based on available data, the classification criteria are not met.

Other toxic properties

Repeated dose toxicity

NOAEL	:	900 mg/kg bw/day (Rat)(Oral; 90-day)
NOAEC	:	22500 mg/m³ (Rat)(Inhalation; 8 Weeks)

Aspiration hazard

Based on available data, the classification criteria are not met.,

Further information

Experience with human exposure	:	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Chronic exposure may cause dermatitis. Chronic inhalation causes tiredness, headache and rhinitis.,

SECTION 12: Ecological information

12.1. Toxicity

Data for the product

Acute toxicity

Short-term (acute) aquatic hazard

Result	:	The product is not classified as dangerous for the environment.

Component:	acetone	CAS-No. 67-64-1
Acute toxicity		
Fish		
LC50	:	5,540 mg/l (Oncorhynchus mykiss; 96 h)
LC50		11,000 mg/l (Alburnus alburnus; 96 h)
Toxicity to daphnia and other aquatic invertebrates		
LC50	:	8,800 mg/l (Daphnia pulex (Water flea); 48 h)
algae		
NOEC	:	430 mg/l (Prorocentrum minimum; 96 h)
Bacteria		
EC12	:	1000 mg/l (activated sludge; 0.5 h) (static test; End point: Respiration inhibition; OECD Test Guideline 209)
Chronic toxicity		
Aquatic invertebrates		
NOEC		2212 mg/l (Daphnia pulex (Water flea); 28 d) (End point: Reproduction)

12.2. Persistence and degradability

Component:	acetone	CAS-No. 67-64-1
Persistence and degradability		
Persistence		
Result	:	decomposition by hydrolysis.
Biodegradability		
Result	:	91 % (Exposure Time: 28 d)(OECD Test Guideline 301B)Readily biodegradable.

12.3. Bioaccumulative potential

Component:	acetone	CAS-No. 67-64-1
Bioaccumulation		

Result : log Kow -0.24
: BCF: 3; (BCFWIN-software)Bioaccumulation is not expected.

12.4. Mobility in soil

Component:	acetone	CAS-No. 67-64-1
Mobility		

Air : The product evaporates readily.
Water : The product is water soluble.
Soil : Mobile in soils

12.5. Results of PBT and vPvB assessment

Component:	acetone	CAS-No. 67-64-1
Results of PBT and vPvB assessment		

Result : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6. Other adverse effects

Component:	acetone	CAS-No. 67-64-1
Biochemical Oxygen Demand (BOD)		

Result : 1760 mg/g (Incubation time: 5 d)

Chemical Oxygen Demand (COD)

Result : 2100 mg/g

Additional ecological information

Result : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product	:	Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.
Contaminated packaging	:	Dispose of contaminated packaging in the same way as the product. In accordance with local and national regulations. Do not burn, or use a cutting torch on, the empty drum. Risk of explosion.
European Waste Catalogue Number	:	No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

SECTION 14: Transport information

14.1. UN number

1090

14.2. UN proper shipping name

ADR : ACETONE
RID : ACETONE
IMDG : ACETONE

14.3. Transport hazard class(es)

ADR-Class (Labels; Classification Code; Hazard Identification Number; Tunnel restriction code)	:	3 3; F1; 33; (D/E)
RID-Class (Labels; Classification Code; Hazard Identification Number)	:	3 3; F1; 33
IMDG-Class (Labels; EmS)	:	3 3; F-E, S-D

14.4. Packaging group

ADR : II
RID : II
IMDG : II

14.5. Environmental hazards

Environmentally hazardous according to ADR	:	no
Environmentally hazardous according to RID	:	no
Marine Pollutant according to IMDG-Code	:	no

14.6. Special precautions for user

Note : Not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG : Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Data for the product		
Restricted (Annex I) & Reportable (Annex II) Explosives Precursors, Regulation (EU) 2019/1148	:	; Regulated explosives precursors that are not restricted: This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. Please see https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/crisis-and-terrorism/explosives/explosives-precursors/docs/list_of_competent_authorities_and_national_contact_points_en.pdf
EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC)	:	; Not listed
EU. REACH Annex XIV, Substances Subject to Authorization	:	; Not listed;

Component:	acetone	CAS-No. 67-64-1
EU. Regulation 273/2004, Drug Precursors, Category 3	:	Scheduled substance Combined Nomenclature (CN) code: , 2914 11 00
EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC)	:	Point Nos.: , 40; Listed

EU. Directive 2012/18/EU (SEVESO III) Annex I	:	Lower-tier requirements: 5,000 tonnes; Part 1: Categories of dangerous substances; P5c: Flammable liquids, Categories 2 or 3 not covered by P5a and P5b, The information given is valid if the product is stored below the boiling point and at a pressure of 1013 hPa. Upper-tier requirements: 50,000 tonnes; Part 1: Categories of dangerous substances; P5c: Flammable liquids, Categories 2 or 3 not covered by P5a and P5b, The information given is valid if the product is stored below the boiling point and at a pressure of 1013 hPa.
AwSV (DE)	:	WGK 1: slightly hazardous to water: 6

Notification status
acetone:

Regulatory List	Notification	Notification number
AICS	YES	
DSL	YES	
EINECS	YES	200-662-2
ENCS (JP)	YES	(2)-542
IECSC	YES	
INSQ	YES	
ISHL (JP)	YES	(2)-542
JEX (JP)	YES	(2)-542
KECI (KR)	YES	KE-29367
NZIOC	YES	HSR001070
ONT INV	YES	
PICCS (PH)	YES	
TCSI	YES	
TH INV	YES	55-1-05314
TH INV	YES	2914.11
TSCA	YES	
VN INVL	YES	

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Abbreviations and Acronyms

BCF	bioconcentration factor
BOD	biochemical oxygen demand
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	carcinogenic, mutagenic or toxic to reproduction
COD	chemical oxygen demand
DNEL	derived no-effect level
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LC50	median lethal concentration
LOAEC	lowest observed adverse effect concentration
LOAEL	lowest observed adverse effect level
LOEL	lowest observed effect level
NLP	no-longer polymer
NOAEC	no observed adverse effect concentration
NOAEL	no observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
OECD	Organisation for Economic Cooperation and Development
OEL	occupational exposure limit
PBT	persistent, bioaccumulative and toxic
REACH Auth. No.:	REACH Authorisation Number
REACH AuthAppC. No.	REACH Authorisation Application Consultation Number
PNEC	predicted no-effect concentration
STOT	specific target organ toxicity
SVHC	substance of very high concern
UVCB	substance of unknown or variable composition, complex reaction products or biological materials
vPvB	very persistent and very bioaccumulative

Further information

Key literature references and sources for data	:	Supplier information and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet.
Methods used for product classification	:	The classification for human health, physical and chemical hazards and environmental hazards were derived from a combination of calculation methods and if available test data.
Hints for trainings	:	The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.

Other information	:	The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship. The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

|| Indicates updated section.

ACETONE

No.	Short title	Main User Group (SU)	Sector of Use (SU)	Product Category (PC)	Process Category (PROC)	Environmental Release Category (ERC)	Article Category (AC)	Specified
1	Manufacture of substance	3	NA	NA	1, 2, 3, 4, 5, 6, 8a, 8b, 9, 10, 14, 15	1, 2, 4, 6a	NA	ES7668
2	Distribution of substance	3	NA	NA	1, 2, 3, 4, 5, 6, 8a, 8b, 9, 10, 14, 15	1, 2, 4, 6a	NA	ES7846
3	Formulation & (re)packing of substances and mixtures	3	NA	NA	1, 2, 3, 4, 5, 6, 8a, 8b, 9, 10, 14, 15	1, 2, 4, 6a	NA	ES13324
4	Use in rubber production and processing	3	NA	NA	1, 2, 3, 4, 5, 6, 7, 8a, 8b, 9, 10, 13, 14	6d	NA	ES7680
5	Use in polymer processing	3	NA	NA	1, 2, 3, 4, 5, 6, 8a, 8b, 9, 10, 13, 14, 15	6d	NA	ES7684
6	Use in polymer processing	22	NA	NA	1, 2, 8a, 8b, 9, 14	8a, 8c, 8d, 8f	NA	ES7743
7	Use in coatings	3	NA	NA	1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 15, 19	4	NA	ES7672
8	Use in coatings	21	NA	1, 4, 9a, 9b, 9c, 15, 24, 31	NA	8a, 8c, 8d, 8f	NA	ES8830
9	Use in coatings	22	NA	NA	1, 2, 3, 4, 5, 8a, 8b, 9, 10, 11, 13, 15, 19	8a, 8c, 8d, 8f	NA	ES7737
10	Use in cleaning agents	3	NA	NA	1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 19	4	NA	ES7686
11	Use in cleaning agents	21	NA	3, 4, 9a, 9b, 9c, 24, 35, 38	NA	8a, 8d	NA	ES8831
12	Use in cleaning agents	22	NA	NA	1, 2, 3, 4, 5, 8a, 8b, 9, 10, 11, 13, 19	8a, 8d	NA	ES7745
13	Use in binder and release agents	3	NA	NA	1, 2, 3, 4, 5, 6, 7, 8a, 8b, 9, 10, 13	5	NA	ES7678
14	Use in binder and release agents	22	NA	NA	1, 2, 3, 4, 5, 6, 8a, 8b, 9, 10, 11	8a, 8b, 8c, 8d, 8e, 8f	NA	ES7739
15	Use in agrochemicals	22	NA	NA	1, 2, 4, 8a, 8b, 11, 13, 19	8a, 8d	NA	ES7749
16	Use in laboratories	3	NA	NA	10, 15, 19	4	NA	ES7670

17	Use in laboratories	22	NA	NA	10, 15, 19	8a	NA	ES7735
18	Use in de-icing and anti-icing applications	21	NA	4	NA	8d	NA	ES8832
19	Use in de-icing and anti-icing applications	22	NA	NA	1, 2, 8b, 11, 19	8d	NA	ES7751
20	Use in oil and gas field drilling and production operations	3	NA	NA	1, 2, 3, 4, 8a, 8b	4	NA	ES7688
21	Use in oil and gas field drilling and production operations	22	NA	NA	1, 2, 3, 4, 8a, 8b	8d	NA	ES7747
22	Use in explosives	22	NA	NA	1, 3, 5, 8a, 8b	8d	NA	ES7753
23	Use as processing aid	3	NA	NA	1, 2, 3, 4, 5, 6, 8a, 8b, 9, 10, 14, 15	1, 2, 4, 6a	NA	ES7845
24	Polymer production	3	NA	NA	1, 2, 3, 4, 5, 6, 8a, 8b, 9, 10, 13, 14, 15	6d	NA	ES7682
25	Polymer production	22	NA	NA	1, 2, 8a, 8b, 9, 14	8a, 8c, 8d, 8f	NA	ES7741
26	Use as blowing agents	3	NA	NA	1, 2, 3, 8b, 9, 12	4, 10a	NA	ES7690

1. Short title of Exposure Scenario 1: Manufacture of substance	
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC6: Calendering operations PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC15: Use as laboratory reagent
Environmental Release Categories	ERC1: Manufacture of substances ERC2: Formulation of preparations ERC4: Industrial use of processing aids in processes and products, not becoming part of articles ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates)

2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC2, ERC4, ERC6a		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Organizational measures to prevent/limit release from the site		
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC14, PROC15		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid

	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.	

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC14, PROC15: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2, PROC14, PROC15	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3, PROC4	---	Inhalation	100ppm	0.20
PROC4, PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC5, PROC6, PROC8a, PROC10	---	Inhalation	250ppm	0.50
PROC5, PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC6, PROC10	---	Dermal	27.43mg/kg/day	0.15
PROC8b	---	Inhalation	150ppm	0.30
PROC8b	---	Dermal	6.86mg/kg/day	0.037
PROC9	---	Inhalation	200ppm	0.40
PROC14, PROC15	---	Dermal	0.34mg/kg/day	0.00

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment

For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 2: Distribution of substance	
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC6: Calendering operations PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC15: Use as laboratory reagent
Environmental Release Categories	ERC1: Manufacture of substances ERC2: Formulation of preparations ERC4: Industrial use of processing aids in processes and products, not becoming part of articles ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates)

2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC2, ERC4, ERC6a		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Organizational measures to prevent/limit release from the site		
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC14, PROC15		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid

	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.	

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC14, PROC15: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2, PROC14, PROC15	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3, PROC4	---	Inhalation	100ppm	0.20
PROC4, PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC5, PROC6, PROC8a, PROC10	---	Inhalation	250ppm	0.50
PROC5, PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC6, PROC10	---	Dermal	27.43mg/kg/day	0.15
PROC8b	---	Inhalation	150ppm	0.30
PROC8b	---	Dermal	6.86mg/kg/day	0.037
PROC9	---	Inhalation	200ppm	0.40
PROC14, PROC15	---	Dermal	0.34mg/kg/day	0.00

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment

For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 3: Formulation & (re)packing of substances and mixtures	
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC6: Calendering operations PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC15: Use as laboratory reagent
Environmental Release Categories	ERC1: Manufacture of substances ERC2: Formulation of preparations ERC4: Industrial use of processing aids in processes and products, not becoming part of articles ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates)

2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC2, ERC4, ERC6a		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Organizational measures to prevent/limit release from the site		
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC14, PROC15		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid

	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.	

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC14, PROC15: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2, PROC14, PROC15	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3, PROC4	---	Inhalation	100ppm	0.20
PROC4, PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC5, PROC6, PROC8a, PROC10	---	Inhalation	250ppm	0.50
PROC5, PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC6, PROC10	---	Dermal	27.43mg/kg/day	0.15
PROC8b	---	Inhalation	150ppm	0.30
PROC8b	---	Dermal	6.86mg/kg/day	0.037
PROC9	---	Inhalation	200ppm	0.40
PROC14, PROC15	---	Dermal	0.34mg/kg/day	0.00

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment

For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 4: Use in rubber production and processing		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC6: Calendering operations PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation	
Environmental Release Categories	ERC6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers	
2.1 Contributing scenario controlling environmental exposure for: ERC6a, ERC6b, ERC6c, ERC6d		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Organizational measures to prevent/limit release from the site		
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	

Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)
	Ensure material transfers are under containment or extract ventilation. or Ensure operation is undertaken outdoors.(PROC7)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
	If above technical/organisational control measures are not feasible, then adopt following PPE: Wear a respirator conforming to EN140 with Type A filter or better.(PROC7)

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2, PROC14	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3, PROC4	---	Inhalation	100ppm	0.20
PROC4, PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC5, PROC6, PROC8a, PROC10, PROC13	---	Inhalation	250ppm	0.50
PROC5, PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC6, PROC10	---	Dermal	27.43mg/kg/day	0.15
PROC7	With Local Exhaust Ventilation, (95% efficiency)	Inhalation	25ppm	0.05
PROC7	---	Dermal	2.14mg/kg/day	0.01
PROC7	Outdoor use, 30% efficiency	Inhalation	350ppm	0.70
PROC7	---	Dermal	42.86mg/kg/day	0.23
PROC7	half mask	Inhalation	50ppm	0.10
PROC8b	---	Inhalation	150ppm	0.30
PROC8b	---	Dermal	6.86mg/kg/day	0.037
PROC9	---	Inhalation	200ppm	0.40
PROC13	---	Dermal	13.71mg/kg/day	0.074

PROC14	---	Dermal	0.34mg/kg/day	0.00

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 5: Use in polymer processing	
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC6: Calendering operations PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC15: Use as laboratory reagent
Environmental Release Categories	ERC6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

2.1 Contributing scenario controlling environmental exposure for: ERC6d		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Organizational measures to prevent/limit release from the site		
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	

Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2, PROC14, PROC15	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3, PROC4	---	Inhalation	100ppm	0.20
PROC4, PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC5, PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC6, PROC10	---	Dermal	27.43mg/kg/day	0.15
PROC5, PROC6, PROC8a, PROC10, PROC13	---	Inhalation	250ppm	0.50
PROC8b	---	Inhalation	150ppm	0.30
PROC8b	---	Dermal	6.86mg/kg/day	0.037
PROC9	---	Inhalation	200ppm	0.40
PROC13	---	Dermal	13.71mg/kg/day	0.074
PROC14, PROC15	---	Dermal	0.34mg/kg/day	0.00

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:

ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 6: Use in polymer processing	
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8d: Wide dispersive outdoor use of processing aids in open systems ERC8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

2.1 Contributing scenario controlling environmental exposure for: ERC8a

Substance is a unique structure, Readily biodegradable.

Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC8a, PROC8b, PROC9, PROC14

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2)	

	Ensure material transfers are under containment or extract ventilation. or Ensure operation is undertaken outdoors.(PROC8a)
	or Avoid carrying out operation for more than 4 hours.(PROC8a)
	Ensure material transfers are under containment or extract ventilation. or Avoid carrying out operation for more than 4 hours.(PROC14)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC8a, PROC8b, PROC9, PROC14: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC14	---	Dermal	0.34mg/kg/day	0.002
PROC2	---	Inhalation	20ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC8a, PROC14	With Local Exhaust Ventilation, 80% efficiency	Inhalation	100ppm	0.20
PROC8a	---	Dermal	0.14mg/kg/day	0.001
PROC8a	Outdoor use, 30% efficiency	Inhalation	350ppm	0.70
PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC8a, PROC14	during 1 - 4 hours	Inhalation	300ppm	0.60
PROC8b, PROC9	---	Inhalation	250ppm	0.50
PROC8b, PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC14	---	Dermal	3.43mg/kg/day	0.02

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx

Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 7: Use in coatings	
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC15: Use as laboratory reagent PROC19: Hand-mixing with intimate contact and only PPE available
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

2.1 Contributing scenario controlling environmental exposure for: ERC4		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Air	Charcoal adsorbers, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Organizational measures to prevent/limit release from the site		
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC15, PROC19		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and	Locate bulk storage outdoors.	

measures to control dispersion from source towards the worker	Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)
	Ensure material transfers are under containment or extract ventilation. or Ensure operation is undertaken outdoors.(PROC7)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
	If above technical/organisational control measures are not feasible, then adopt following PPE: Wear a respirator conforming to EN140 with Type A filter or better.(PROC7)

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC15, PROC19: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2, PROC15	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3, PROC4	---	Inhalation	100ppm	0.20
PROC4, PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC5, PROC8a, PROC10, PROC13, PROC19	---	Inhalation	250ppm	0.50
PROC5, PROC8a, PROC13	---	Dermal	13.71mg/kg/day	0.07
PROC7	With Local Exhaust Ventilation, (95% efficiency)	Inhalation	25ppm	0.05
PROC7	---	Dermal	2.14mg/kg/day	0.01
PROC7	Outdoor use, 30% efficiency	Inhalation	350ppm	0.70
PROC7	---	Dermal	42.86mg/kg/day	0.23
PROC7	half mask	Inhalation	50ppm	0.10
PROC8b	---	Inhalation	150ppm	0.30
PROC8b	---	Dermal	6.86mg/kg/day	0.037
PROC9	---	Inhalation	200ppm	0.40
PROC10	---	Dermal	27.43mg/kg/day	0.15
PROC15	---	Dermal	0.34mg/kg/day	0.00

PROC19	with gloves	Dermal	28.29mg/kg/day	0.15

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 8: Use in coatings		
Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)	
Chemical product category	PC1: Adhesives, sealants PC4: Anti-Freeze and de-icing products PC9a: Coatings and paints, thinners, paint removers PC9b: Fillers, putties, plasters, modelling clay PC9c: Finger paints PC15: Non-metal-surface treatment products PC24: Lubricants, greases, release products PC31: Polishes and wax blends	
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8d: Wide dispersive outdoor use of processing aids in open systems ERC8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix	
2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8c, ERC8d, ERC8f		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	
2.2 Contributing scenario controlling consumer exposure for: PC1: Glues, hobby use		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 30%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	9 g
Frequency and duration of use	Exposure duration	< 4 h
	Frequency of use	< 365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 35.73 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

2.3 Contributing scenario controlling consumer exposure for: PC1: Glues DIY-use (carpet glue, tile glue, wood parquet glue)		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 30%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	6390 g
Frequency and duration of use	Exposure duration	6 h
	Frequency of use	1 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 110 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	
2.4 Contributing scenario controlling consumer exposure for: PC1: Glue from spray		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 30%
	Physical Form (at time of use)	spray aerosol
Amount used	Amount used per event	85.05 g
Frequency and duration of use	Exposure duration	4 h
	Frequency of use	6 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 35.73 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	
2.5 Contributing scenario controlling consumer exposure for: PC4: Washing car window		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	0.5 g
Frequency and duration of use	Exposure duration	0.02 h
	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 6600 cm²
Other given operational conditions affecting consumers exposure	Room size	34 m3
	Covers use in a one car garage (34 m3) under typical ventilation.	
2.6 Contributing scenario controlling consumer exposure for: PC4: Pouring into radiator		

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 10%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	2000 g
Frequency and duration of use	Exposure duration	0.17 h
	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 428 cm²
Other given operational conditions affecting consumers exposure	Room size	34 m3
	Covers use in a one car garage (34 m3) under typical ventilation.	
2.7 Contributing scenario controlling consumer exposure for: PC4: Lock de-icer		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	4 g
Frequency and duration of use	Exposure duration	0.25 h
	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 214.4 cm²
Other given operational conditions affecting consumers exposure	Room size	34 m3
	Covers use in a one car garage (34 m3) under typical ventilation.	
2.8 Contributing scenario controlling consumer exposure for: PC9a: Waterborne latex wall paint		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 1,5%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	2760 g
Frequency and duration of use	Exposure duration	2.2 h
	Frequency of use	4 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 428.75 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	
2.9 Contributing scenario controlling consumer exposure for: PC9a: Solvent rich, high solid, water borne paint, PC15: Solvent rich, high solid, water borne paint		
Product characteristics	Concentration of the	Covers concentrations up to 27,5%

	Substance in Mixture/Article	
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	744 g
Frequency and duration of use	Exposure duration	2.2 h
	Frequency of use	6 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 482.75 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

2.10 Contributing scenario controlling consumer exposure for: PC9a: Aerosol spray can, PC15: Aerosol spray can

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
	Physical Form (at time of use)	spray aerosol
Amount used	Amount used per event	215 g
Frequency and duration of use	Exposure duration	0.33 h
	Frequency of use	2 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 6600 cm²
Other given operational conditions affecting consumers exposure	Room size	34 m3
	Covers use in a one car garage (34 m3) under typical ventilation.	

2.11 Contributing scenario controlling consumer exposure for: PC9a: Removers (paint-, glue-, wall paper-, sealant-remover), PC15: Removers (paint-, glue-, wall paper-, sealant remover)

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	491 g
Frequency and duration of use	Exposure duration	2 h
	Frequency of use	3 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 857.5 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

2.12 Contributing scenario controlling consumer exposure for: PC9b: Fillers and putty

Product characteristics	Concentration of the Substance in	Covers concentrations up to 2%

	Mixture/Article	
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	85 g
Frequency and duration of use	Exposure duration	4 h
	Frequency of use	12 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 35.73 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

2.13 Contributing scenario controlling consumer exposure for: PC9b: Plasters and floor equalizers

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 2%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	13800 g
Frequency and duration of use	Exposure duration	2 h
	Frequency of use	12 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 857.5 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

2.14 Contributing scenario controlling consumer exposure for: PC9c: Finger paints

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	1.35 g
Frequency and duration of use	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 254.4 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	Avoid using at a product concentration greater than 5%

2.15 Contributing scenario controlling consumer exposure for: PC24: Sprays		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
	Physical Form (at time of use)	spray aerosol
Amount used	Amount used per event	73 g
Frequency and duration of use	Exposure duration	0.17 h
	Frequency of use	6 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 428.75 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

2.16 Contributing scenario controlling consumer exposure for: PC31: Polishes, spray (furniture, shoes)		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	142 g
Frequency and duration of use	Exposure duration	1.23 h
	Frequency of use	29 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 430 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

3. Exposure estimation and reference to its source

Environment

No information available.

Consumers

No exposure assessment presented for human health.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

1. Short title of Exposure Scenario 9: Use in coatings	
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring PROC15: Use as laboratory reagent PROC19: Hand-mixing with intimate contact and only PPE available
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8d: Wide dispersive outdoor use of processing aids in open systems ERC8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8c, ERC8d, ERC8f

Substance is a unique structure, Readily biodegradable.

Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
	Air	Closed system, or, Treated by scrubbers
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Organizational measures to prevent/limit release from the site		
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC15, PROC19

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa

Frequency and duration of use	Covers daily exposures up to 8 hours
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)
	Ensure material transfers are under containment or extract ventilation. or Ensure operation is undertaken outdoors.(PROC5, PROC8a)
	or Avoid carrying out operation for more than 4 hours.(PROC5, PROC8a)
	Ensure material transfers are under containment or extract ventilation. or Limit the substance content in the product to 25 %.(PROC10)
	or Avoid carrying out operation for more than 4 hours.(PROC10)
	Ensure material transfers are under containment or extract ventilation. or Limit the substance content in the product to 25 %. Ensure operation is undertaken outdoors. Avoid carrying out operation for more than 4 hours.(PROC11)
	or Avoid carrying out operation for more than 1 hour.(PROC11)
	Avoid carrying out operation for more than 1 hour.(PROC19)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
	If above technical/organisational control measures are not feasible, then adopt following PPE: Wear a respirator conforming to EN140 with Type A filter or better.(PROC11)
	If above technical/organisational control measures are not feasible, then adopt following PPE: Limit the substance content in the product to 25 %. Wear suitable gloves tested to EN374.(PROC19)

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC15, PROC19: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3, PROC15	---	Dermal	0.34mg/kg/day	0.002
PROC2, PROC15	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3	---	Inhalation	100ppm	0.20
PROC4, PROC8b, PROC9,	---	Inhalation	250ppm	0.50

PROC13				
PROC4, PROC8b, PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC5	---	Dermal	0.07mg/kg/day	0.00
PROC5, PROC8a	Outdoor use, 30% efficiency	Inhalation	350ppm	0.70
PROC5, PROC8a, PROC13	---	Dermal	13.71mg/kg/day	0.07
PROC5, PROC8a	during 1 - 4 hours	Inhalation	300ppm	0.60
PROC8a	---	Dermal	0.14mg/kg/day	0.001
PROC10	---	Dermal	1.37mg/kg/day	0.007
PROC11	With Local Exhaust Ventilation, 80% efficiency	Inhalation	200ppm	0.40
PROC11	---	Dermal	2.14mg/kg/day	0.01
PROC11	during 1 - 4 hours, Concentration of substance in product: 5% - 25%, Outdoor use, 30% efficiency	Inhalation	252ppm	0.50
PROC11	Concentration of substance in product: 5% - 25%	Dermal	64.28mg/kg/day	0.35
PROC11	---	Dermal	107.14mg/kg/day	0.58
PROC19	Concentration of substance in product: 5% - 25%, with gloves	Dermal	16.97mg/kg/day	0.09
PROC5, PROC8a, PROC10	With Local Exhaust Ventilation, 80% efficiency	Inhalation	100ppm	0.20
PROC11	half mask	Inhalation	100ppm	0.20
PROC19	Concentration of substance in product: 5% - 25%	Inhalation	300ppm	0.60

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 10: Use in cleaning agents	
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC19: Hand-mixing with intimate contact and only PPE available
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

2.1 Contributing scenario controlling environmental exposure for: ERC4		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Organizational measures to prevent/limit release from the site		
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC19		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors,	

from source towards the worker	windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)
	Ensure material transfers are under containment or extract ventilation. or Ensure operation is undertaken outdoors.(PROC7)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
	If above technical/organisational control measures are not feasible, then adopt following PPE: Wear a respirator conforming to EN140 with Type A filter or better.(PROC7)

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC19: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3, PROC4	---	Inhalation	100ppm	0.20
PROC4, PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC5, PROC8a, PROC10, PROC13, PROC19	---	Inhalation	250ppm	0.50
PROC5, PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC7	With Local Exhaust Ventilation, (95% efficiency)	Inhalation	25ppm	0.05
PROC7	---	Dermal	2.14mg/kg/day	0.01
PROC7	---	Inhalation	350ppm	0.70
PROC7	Outdoor use, 30% efficiency	Dermal	42.86mg/kg/day	0.23
PROC7	half mask	Inhalation	50ppm	0.10
PROC8b	---	Inhalation	150ppm	0.30
PROC8b	---	Dermal	6.86mg/kg/day	0.037
PROC9	---	Inhalation	200ppm	0.40
PROC10	---	Dermal	27.43mg/kg/day	0.15
PROC13	---	Dermal	13.71mg/kg/day	0.074
PROC19	with gloves	Dermal	28.29mg/kg/day	0.15

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the

Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 11: Use in cleaning agents		
Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)	
Chemical product category	PC3: Air care products PC4: Anti-Freeze and de-icing products PC9a: Coatings and paints, thinners, paint removers PC9b: Fillers, putties, plasters, modelling clay PC9c: Finger paints PC24: Lubricants, greases, release products PC35: Washing and cleaning products (including solvent based products) PC38: Welding and soldering products (with flux coatings or flux cores.), flux products	
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems	
2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	
2.2 Contributing scenario controlling consumer exposure for: PC3: Aircare, instant action (aerosol sprays)		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
	Physical Form (at time of use)	spray aerosol
Amount used	Amount used per event	0.1 g
Frequency and duration of use	Exposure duration	0.25 h
	Frequency of use	365 days/year
	Frequency of use	4 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 6600 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	
2.3 Contributing scenario controlling consumer exposure for: PC3: Aircare, continuous action		

(solid & liquid)		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 1%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
	Physical Form (at time of use)	solid
Amount used	Amount used per event	0.48 g
Frequency and duration of use	Exposure duration	8 h
	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 35.70 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	
2.4 Contributing scenario controlling consumer exposure for: PC4: Washing car window		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers product concentrations up to 1%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	0.5 g
Frequency and duration of use	Exposure duration	0.02 h
	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Other given operational conditions affecting consumers exposure	Room size	34 m3
	Covers use in a one car garage (34 m3) under typical ventilation.	
2.5 Contributing scenario controlling consumer exposure for: PC4: Pouring into radiator		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 10%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	2000 g
Frequency and duration of use	Exposure duration	0.17 h
	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 428 cm²
Other given operational conditions affecting consumers exposure	Room size	34 m3
	Covers use in a one car garage (34 m3) under typical ventilation.	
2.6 Contributing scenario controlling consumer exposure for: PC4: Lock de-icer		

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	4 g
Frequency and duration of use	Exposure duration	0.25 h
	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 214.4 cm²
Other given operational conditions affecting consumers exposure	Room size	34 m3
	Covers use in a one car garage (34 m3) under typical ventilation.	
2.7 Contributing scenario controlling consumer exposure for: PC9a: Waterborne latex wall paint		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 1,5%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	2760 g
Frequency and duration of use	Exposure duration	2.2 h
	Frequency of use	4 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 428.75 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	
2.8 Contributing scenario controlling consumer exposure for: PC9a: Solvent rich, high solid, water borne paint		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 27,5%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	744 g
Frequency and duration of use	Exposure duration	2.2 h
	Frequency of use	6 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 428.75 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	
2.9 Contributing scenario controlling consumer exposure for: PC9a: Aerosol spray can		

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
	Physical Form (at time of use)	spray aerosol
Amount used	Amount used per event	215 g
Frequency and duration of use	Exposure duration	0.33 min
	Frequency of use	2 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 6600 cm²
Other given operational conditions affecting consumers exposure	Room size	34 m3
	Covers use in a one car garage (34 m3) under typical ventilation.	

2.10 Contributing scenario controlling consumer exposure for: PC9a: Removers (paint-, glue-, wall paper-, sealant-remover)

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	491 g
Frequency and duration of use	Exposure duration	2 h
	Frequency of use	3 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 857.5 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

2.11 Contributing scenario controlling consumer exposure for: PC9b: Fillers and putty

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 2%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	85 g
Frequency and duration of use	Exposure duration	4 h
	Frequency of use	12 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 35.73 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

2.12 Contributing scenario controlling consumer exposure for: PC9b: Plasters and floor equalizers

Product characteristics	Concentration of the	Covers concentrations up to 2%

	Substance in Mixture/Article	
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	13800 g
Frequency and duration of use	Exposure duration	2 h
	Frequency of use	12 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 857.5 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

2.13 Contributing scenario controlling consumer exposure for: PC9b: Modelling clay

Product characteristics	Concentration of the Substance in Mixture/Article	Covers product concentrations up to 1%
	Physical Form (at time of use)	solid
Amount used	Amount used per event	1 g
Frequency and duration of use	Exposure duration	8 h
	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 254.4 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

2.14 Contributing scenario controlling consumer exposure for: PC9c: Finger paints

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	1.35 g
Frequency and duration of use	Exposure duration	8 h
	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 254.4 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	Avoid using at a product concentration greater than 5%

2.15 Contributing scenario controlling consumer exposure for: PC24: Liquids		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 100%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	2200 g
Frequency and duration of use	Exposure duration	0.17 h
	Frequency of use	4 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 468 cm²
Other given operational conditions affecting consumers exposure	Room size	34 m3
	Covers use in a one car garage (34 m3) under typical ventilation.	

2.16 Contributing scenario controlling consumer exposure for: PC24: Pastes		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 20%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	34 g
Frequency and duration of use	Exposure duration	8 h
	Frequency of use	10 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 468 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

2.17 Contributing scenario controlling consumer exposure for: PC24: Sprays		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
	Physical Form (at time of use)	spray aerosol
Amount used	Amount used per event	73 g
Frequency and duration of use	Exposure duration	0.17 h
	Frequency of use	6 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 428.75 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

2.18 Contributing scenario controlling consumer exposure for: PC35: Laundry and dish washing products

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 5%.
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	15 g
Frequency and duration of use	Exposure duration	0.5 h
	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 857.5 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

2.19 Contributing scenario controlling consumer exposure for: PC35: Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners)

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 5%.
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	27 g
Frequency and duration of use	Exposure duration	0.33 h
	Frequency of use	128 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 857.5 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

2.20 Contributing scenario controlling consumer exposure for: PC38

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 20%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	12 g
Frequency and duration of use	Exposure duration	1 h
	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 6600 cm²
Other given operational conditions affecting consumers exposure	Room size	20 m3
	Covers use under typical household ventilation., Covers use at ambient temperatures.	

3. Exposure estimation and reference to its source

Environment

No information available.

Consumers

No exposure assessment presented for human health.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

1. Short title of Exposure Scenario 12: Use in cleaning agents		
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring PROC19: Hand-mixing with intimate contact and only PPE available	
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems	
2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Organizational measures to prevent/limit release from the site		
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC19		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors,	

from source towards the worker	windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)
	Ensure material transfers are under containment or extract ventilation. or Ensure operation is undertaken outdoors.(PROC5, PROC8a)
	or Avoid carrying out operation for more than 4 hours.(PROC5, PROC8a)
	Ensure material transfers are under containment or extract ventilation. or Limit the substance content in the product to 25 %.(PROC10)
	or Avoid carrying out operation for more than 4 hours.(PROC10)
	Ensure material transfers are under containment or extract ventilation. or Limit the substance content in the product to 25 %. Ensure operation is undertaken outdoors. Avoid carrying out operation for more than 4 hours.(PROC11)
	or Avoid carrying out operation for more than 1 hour.(PROC11)
	Avoid carrying out operation for more than 1 hour.(PROC19)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
	If above technical/organisational control measures are not feasible, then adopt following PPE: Wear a respirator conforming to EN140 with Type A filter or better.(PROC11)
	If above technical/organisational control measures are not feasible, then adopt following PPE: Limit the substance content in the product to 25 %. Wear suitable gloves tested to EN374.(PROC19)

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC19: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3	---	Inhalation	100ppm	0.20
PROC4, PROC8b, PROC9, PROC13	---	Inhalation	250ppm	0.50
PROC4, PROC8b, PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC5	---	Dermal	0.07mg/kg/day	0.00

PROC8b	---	Inhalation	350ppm	0.70
PROC5, PROC8a, PROC13	---	Dermal	13.71mg/kg/day	0.07
PROC5, PROC8a	during 1 - 4 hours	Inhalation	300ppm	0.60
PROC5, PROC8a, PROC10	With Local Exhaust Ventilation, 80% efficiency	Inhalation	100ppm	0.20
PROC5	Outdoor use, 30% efficiency	Inhalation	350ppm	0.70
PROC8a	---	Dermal	0.14mg/kg/day	0.001
PROC10	---	Dermal	1.37mg/kg/day	0.007
PROC10	Concentration of substance in product: 5% - 25%	Dermal	16.46mg/kg/day	0.09
PROC10	---	Dermal	27.43mg/kg/day	0.15
PROC11	during 15 mins - 1 hour, With Local Exhaust Ventilation, 80% efficiency	Inhalation	200ppm	0.40
PROC11	---	Dermal	2.14mg/kg/day	0.01
PROC11	during 1 - 4 hours, Concentration of substance in product: 5% - 25%, Outdoor use, 30% efficiency	Inhalation	252ppm	0.50
PROC11	Concentration of substance in product: 5% - 25%	Dermal	64.28mg/kg/day	0.35
PROC11	---	Dermal	107.14mg/kg/day	0.58
PROC11	---	Inhalation	300ppm	0.60
PROC11	half mask	Inhalation	100ppm	0.20
PROC19	Concentration of substance in product: 5% - 25%, with gloves	Dermal	16.97mg/kg/day	0.09
PROC19	Concentration of substance in product: 5% - 25%	Inhalation	300ppm	0.60

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template

(http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 13: Use in binder and release agents		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC6: Calendering operations PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring	
Environmental Release Categories	ERC5: Industrial use resulting in inclusion into or onto a matrix	
2.1 Contributing scenario controlling environmental exposure for: ERC5		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Organizational measures to prevent/limit release from the site		
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors,	

from source towards the worker	windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)
	Ensure material transfers are under containment or extract ventilation. or Ensure operation is undertaken outdoors.(PROC7)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
	If above technical/organisational control measures are not feasible, then adopt following PPE: Wear a respirator conforming to EN140 with Type A filter or better.(PROC7)

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3, PROC4	---	Inhalation	100ppm	0.20
PROC4, PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC5, PROC6, PROC8a	---	Inhalation	250ppm	0.50
PROC5	---	Dermal	13.71mg/kg/day	0.07
PROC6	---	Dermal	27.43mg/kg/day	0.15
PROC7	With Local Exhaust Ventilation, (95% efficiency)	Inhalation	25ppm	0.05
PROC7	---	Dermal	2.14mg/kg/day	0.01
PROC7	---	Inhalation	350ppm	0.70
PROC7	---	Dermal	42.86mg/kg/day	0.23
PROC7	half mask	Inhalation	50ppm	0.10
PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC8b	---	Inhalation	150ppm	0.30
PROC8b	---	Dermal	6.86mg/kg/day	0.037
PROC9	---	Inhalation	200ppm	0.40
PROC10	---	Inhalation	250ppm	0.50
PROC10	---	Dermal	27.34mg/kg/day	0.15
PROC13	---	Inhalation	250ppm	0.50
PROC13	---	Dermal	13.71mg/kg/day	0.074

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 14: Use in binder and release agents	
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC6: Calendering operations PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC11: Non industrial spraying
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8b: Wide dispersive indoor use of reactive substances in open systems ERC8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8d: Wide dispersive outdoor use of processing aids in open systems ERC8e: Wide dispersive outdoor use of reactive substances in open systems ERC8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC8f

Substance is a unique structure, Readily biodegradable.

Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Organizational measures to prevent/limit release from the site		
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC11

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid

	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)	
	Ensure material transfers are under containment or extract ventilation. or Ensure operation is undertaken outdoors.(PROC5, PROC8a)	
	or Avoid carrying out operation for more than 4 hours.(PROC5, PROC8a)	
	Ensure operation is undertaken outdoors. or Avoid carrying out operation for more than 4 hours.(PROC6)	
	Ensure material transfers are under containment or extract ventilation. or Limit the substance content in the product to 25 %.(PROC10)	
	or Avoid carrying out operation for more than 4 hours.(PROC10)	
	Ensure material transfers are under containment or extract ventilation. or Limit the substance content in the product to 25 %. Ensure operation is undertaken outdoors. Avoid carrying out operation for more than 4 hours.(PROC11)	
	or Avoid carrying out operation for more than 1 hour.(PROC11)	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.	
	If above technical/organisational control measures are not feasible, then adopt following PPE: Wear a respirator conforming to EN140 with Type A filter or better.(PROC11)	

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC11: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3, PROC8b	---	Inhalation	100ppm	0.20
PROC4	---	Inhalation	250ppm	0.50
PROC4	---	Dermal	6.86mg/kg/day	0.04
PROC5	---	Dermal	0.07mg/kg/day	0.00
PROC5,	Outdoor use, 30%	Inhalation	350ppm	0.70

PROC8a	efficiency			
PROC5, PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC5, PROC8a	during 1 - 4 hours	Inhalation	300ppm	0.60
PROC6	Outdoor use, 30% efficiency	Inhalation	420ppm	0.84
PROC6	---	Dermal	27.43mg/kg/day	0.15
PROC6	during 1 - 4 hours	Inhalation	360ppm	0.72
PROC8a	---	Dermal	0.14mg/kg/day	0.001
PROC8a	---	Dermal	13.71mg/kg/day	0.50
PROC8b	---	Inhalation	250ppm	0.50
PROC8b	---	Dermal	6.86mg/kg/day	0.04
PROC9	---	Inhalation	250ppm	0.50
PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC11	half mask	Inhalation	100ppm	0.20
PROC10	---	Dermal	1.37mg/kg/day	0.007
PROC10	during 1 - 4 hours, Concentration of substance in product: 5% - 25%	Inhalation	300ppm	0.60
PROC10	Concentration of substance in product: 5% - 25%	Dermal	16.46mg/kg/day	0.09
PROC10	---	Dermal	27.43mg/kg/day	0.15
PROC11	during 15 mins - 1 hour, With Local Exhaust Ventilation, 80% efficiency	Inhalation	200ppm	0.40
PROC11	---	Dermal	2.14mg/kg/day	0.01
PROC11	during 1 - 4 hours, Concentration of substance in product: 5% - 25%, Outdoor use, 30% efficiency	Inhalation	252ppm	0.50
PROC11	Concentration of substance in product: 5% - 25%	Dermal	64.28mg/kg/day	0.35
PROC11	---	Dermal	107.14mg/kg/day	0.58
PROC5, PROC10	With Local Exhaust Ventilation, 80% efficiency	Inhalation	100ppm	0.20

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:

ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 15: Use in agrochemicals	
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring PROC19: Hand-mixing with intimate contact and only PPE available
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC4, PROC8a, PROC8b, PROC11, PROC13, PROC19		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2)	
	Ensure material transfers are under containment or extract ventilation.	

	or Ensure operation is undertaken outdoors.(PROC8a)
	or Avoid carrying out operation for more than 4 hours.(PROC8a)
	Ensure material transfers are under containment or extract ventilation. or Limit the substance content in the product to 25 %. Ensure operation is undertaken outdoors. Avoid carrying out operation for more than 4 hours.(PROC11)
	or Avoid carrying out operation for more than 1 hour.(PROC11)
	Avoid carrying out operation for more than 1 hour.(PROC19)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
	If above technical/organisational control measures are not feasible, then adopt following PPE: Wear a respirator conforming to EN140 with Type A filter or better.(PROC11)
	If above technical/organisational control measures are not feasible, then adopt following PPE: Limit the substance content in the product to 25 %. Wear suitable gloves tested to EN374.(PROC19)

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC4, PROC8a, PROC8b, PROC11, PROC13, PROC19: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1	---	Dermal	0.34mg/kg/day	0.002
PROC2	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC4, PROC8b, PROC13	---	Inhalation	250ppm	0.50
PROC4, PROC8b	---	Dermal	6.86mg/kg/day	0.04
PROC8a	With Local Exhaust Ventilation, 80% efficiency	Inhalation	100ppm	0.20
PROC8a	---	Dermal	0.14mg/kg/day	0.001
PROC8a	Outdoor use, 30% efficiency	Inhalation	350ppm	0.70
PROC8a, PROC13	---	Dermal	13.71mg/kg/day	0.07
PROC8a	during 1 - 4 hours	Inhalation	300ppm	0.60
PROC11	during 15 mins - 1 hour, With Local Exhaust Ventilation, 80% efficiency	Inhalation	200ppm	0.40

PROC11	---	Dermal	2.14mg/kg/day	0.01
PROC11	during 1 - 4 hours, Concentration of substance in product: 5% - 25%, Outdoor use, 30% efficiency	Inhalation	252ppm	0.50
PROC11	Concentration of substance in product: 5% - 25%	Dermal	64.28mg/kg/day	0.35
PROC11	---	Dermal	107.14mg/kg/day	0.58
PROC11	half mask	Inhalation	100ppm	0.20
PROC19	Concentration of substance in product: 5% - 25%	Dermal	16.97mg/kg/day	0.09
PROC19	Concentration of substance in product: 5% - 25%	Inhalation	300ppm	0.60

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 16: Use in laboratories		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Process categories	PROC10: Roller application or brushing PROC15: Use as laboratory reagent PROC19: Hand-mixing with intimate contact and only PPE available	
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles	
2.1 Contributing scenario controlling environmental exposure for: ERC4		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	
2.2 Contributing scenario controlling worker exposure for: PROC10, PROC15, PROC19		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.	

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC10, PROC15, PROC19: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC10, PROC19	---	Inhalation	250ppm	0.50
PROC10	---	Dermal	27.43mg/kg/day	0.15
PROC15	---	Inhalation	50ppm	0.10
PROC15	---	Dermal	0.34mg/kg/day	0.00
PROC19	with gloves	Dermal	28.29mg/kg/day	0.15

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 17: Use in laboratories		
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Process categories	PROC10: Roller application or brushing PROC15: Use as laboratory reagent PROC19: Hand-mixing with intimate contact and only PPE available	
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems	
2.1 Contributing scenario controlling environmental exposure for: ERC8a		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	
2.2 Contributing scenario controlling worker exposure for: PROC10, PROC15, PROC19		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
	Ensure material transfers are under containment or extract ventilation. or Limit the substance content in the product to 25 %.(PROC10)	
	or Avoid carrying out operation for more than 4 hours.(PROC10)	
	Avoid carrying out operation for more than 1 hour.(PROC19)	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.	

	If above technical/organisational control measures are not feasible, then adopt following PPE: Limit the substance content in the product to 25 %. Wear suitable gloves tested to EN374.(PROC19)

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC10, PROC15, PROC19: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC10	With Local Exhaust Ventilation, 80% efficiency	Inhalation	100ppm	0.20
PROC10	---	Dermal	1.37mg/kg/day	0.007
PROC15	---	Inhalation	50ppm	0.10
PROC15	---	Dermal	0.34mg/kg/day	0.002
PROC19	Concentration of substance in product: 5% - 25%	Inhalation	300ppm	0.60
PROC19	Concentration of substance in product: 5% - 25%, with gloves	Dermal	16.97mg/kg/day	0.09

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 18: Use in de-icing and anti-icing applications		
Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)	
Chemical product category	PC4: Anti-Freeze and de-icing products	
Environmental Release Categories	ERC8d: Wide dispersive outdoor use of processing aids in open systems	
2.1 Contributing scenario controlling environmental exposure for: ERC8d		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	
2.2 Contributing scenario controlling consumer exposure for: PC4: Washing car window		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	0.5 g
Frequency and duration of use	Exposure duration	0.02 h
	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 6600 cm²
Other given operational conditions affecting consumers exposure	Room size	34 m3
	Covers use in a one car garage (34 m3) under typical ventilation.	
2.3 Contributing scenario controlling consumer exposure for: PC4: Pouring into radiator		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 10%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	2000 g

Frequency and duration of use	Exposure duration	0.17 h
	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 428 cm²
Other given operational conditions affecting consumers exposure	Room size	34 m3
	Covers use in a one car garage (34 m3) under typical ventilation.	

2.4 Contributing scenario controlling consumer exposure for: PC4: Lock de-icer

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 50%
	Physical Form (at time of use)	liquid
	Vapour pressure	240 hPa
Amount used	Amount used per event	4 g
Frequency and duration of use	Exposure duration	0.25 h
	Frequency of use	365 days/year
	Frequency of use	1 Times per day
Human factors not influenced by risk management	Exposed skin area	Covers skin contact area up to 214.4 cm²
Other given operational conditions affecting consumers exposure	Room size	34 m3
	Covers use in a one car garage (34 m3) under typical ventilation.	

3. Exposure estimation and reference to its source

Environment

No information available.

Consumers

No exposure assessment presented for human health.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES

1. Short title of Exposure Scenario 19: Use in de-icing and anti-icing applications		
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC11: Non industrial spraying PROC19: Hand-mixing with intimate contact and only PPE available	
Environmental Release Categories	ERC8d: Wide dispersive outdoor use of processing aids in open systems	
2.1 Contributing scenario controlling environmental exposure for: ERC8d		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC8b, PROC11, PROC19		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2)	
	Ensure material transfers are under containment or extract ventilation. or Limit the substance content in the product to 25 %. Ensure operation is undertaken outdoors. Avoid carrying out operation for more than 4 hours.(PROC11)	
	or	

	Avoid carrying out operation for more than 1 hour.(PROC11)
	Avoid carrying out operation for more than 1 hour.(PROC19)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.
	If above technical/organisational control measures are not feasible, then adopt following PPE: Wear a respirator conforming to EN140 with Type A filter or better.(PROC11)
	If above technical/organisational control measures are not feasible, then adopt following PPE: Limit the substance content in the product to 25 %. Wear suitable gloves tested to EN374.(PROC19)

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC8b, PROC11, PROC19: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1	---	Dermal	0.34mg/kg/day	0.002
PROC2	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.10
PROC8b	---	Inhalation	250ppm	0.50
PROC8b	---	Dermal	6.86mg/kg/day	0.04
PROC11	during 15 mins - 1 hour, With Local Exhaust Ventilation, 80% efficiency	Inhalation	200ppm	0.40
PROC11	---	Dermal	2.14mg/kg/day	0.01
PROC11	during 1 - 4 hours, Concentration of substance in product: 5% - 25%, Outdoor use, 30% efficiency	Inhalation	252ppm	0.50
PROC11	Concentration of substance in product: 5% - 25%	Dermal	64.28mg/kg/day	0.35
PROC11	---	Dermal	107.14mg/kg/day	0.58
PROC11	half mask	Inhalation	100ppm	0.20
PROC19	Concentration of substance in product: 5% - 25%	Inhalation	300ppm	0.60
PROC19	Concentration of substance in product: 5% - 25%, with gloves	Dermal	16.97mg/kg/day	0.09

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may

be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 20: Use in oil and gas field drilling and production operations		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities	
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles	
2.1 Contributing scenario controlling environmental exposure for: ERC4		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.	

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3, PROC4	---	Inhalation	100ppm	0.20
PROC4	---	Dermal	6.86mg/kg/day	0.04
PROC8a	---	Inhalation	250ppm	0.50
PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC8b	---	Inhalation	150ppm	0.30
PROC8b	---	Dermal	6.86mg/kg/day	0.037

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 21: Use in oil and gas field drilling and production operations		
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities	
Environmental Release Categories	ERC8d: Wide dispersive outdoor use of processing aids in open systems	
2.1 Contributing scenario controlling environmental exposure for: ERC8d		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)	
	Ensure material transfers are under containment or extract ventilation. or Ensure operation is undertaken outdoors.(PROC8a)	

	or Avoid carrying out operation for more than 4 hours.(PROC8a)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3	---	Inhalation	100ppm	0.20
PROC4, PROC8b	---	Inhalation	250ppm	0.50
PROC4, PROC8b	---	Dermal	6.86mg/kg/day	0.04
PROC8a	---	Dermal	0.14mg/kg/day	0.001
PROC8a	Outdoor use, 30% efficiency	Inhalation	350ppm	0.70
PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC8a	during 1 - 4 hours	Inhalation	300ppm	0.60
PROC8a	With Local Exhaust Ventilation, 80% efficiency	Inhalation	100ppm	0.20

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 22: Use in explosives		
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC3: Use in closed batch process (synthesis or formulation) PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities	
Environmental Release Categories	ERC8d: Wide dispersive outdoor use of processing aids in open systems	

2.1 Contributing scenario controlling environmental exposure for: ERC8d		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC3, PROC5, PROC8a, PROC8b		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC3)	
	Ensure material transfers are under containment or extract ventilation. or Ensure operation is undertaken outdoors.(PROC5, PROC8a)	

	or Avoid carrying out operation for more than 4 hours.(PROC5, PROC8a)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC3, PROC5, PROC8a: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC3, PROC5	---	Inhalation	100ppm	0.20
PROC5	---	Dermal	0.07mg/kg/day	0.00
PROC5	---	Inhalation	350ppm	0.70
PROC5	---	Dermal	13.71mg/kg/day	0.07
PROC5	---	Inhalation	300ppm	0.60
PROC8a	---	Dermal	0.14mg/kg/day	0.001
PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC8a	With Local Exhaust Ventilation, 80% efficiency	Inhalation	100ppm	0.20
PROC8a	Outdoor use, 30% efficiency	Inhalation	350ppm	0.70
PROC8a	during 1 - 4 hours	Inhalation	300ppm	0.60

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 23: Use as processing aid	
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC6: Calendering operations PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC15: Use as laboratory reagent
Environmental Release Categories	ERC1: Manufacture of substances ERC2: Formulation of preparations ERC4: Industrial use of processing aids in processes and products, not becoming part of articles ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates)

2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC2, ERC4, ERC6a		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Organizational measures to prevent/limit release from the site		
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC14, PROC15		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid

	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.	

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC14, PROC15: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2, PROC14, PROC15	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3, PROC4	---	Inhalation	100ppm	0.20
PROC4, PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC5, PROC6, PROC8a, PROC10	---	Inhalation	250ppm	0.50
PROC5, PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC6, PROC10	---	Dermal	27.43mg/kg/day	0.15
PROC8b	---	Inhalation	150ppm	0.30
PROC8b	---	Dermal	6.86mg/kg/day	0.037
PROC9	---	Inhalation	200ppm	0.40
PROC14, PROC15	---	Dermal	0.34mg/kg/day	0.00

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment

For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 24: Polymer production	
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC6: Calendering operations PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC15: Use as laboratory reagent
Environmental Release Categories	ERC6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

2.1 Contributing scenario controlling environmental exposure for: ERC6d		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Organizational measures to prevent/limit release from the site		
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	

Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2, PROC14, PROC15	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3, PROC4	---	Inhalation	100ppm	0.20
PROC4, PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC5, PROC6, PROC8a, PROC10, PROC13	---	Inhalation	250ppm	0.50
PROC5, PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC6, PROC10	---	Dermal	27.43mg/kg/day	0.15
PROC8b	---	Inhalation	150ppm	0.30
PROC8b	---	Dermal	6.86mg/kg/day	0.037
PROC9	---	Inhalation	200ppm	0.40
PROC13	---	Dermal	13.71mg/kg/day	0.074
PROC14, PROC15	---	Dermal	0.34mg/kg/day	0.00

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:

ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 25: Polymer production	
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8d: Wide dispersive outdoor use of processing aids in open systems ERC8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8c, ERC8d, ERC8f

Substance is a unique structure, Readily biodegradable.

Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC8a, PROC8b, PROC9, PROC14

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2)	

	Ensure material transfers are under containment or extract ventilation. or Ensure operation is undertaken outdoors.(PROC8a)
	or Avoid carrying out operation for more than 4 hours.(PROC8a)
	Ensure material transfers are under containment or extract ventilation. or Avoid carrying out operation for more than 4 hours.(PROC14)
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC8a, PROC8b, PROC9, PROC14: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC14	---	Dermal	0.34mg/kg/day	0.002
PROC2	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC8a, PROC14	With Local Exhaust Ventilation, 80% efficiency	Inhalation	100ppm	0.20
PROC8a	---	Dermal	0.14mg/kg/day	0.001
PROC8a	Outdoor use, 30% efficiency	Inhalation	350ppm	0.70
PROC8a	---	Dermal	13.71mg/kg/day	0.07
PROC8a	during 1 - 4 hours	Inhalation	300ppm	0.60
PROC8b, PROC9	---	Inhalation	250ppm	0.50
PROC8b, PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC14	during 1 - 4 hours	Inhalation	300ppm	0.002

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health

For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

1. Short title of Exposure Scenario 26: Use as blowing agents		
Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites	
Process categories	PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC12: Use of blowing agents in manufacture of foam	
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles ERC10a: Wide dispersive outdoor use of long-life articles and materials with low release	
2.1 Contributing scenario controlling environmental exposure for: ERC4, ERC10a		
Substance is a unique structure, Readily biodegradable.		
Amount used	To be defined by site	
Frequency and duration of use	Continuous exposure	360 days/year
Other given operational conditions affecting environmental exposure	Indoor or outdoor use	
Technical conditions and measures at process level to prevent release Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil Organizational measures to prevent/limit release from the site	Air	Treat air emission to provide a typical removal efficiency of (%): (Efficiency: 90 %)
	Air	Closed system, or, Treated by scrubbers
	Air	or, Charcoal adsorbers
	Common practices vary across sites thus conservative process release estimates used.	
Conditions and measures related to external treatment of waste for disposal	Contain and dispose of waste in accordance with environmental legislation and according to local regulations.	
Conditions and measures related to external recovery of waste	If recycling is not practicable, dispose of in compliance with local regulations.	
2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC8b, PROC9, PROC12		
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
	Vapour pressure	> 10 kPa
Frequency and duration of use	Covers daily exposures up to 8 hours	
Technical conditions and measures to control dispersion from source towards the worker	Locate bulk storage outdoors. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.	
	Sample via a closed loop or other system to avoid exposure. Handle substance within a closed system.(PROC1, PROC2, PROC3)	

Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

3. Exposure estimation and reference to its source

Environment

No information available.

Workers

PROC1, PROC2, PROC3, PROC8b, PROC9, PROC12: ECETOC TRA

Contributing Scenario	Specific conditions	Exposure routes	Level of Exposure	RCR
PROC1	---	Inhalation	0.01ppm	0.00002
PROC1, PROC3	---	Dermal	0.34mg/kg/day	0.002
PROC2	---	Inhalation	50ppm	0.10
PROC2	---	Dermal	1.37mg/kg/day	0.01
PROC3, PROC12	---	Inhalation	100ppm	0.20
PROC8b	---	Inhalation	150ppm	0.30
PROC8b	---	Dermal	6.86mg/kg/day	0.037
PROC9	---	Inhalation	200ppm	0.40
PROC9	---	Dermal	6.86mg/kg/day	0.04
PROC12	---	Dermal	0.34mg/kg/day	0.00

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES
Environment
For scaling see ECT Tool:
ECT: http://www.reachcentrum.eu/en/consortiummanagement/consortia-under-reach/phenol-derivatives-reachconsortium/phenol-derivatives-dossiers.aspx
Health
For scaling see: GES Worker Chemical Safety Assessment (CSA) Template (http://cefic.org/templates/shwPublications.asp?HID=750)

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

SAFETY DATA SHEET

Chemtronics®

Pow-R-Wash™ VZ UFI

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Product name : Pow-R-Wash™ VZ UFI

Product code : ES6300EA

Product description : Cleaning Product

Product type : Aerosol.

Other means of identification : Aerosol
Cleaning Product
Industrial/Professional use
UFI: H0E8-H03A-P006-RJKT

1.2 Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

1.3 Details of the supplier of the safety data sheet

Manufacturer
Chemtronics
8125 Cobb Center Drive
Kennesaw, GA 30152

Tel. 770-424-4888 or toll free 800-645-5244

Distributor

Importer
Chemtronics
8125 Cobb Center Drive
Kennesaw, GA 30152

Tel. 770-424-4888 or toll free 800-645-5244
Website: www.Chemtronicseu.com

e-mail address of person responsible for this SDS : Importer/Only Representative
Bay 150
Shannon Industrial Estate
Shannon
County Clare
Ireland
V14 DF82
+353 61 771 500
customerservice.shannon@itwpp.com

National contact

ITW Contamination Control BV
Saffierlaan 5
VZ-2132 Hoofddorp
The Netherlands

Email: info@itw-cc.com

Tel: +31 88 1307 400
FAX: +31 88 1307 499

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

Website: www. Chemtronicseu.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : EMERGENCY HEALTH INFORMATION:
Austria 01 406 43 43, Belgium +070 245 245, Bulgaria +359 2 9154 233, Croatia +3851 2348 342, Cyprus 1401, Czech Republic +420224 919 293, Denmark +45 8212 1212, Estonia 16662, Finland 0800 147 111, France +33 (0) 1 45 42 59 59, Germany +49-30-18412-0, Greece (0300) 2107793777, Hungary +36-80-201-199, Iceland 543-4071, Ireland 01 809 2566, Italy 0382-24444, Latvia +371 67042473, Lithuania +370 (85)2362052, Luxembourg +352 8002 5500, Netherland +31 88 75 585 61, Norway22 59 13 00, Poland +48 42 2530 400, Portugal +351 800 250 250, Romania +40213183606, Slovakia +421 2 5477 4166, Slovenia 112, Spain +34 91 562 0420, Sweden 112
United Kingdom (England or Wales) 0845 46 47 or Scotland 08454 24 24 24 (UK only)

Supplier

Telephone number : Chemtronics Product Information: 800-TECH-401 (800-832-4401)
Chemtronics Customer Service: 800-645-5244

Hours of operation : 8:00 AM to 5:00 PM

Information limitations : EMERGENCY HEALTH INFORMATION:
EMERGENCY SPILL INFORMATION:
Transport information

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Aerosol 3, H229
Acute Tox. 4, H302
Acute Tox. 4, H332
Skin Irrit. 2, H315
Eye Irrit. 2, H319

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Ingredients of unknown toxicity : 76 percent of the mixture consists of component(s) of unknown acute oral toxicity
76 percent of the mixture consists of component(s) of unknown acute dermal toxicity
76 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

Ingredients of unknown ecotoxicity : Contains 76% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : Pressurised container: may burst if heated.
Harmful if swallowed or if inhaled.
Causes skin irritation.
Causes serious eye irritation.

SECTION 2: Hazards identification

Precautionary statements

Prevention : Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing dust or mist. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Do not pierce or burn, even after use.

Response : IF INHALED: Call a POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : trans-dichloroethylene

Supplemental label elements : FOR INDUSTRIAL USE ONLY
For professional use only.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
trans-dichloroethylene	EC: 205-860-2 CAS: 156-60-5 Index: 602-026-00-3	≥10 - ≤23	Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 3, H412	ATE [Oral] = 1235 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1]
Carbon dioxide, gas	REACH #: Annex IV EC: 204-696-9 CAS: 124-38-9	≤5	Press. Gas (Comp.), H280	-	[2]
methanol	EC: 200-659-6 CAS: 67-56-1 Index: 603-001-00-X	≤0.85	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311	ATE [Oral] = 100 mg/kg ATE [Dermal] =	[1] [2]

SECTION 3: Composition/information on ingredients

			Acute Tox. 3, H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 1, H370 **See Section 16 for the full text of the H statements declared above.**	300 mg/kg ATE [Inhalation (vapours)] = 3 mg/l STOT SE 1, H370: C ≥ 10% STOT SE 2, H371: 3% ≤ C < 10%	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

SECTION 4: First aid measures

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
Ingestion Seek medical attention.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
carbonyl halides

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurised contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

SECTION 6: Accidental release measures

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurised container: protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Carbon dioxide, gas	**EU OEL (Europe, 10/2019). Notes: list of indicative occupational exposure limit values** TWA: 9000 mg/m³ 8 hours. TWA: 5000 ppm 8 hours.
methanol	**EU OEL (Europe, 10/2019). Absorbed through skin. Notes: list of indicative occupational exposure limit values** TWA: 260 mg/m³ 8 hours. TWA: 200 ppm 8 hours.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
methanol	DNEL	Short term Dermal	8 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	8 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	40 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	50 mg/m³	General population	Local
	DNEL	Long term Inhalation	50 mg/m³	General population	Local
	DNEL	Short term Inhalation	50 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	50 mg/m³	General population	Systemic
	DNEL	Short term Inhalation	260 mg/m³	Workers	Local
	DNEL	Long term Inhalation	260 mg/m³	Workers	Local
	DNEL	Short term Inhalation	260 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	260 mg/m³	Workers	Systemic

PNECs

No PNECs available

8.2 Exposure controls

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Colour : Clear. Colourless.

Odour : Characteristic.

Odour threshold : Not available.

Melting point/freezing point : Not available.

Initial boiling point and boiling range : Not available.

Flammability : Not available.

Lower and upper explosion limit : Not available.

Flash point : Not applicable.

SECTION 9: Physical and chemical properties

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

pH : Not available.

Viscosity : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not applicable.

Vapour pressure :

	Vapour Pressure at 20°C			Vapour pressure at 50°C		
Ingredient name	**mm Hg**	**kPa**	**Method**	**mm Hg**	**kPa**	**Method**
Carbon dioxide, gas	42903.49	5720				
methanol	126.96	16.9				

Relative density : 1.03

Vapour density : Not available.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties : Not applicable

Oxidising properties : Not available.

Aerosol product

Type of aerosol : Spray

Ignition distance : 0 cm

Enclosed space ignition - Time equivalent : 382 s/m³

Enclosed space ignition - Deflagration density : 2355 g/m³

9.2.2 Other safety characteristics

Miscible with water Not available.

Evaporation rate : Not available.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

10.5 Incompatible materials : No specific data.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
trans-dichloroethylene	LC50 Inhalation Gas.	Rat	24100 ppm	4 hours
	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	1235 mg/kg	-
methanol	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-

Conclusion/Summary : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
trans-dichloroethylene	1235	N/A	24100	11	N/A
methanol	100	300	64000	3	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
trans-dichloroethylene	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
methanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	40 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-

Conclusion/Summary : Not available.

Sensitisation

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
methanol	Category 1	-	-

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

SECTION 11: Toxicological information

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled.

Skin contact : Causes skin irritation.

Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
Ingestion Seek medical attention.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
trans-dichloroethylene	Acute LC50 220000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
methanol	Acute EC50 16.912 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 2500000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 3289 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 290 mg/l Fresh water	Fish - Danio rerio - Egg	96 hours
	Chronic NOEC 9.96 mg/l Marine water	Algae - Ulva pertusa	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
trans-dichloroethylene	2.09	-	low
Carbon dioxide, gas	0.83	-	low
methanol	-0.77	<10	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

SECTION 13: Disposal considerations

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN1950	UN1950	UN1950	UN1950
14.2 UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	Aerosols, non-flammable
14.3 Transport hazard class(es)	2 	2 	2.2 	2.2 
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

Additional information

ADR/RID : **Tunnel code** (E)

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Listed

SECTION 15: Regulatory information

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Aerosol dispensers :

3

58.05% by mass of the contents are flammable.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Ingredient name	Status
HFC-365mfc	Annex F, Group I

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : Not determined.

Eurasian Economic Union : **Russian Federation inventory**: Not determined.

Japan : **Japan inventory (CSCL)**: All components are listed or exempted.
Japan inventory (ISHL): Not determined.

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States : All components are active or exempted.

Viet Nam : All components are listed or exempted.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Aerosol 3, H229	On basis of test data
Acute Tox. 4, H302	Calculation method
Acute Tox. 4, H332	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H229	Pressurised container: may burst if heated.
H280	Contains gas under pressure; may explode if heated.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H370	Causes damage to organs.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aerosol 3	AEROSOLS - Category 3
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Press. Gas (Comp.)	GASES UNDER PRESSURE - Compressed gas
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT SE 1	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1

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Date of previous issue : 1/20/2023

Version : 23

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

PRO-POWER AIR DUSTER FLAMMABLE

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 10/01/2025 Revision date: 15/11/2024 Supersedes version of: 29/06/2017 Version: 2.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Substance name : PRO-POWER AIR DUSTER FLAMMABLE
Product code : PPC235
Vaporizer : Aerosol

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Cleaners - Precision

1.3. Details of the supplier of the safety data sheet

Supplier: CPC
Component House Faraday Drive
Fulwood, Preston Lancashire PR2 9PP
https://cpc.farnell.com/
03447 880088
sales@cpc.co.uk productinfo@cpc.co.uk

1.4. Emergency telephone number

Emergency number

Tel.:(+44)(0)3447 880088 (office hours: 9-17h GMT)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aerosol, Category 1 H222;H229
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Pressurised container: May burst if heated. Extremely flammable aerosol.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

Signal word (CLP) : Danger
Hazard statements (CLP) : H222 - Extremely flammable aerosol.
H229 - Pressurised container: May burst if heated.
Precautionary statements (CLP) : P102 - Keep out of reach of children.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 - Do not spray on an open flame or other ignition source.
P251 - Do not pierce or burn, even after use.
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
P501 - Dispose of contents/container to a hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : PROPOWER AIR DUSTER FLAMMABLE

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Petroleum gases, liquefied; Petroleum gas; [A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C3 through C7 and boiling in the range of approximately– 40°C to 80°C (– 40°F to 176°F).]	CAS-No.: 68476-85-7 EC-No.: 270-704-2 EC Index-No.: 649-202-00-6	75 – 100	Flam. Gas 1, H220 Press. Gas (Comp.), H280
propane (Constituent)	CAS-No.: 74-98-6 EC-No.: 200-827-9 EC Index-No.: 601-003-00-5 REACH-no: 01-2119486944-21	25 – 50	Flam. Gas 1, H220 Press. Gas (Liq.), H280
butane (Constituent)	CAS-No.: 106-97-8 EC-No.: 203-448-7 EC Index-No.: 601-004-00-0 REACH-no: 01-2119474691-32	25 – 50	Flam. Gas 1, H220 Press. Gas (Liq.), H280
isobutane (Constituent)	CAS-No.: 75-28-5 EC-No.: 200-857-2 EC Index-No.: 601-004-00-0 REACH-no: 01-2119485395-27	25 – 50	Flam. Gas 1, H220 Press. Gas (Liq.), H280

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If signs/symptoms develop, get medical attention.

First-aid measures after skin contact : Wash skin with plenty of water. Seek medical attention if irritation develops.

First-aid measures after eye contact : Rinse eyes with water as a precaution. Seek medical attention if irritation develops.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable aerosol.

Explosion hazard : Pressurised container: May burst if heated.

Hazardous decomposition products in case of fire : During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Firefighting instructions : Move containers from fire area if it can be done without personal risk. Use standard firefighting procedures and consider the hazards of other involved materials.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment : Wear appropriate protective equipment and clothing during clean-up.

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Following product recovery, flush area with water. Take up small spills with dry chemical absorbent. Clean surface thoroughly to remove residual contamination.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For disposal of contaminated materials refer to section 13 : "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wear personal protective equipment. Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid prolonged exposure. Handle in accordance with good industrial hygiene and safety procedures.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store in a well-ventilated place. Keep cool. Keep container closed when not in use.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

Petroleum gases, liquefied; Petroleum gas; [A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C3 through C7 and boiling in the range of approximately– 40°C to 80°C (– 40°F to 176°F).] (68476-85-7)	
United Kingdom - Occupational Exposure Limits	
Local name	Liquefied petroleum gas
WEL TWA (OEL TWA)	1750 mg/m³
	1000 ppm
WEL STEL (OEL STEL)	2180 mg/m³
	1250 ppm
Remark	Carc (Capable of causing cancer and/or heritable genetic damage (only applies if LPG contains more than 0.1% of buta-1,3-diene))
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

butane (106-97-8)	
United Kingdom - Occupational Exposure Limits	
Local name	Butane
WEL TWA (OEL TWA)	1450 mg/m³
	600 ppm
WEL STEL (OEL STEL)	1810 mg/m³
	750 ppm
Remark	Carc (Capable of causing cancer and/or heritable genetic damage, only applies if Butane contains more than 0.1% of buta-1,3-diene)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal protection equipment

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:
Use eye protection according to EN 166. Safety glasses with side shields.

Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Wear suitable gloves tested to EN374. The breakthrough time of the glove should be longer than the total duration of product use. If work lasts longer than the breakthrough time, gloves should be changed part-way through. Use insulating gloves.

Respiratory protection

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment. Compressed air/oxygen apparatus

Thermal hazards

Thermal hazard protection:
Not expected to present a significant hazard under anticipated conditions of normal use. Wear appropriate thermal protective clothing, when necessary.

Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Colourless.
Appearance	:	Liquified gas.
Odour	:	characteristic.
Odour threshold	:	Not available
Melting point	:	Not applicable
Freezing point	:	Not available
Boiling point	:	-40 °C
Flammability	:	Extremely flammable aerosol.
Explosive properties	:	Pressurised container: May burst if heated.
Lower explosion limit	:	1.4 vol %
Upper explosion limit	:	10.9 vol %
Flash point	:	-60 °C (closed cup)
Auto-ignition temperature	:	365 °C
Decomposition temperature	:	Not available
pH	:	Not available
Viscosity, kinematic	:	Not available
Solubility	:	Insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Partition coefficient n-octanol/water (Log Pow)	:	2.3 – 2.8
Vapour pressure	:	214 – 853 kPa at 40 °C
Vapour pressure at 50°C	:	Not available
Density	:	0.505 g/cm³ at 15°C
Relative density	:	0.505 at 15°C
Relative vapour density at 20°C	:	1.5 at 15°C
Particle characteristics	:	Not applicable

propane (74-98-6)	
Boiling point	-42 °C
Flash point	-105 °C

propane (74-98-6)	
Auto-ignition temperature	450 °C
Vapour pressure	840 kPa

butane (106-97-8)	
Boiling point	-0.5 °C
Flash point	-60 °C
Auto-ignition temperature	365 °C
Vapour pressure	213.7 kPa

isobutane (75-28-5)	
Boiling point	-11.7 °C
Auto-ignition temperature	460 °C
Vapour pressure	2611 mm Hg

9.2. Other information

Information with regard to physical hazard classes

% of flammable ingredients : 100 %

Other safety characteristics

VOC content : 505 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol. Pressurised container: May burst if heated.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Carbon oxides (CO, CO2).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)

Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)

Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)

Serious eye damage/irritation	:	Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitisation	:	Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	:	Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	:	Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	:	Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	:	Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	:	Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	:	Not classified (Based on available data, the classification criteria are not met)

PROPOWER AIR DUSTER FLAMMABLE	
Vaporizer	Aerosol

11.2. Information on other hazards

Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties	:	The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	:	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short–term (acute)	:	Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long–term (chronic)	:	Not classified (Based on available data, the classification criteria are not met)

12.2. Persistence and degradability

PROPOWER AIR DUSTER FLAMMABLE	
Persistence and degradability	Not established. No data is available on the degradability of this product.

12.3. Bioaccumulative potential

PROPOWER AIR DUSTER FLAMMABLE	
Partition coefficient n-octanol/water (Log Pow)	2.3 – 2.8

Petroleum gases, liquefied; Petroleum gas; [A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C3 through C7 and boiling in the range of approximately– 40°C to 80°C (– 40°F to 176°F).] (68476-85-7)	
Partition coefficient n-octanol/water (Log Pow)	2.3

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

PROPOWER AIR DUSTER FLAMMABLE	
Results of PBT assessment	Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

12.7. Other adverse effects

Additional information : No other effects known

Global warming potential (GWP) : 3.00 (Fluorinated greenhouse gases - (EC) No 2024/573)

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

European List of Waste (LoW, EC 2000/532) : According to the European Waste Catalogue (EWC), Waste Codes are not product specific, but application specific Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1950	UN 1950	UN 1950	UN 1950	UN 1950
14.2. UN proper shipping name				
AEROSOLS	AEROSOLS	Aerosols, flammable	AEROSOLS	AEROSOLS
Transport document description				
UN 1950 AEROSOLS, 2.1, (D)	UN 1950 AEROSOLS, 2.1	UN 1950 Aerosols, flammable, 2.1	UN 1950 AEROSOLS, 2.1	UN 1950 AEROSOLS, 2.1
14.3. Transport hazard class(es)				
2.1	2.1	2.1	2.1	2.1
				
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No EmS-No. (Fire): F-D EmS-No. (Spillage): S-U	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR) : 5F

Special provisions (ADR)	:	190, 327, 344, 625
Limited quantities (ADR)	:	1l
Excepted quantities (ADR)	:	E0
Packing instructions (ADR)	:	P207, LP200
Special packing provisions (ADR)	:	PP87, RR6, L2
Mixed packing provisions (ADR)	:	MP9
Transport category (ADR)	:	2
Special provisions for carriage - Packages (ADR)	:	V14
Special provisions for carriage - Loading, unloading and handling (ADR)	:	CV9, CV12
Special provisions for carriage - Operation (ADR)	:	S2
Tunnel restriction code (ADR)	:	D

Transport by sea

Special provisions (IMDG)	:	63, 190, 277, 327, 344, 381, 959
Limited quantities (IMDG)	:	SP277
Excepted quantities (IMDG)	:	E0
Packing instructions (IMDG)	:	P207, LP200
Special packing provisions (IMDG)	:	PP87, L2
Stowage category (IMDG)	:	None
Stowage and handling (IMDG)	:	SW1, SW22
Segregation (IMDG)	:	SG69

Air transport

PCA Excepted quantities (IATA)	:	E0
PCA Limited quantities (IATA)	:	Y203
PCA limited quantity max net quantity (IATA)	:	30kgG
PCA packing instructions (IATA)	:	203
PCA max net quantity (IATA)	:	75kg
CAO packing instructions (IATA)	:	203
CAO max net quantity (IATA)	:	150kg
Special provisions (IATA)	:	A145, A167, A802
ERG code (IATA)	:	10L

Inland waterway transport

Classification code (ADN)	:	5F
Special provisions (ADN)	:	190, 327, 344, 625
Limited quantities (ADN)	:	1 L
Excepted quantities (ADN)	:	E0
Equipment required (ADN)	:	PP, EX, A
Ventilation (ADN)	:	VE01, VE04
Number of blue cones/lights (ADN)	:	1

Rail transport

Classification code (RID)	:	5F
Special provisions (RID)	:	190, 327, 344, 625
Limited quantities (RID)	:	1L
Excepted quantities (RID)	:	E0
Packing instructions (RID)	:	P207, LP200
Special packing provisions (RID)	:	PP87, RR6, L2
Mixed packing provisions (RID)	:	MP9
Transport category (RID)	:	2
Special provisions for carriage – Packages (RID)	:	W14
Special provisions for carriage - Loading, unloading and handling (RID)	:	CW9, CW12
Colis express (express parcels) (RID)	:	CE2
Hazard identification number (RID)	:	23

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

VOC Directive (2004/42)

VOC content : 505 g/l

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level

Abbreviations and acronyms:	
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Full text of H- and EUH-statements:	
Aerosol 1	Aerosol, Category 1
Flam. Gas 1	Flammable gases, Category 1
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
Press. Gas (Comp.)	Gases under pressure : Compressed gas
Press. Gas (Liq.)	Gases under pressure : Liquefied gas

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Apart from any fair dealing for purposes of study, research and review of health, safety and environmental risks, no part of these documents may be reproduced by any process without written permission from CRC. The products are governed by Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP); Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (in each case, as amended and replaced) and other applicable laws. It is an importers or downstream users responsibility to ensure compliance of product they import. An SDS provided in the official language(s) of a country is not a guarantee of compliance in that country.

Cleaning Agents / Solvents



Feature:

- This is a high purity liquefied gas designed for recharging portable gas powered equipment

Applications:

Can be used to refill portable soldering irons, lighters, igniters and glue guns, and any other portable gas powered appliances

Directions:

Invert can and press nozzle firmly into filler valve, using appropriate adaptor if required. Always follow the appliance manufacturer's instructions

Note:

Highly flammable liquefied propellant gas. Do not smoke during use, and avoid contact with naked flames and any ignition source

Warning:

Deliberately inhaling the contents may be harmful or even fatal

Technical Information

Appearance	Gas at room temperature
Odour	Distinctive odour
SG at 25°C	0.546
Pressure at 25°C	4 bar
Flammability	Classified As extremely flammable under CHIP regulations
Flashpoint	Not Applicable In sealed aerosol

Storage:

The product may be stored at normal temperatures and has a shelf life of not less than 36 months with correct storage. Aerosols should always be stored below 50°C, away from direct heat and naked flames

Part Number Table

Description	Part Number
Butane Gas, 200 ml Aerosol	PPC113

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pro-POWER

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture	PROPOWER GLASS CLEANER
Registration number	-
Synonyms	None.
Product code	UDS000144AE

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Cleaners - Heavy duty
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Company name	Premier Farnell plc.
Address	150 Armley Road Leeds LS12 2QQ United Kingdom
Telephone	+44 (0) 870 129 8608
Fax	-
E-mail	
Website	

Company name	Premier Farnell plc.
Address	150 Armley Road Leeds LS12 2QQ United Kingdom
Telephone	+44 (0) 870 129 8608
Fax	
E-mail	
Website	

1.4. Emergency telephone no Tel.: +44 (0) 8447 880088 (office hours: 9-17h GMT)

Austria National Poisons Information Centre	+431 406 4343 (Available 24 hours a day.)
Belgium National Poisons Control Center	070 245 245 (Available 24 hours a day.)
Bulgaria National Toxicological Information Centre	+359 2 9154233 (Available 24 hours a day.)
Czech Republic National Poisons Information Centre	+420 224 919 293, or +420 224 915 402 (Hours of operation not provided.)
Denmark National Poisons Control Center	+45 82 12 12 12 (Available 24 hours a day.)
Estonia National Poisons Information Centre	16662 or abroad: (+372) 626 9390 (Monday 9:00AM to Saturday 9:00AM (closed on Sundays and on national holidays))

Finland National Poison Information Center	(09) 471 977 (direct) or (09) 4711 (exchange) (Available 24 hours a day.)
France National Poisons Control Center	ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (Available 24 hours a day.)
Hungary National Emergency Phone Number	36 80 20 11 99 (Available 24 hours a day.)
Lithuania Neatidėliotina informacija apsinuodijus	+370 5 236 20 52 or +37068753378 (Hours of operation not provided.)
Malta Accident and Emergency Department	2545 4030 (Hours of operation not provided.)
Netherlands National Poisons Information Center (NVIC)	030-274 88 88 (Only for the purpose of informing medical personnel in cases of acute intoxications)
Norway Norwegian Poison Information Center	22 59 13 00 (Available 24 hours a day.)
Portugal Poison Centre	800 250 250 (Available 24 hours a day.)
Romania Număr de telefon care poate fi apelat în caz de urgență:	021 5992300, int. 291 Spitalul Clinic de Urgență București: spital@urgentafloreasca.ro
Romania	0265 212111, 0265 211292, 0265 217235 Spitalul Clinic Județean de Urgență Târgu Mureș: secretariat@spitjudms.ro
Slovakia National Toxicological Information Centre	+421 2 5477 4166 (Available 24 hours a day.)
Sweden National Poison Information Center	112 - and ask for Poison Information (Available 24 hours a day.)
Switzerland Tox Info Suisse	145 (Available 24 hours a day.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards		
Aerosols	Category 1	H222 - Extremely flammable aerosol. H229 - Pressurized container: May burst if heated.
Health hazards		
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Specific target organ toxicity - single exposure	Category 3 narcotic effects	H336 - May cause drowsiness or dizziness.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Propan-2-ol; Isopropyl alcohol; Isopropanol

Hazard pictograms



Signal word Danger

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurized container: May burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements

Prevention

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing mist/vapours.
P271	Use only outdoors or in a well-ventilated area.

Response Not assigned.

Storage

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information According to Regulation (EC) No. 648/2004 on Detergents, as amended; Contains: Aliphatic hydrcarbons 5-15%. perfumes: Hexyl Cinnamal, Hydroxycitronellal

2.3. Other hazards This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Propan-2-ol; Isopropyl alcohol; Isopropanol	30 - 60	67-63-0 200-661-7	01-2119457558-25	603-117-00-0	
Classification:	Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336				
ammonia ….%	0 - 1	1336-21-6 215-647-6	01-2119982985-14	007-001-01-2	
Classification:	Acute Tox. 3;H331;(ATE: 3 mg/l), Skin Corr. 1B;H314, Eye Dam. 1;H318, STOT SE 3;H335, Aquatic Acute 1;H400, Aquatic Chronic 1;H410				B
Specific Concentration Limits:	STOT SE 3;H335: C >= 5 %				

List of abbreviations and symbols that may be used above

#: This substance has been assigned Union workplace exposure limit(s).
ATE: Acute toxicity estimate.
M: M-factor
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison centre or doctor/physician if you feel unwell.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion In the unlikely event of swallowing contact a physician or poison control centre. Rinse mouth.

4.2. Most important symptoms and effects, both acute and delayed May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards Extremely flammable aerosol.

5.1. Extinguishing media

Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
5.2. Special hazards arising from the substance or mixture	Contents under pressure. Pressurised container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Special fire fighting procedures	Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapour pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. In the event of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
For emergency responders	Keep unnecessary personnel away. Avoid breathing mist/vapours. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. This product is miscible in water. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
6.4. Reference to other sections	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Pressurised container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid breathing mist/vapours. Avoid contact with eyes. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Storage class (TRGS 510): 2B (Aerosol dispensers and lighters)
7.3. Specific end use(s)	Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	MAK	500 mg/m3
		200 ppm
	STEL	2000 mg/m3
		800 ppm

Belgium. Exposure Limit Values

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	STEL	36 mg/m3
		50 ppm
	TWA	14 mg/m3
		20 ppm
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	1000 mg/m3
		400 ppm
	TWA	500 mg/m3
		200 ppm

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	1225 mg/m3
	TWA	980 mg/m3

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	MAC	14 mg/m3
		20 ppm
	STEL	36 mg/m3
		50 ppm
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	MAC	999 mg/m3
		400 ppm
	STEL	1250 mg/m3
		500 ppm

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	TWA	980 mg/m3
		400 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	Ceiling	36 mg/m3
	TWA	14 mg/m3
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	Ceiling	1000 mg/m3
	TWA	500 mg/m3

Denmark. Exposure Limit Values

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	TLV	490 mg/m3
		200 ppm

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	600 mg/m3
		250 ppm
	TWA	350 mg/m3
		150 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	STEL	36 mg/m3
		50 ppm
	TWA	14 mg/m3
		20 ppm
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	620 mg/m3
		250 ppm
	TWA	500 mg/m3
		200 ppm

France. OELs. Occupational Exposure Limits as Prescribed by Art. R.4412-149 of Labor Code, as amended

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	VLE	14 mg/m3
		20 ppm
	VME	7 mg/m3
		10 ppm

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	VLE	980 mg/m3
Regulatory status: Indicative limit (VL)		
		400 ppm
Regulatory status: Indicative limit (VL)		

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	TWA	14 mg/m3
		20 ppm
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	TWA	500 mg/m3
		200 ppm

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	AGW	500 mg/m3
		200 ppm

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	1225 mg/m3

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value
		500 ppm
	TWA	980 mg/m3
		400 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	STEL	36 mg/m3
	TWA	14 mg/m3
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	1000 mg/m3
	TWA	500 mg/m3

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	STEL	36 mg/m3
		50 ppm
	TWA	14 mg/m3
		20 ppm
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	TWA	490 mg/m3
		200 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	STEL	36 mg/m3
		50 ppm
	TWA	14 mg/m3
		20 ppm
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Italy. Occupational Exposure Limits

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	STEL	36 mg/m3
		50 ppm
	TWA	14 mg/m3
		20 ppm
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	600 mg/m3
	TWA	350 mg/m3

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	STEL	36 mg/m3
		50 ppm
	TWA	14 mg/m3
		20 ppm
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	600 mg/m3
		250 ppm
	TWA	350 mg/m3
		150 ppm

Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	STEL	36 mg/m3
		50 ppm
	TWA	14 mg/m3
		20 ppm

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	STEL	36 mg/m3
		50 ppm
	TWA	14 mg/m3
		20 ppm

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	TLV	245 mg/m3
		100 ppm

Poland. Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	1200 mg/m3
	TWA	900 mg/m3

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	STEL	35 ppm
	TWA	25 ppm
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	STEL	36 mg/m3
		50 ppm
	TWA	14 mg/m3

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value
		20 ppm
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	500 mg/m3
		203 ppm
	TWA	200 mg/m3
		81 ppm

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	1000 mg/m3
		400 ppm
	TWA	500 mg/m3
		200 ppm

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Components	Type	Value
ammonia ….% (CAS 1336-21-6)	TWA	14 mg/m3
		20 ppm
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	TWA	500 mg/m3
		200 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	1000 mg/m3
		400 ppm
	TWA	500 mg/m3
		200 ppm

Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	600 mg/m3
		250 ppm
	TWA	350 mg/m3
		150 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	1000 mg/m3
		400 ppm
	TWA	500 mg/m3
		200 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	STEL	1250 mg/m3

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
		500 ppm
	TWA	999 mg/m3
		400 ppm

Biological limit values

Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)

Components	Value	Determinant	Specimen	Sampling Time
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	50 mg/l	Acetone	Urine	*
	50 mg/l	Acetone	Blood	*
	0,86 umol/l	Acetone	Urine	*
	0,86 umol/l	Acetone	Blood	*

* - For sampling details, please see the source document.

Germany. TRGS 903, BAT List (Biological Limit Values)

Components	Value	Determinant	Specimen	Sampling Time
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	25 mg/l	ACETON	Urine	*
	25 mg/l	ACETON	Blood	*

* - For sampling details, please see the source document.

Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices

Components	Value	Determinant	Specimen	Sampling Time
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	430 µmol/l	Acetone	Urine	*
	25 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4

Components	Value	Determinant	Specimen	Sampling Time
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	40 mg/l	Acetona	Urine	*

* - For sampling details, please see the source document.

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

Components	Value	Determinant	Specimen	Sampling Time
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	25 mg/l	ACETON	Urine	*
	25 mg/l	ACETON	Blood	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs)

General population

Components	Value	Assessment factor	Notes
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)			
Long-term, Systemic, Dermal	319 mg/kg bw/day	2	Repeated dose toxicity
Long-term, Systemic, Inhalation	89 mg/m3	2	Repeated dose toxicity
Long-term, Systemic, Oral	26 mg/kg bw/day	2	Repeated dose toxicity

Workers

Components	Value	Assessment factor	Notes
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)			
Long-term, Systemic, Dermal	888 mg/kg bw/day	1	
Long-term, Systemic, Inhalation	500 mg/m3	1	

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)			
Freshwater	140,9 mg/l	1	
Secondary poisoning	160 mg/kg	30	Oral
Sediment (freshwater)	552 mg/kg		
Soil	28 mg/kg		

Exposure guidelines

Cyprus OEL: Skin designation

Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	Can be absorbed through the skin.

Hungary OELs: Skin designation

Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	Can be absorbed through the skin.

Iceland OELs: Skin designation

ammonia ….% (CAS 1336-21-6)	Can be absorbed through the skin.
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	Can be absorbed through the skin.

Ireland Exposure Limit Values: Skin designation

Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection conforming to EN 166.

Skin protection

- Hand protection When handling the product wear chemical-resistant gloves (standard EN 374). The breakthrough time of the glove should be longer than the total duration of product use. If work lasts longer than the breakthrough time, gloves should be changed part-way through. Nitrile gloves are recommended. Suitable gloves can be recommended by the glove supplier.

- Other Wear suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Chemical respirator with organic vapour cartridge and full facepiece. (Filter type A)

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental exposure controls Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Liquid.

Form Aerosol.

Colour Colourless.

Odour Characteristic odor.

Melting point/freezing point Not available.

Boiling point or initial boiling point and boiling range 82 °C (179,6 °F)

Flammability Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) 1,8 %

Explosive limit – upper (%) 12 %

Flash point	12,0 °C (53,6 °F)
Auto-ignition temperature	460 °C (860 °F)
Decomposition temperature	Not available.
pH	Not available.
Kinematic viscosity	Not available.
Solubility	
Solubility (water)	Miscible with water
Partition coefficient (n-octanol/water) (log value)	Not available.
Vapour pressure	Not available.
Density and/or relative density	
Relative density	0,93 g/cm3 20 °C
Vapour density	Not available.
Particle characteristics	Not available.
9.2. Other information	
9.2.1. Information with regard to physical hazard classes	No relevant additional information available.
9.2.2. Other safety characteristics	
Evaporation rate	Not available.
VOC	412 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
10.5. Incompatible materials	Acids. Strong oxidising agents. Chlorine. Isocyanates.
10.6. Hazardous decomposition products	Carbon oxides.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.
Information on likely routes of exposure	
Inhalation	May cause drowsiness or dizziness. Headache. Nausea, vomiting. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Prolonged inhalation may be harmful.
Skin contact	May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
Symptoms	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

11.1. Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Components	Species	Test Results
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)		
Acute		
Inhalation		
LC50	Rat	> 25000 mg/m3, 6 h

Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitisation	Based on available data, the classification criteria are not met.
Skin sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

Not listed.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Not likely, due to the form of the product.

Mixture versus substance information Not available.

11.2. Information on other hazards

Endocrine disrupting properties The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other information May cause allergic respiratory and skin reactions.

SECTION 12: Ecological information

12.1. Toxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
ammonia ….% (CAS 1336-21-6)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia magna	101 mg/l, 96 hours
Fish	LC50	Fish	0,89 mg/l, 96 hours
Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)			
Aquatic			
Acute			
Crustacea	LC50	Brine shrimp (Artemia salina)	> 10000 mg/l, 24 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/l, 96 hours

12.2. Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

ammonia ….%	-2,66
Propan-2-ol; Isopropyl alcohol; Isopropanol	0,05

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.

12.6. Endocrine disrupting properties The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.
GWP: 0

Substance Global Warming Potential per (Annex IV), Regulation 517/2014/EU on fluorinated greenhouse gases, as amended

ammonia ….% (CAS 1336-21-6)	0

12.8. Additional information

Estonia Dangerous substances in soil Data

Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)	Chemical pesticides (As the total sum of the active substances) 0,5 mg/kg Chemical pesticides (As the total sum of the active substances) 20 mg/kg Chemical pesticides (As the total sum of the active substances) 5 mg/kg

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN1950
14.2. UN proper shipping name	AEROSOLS, flammable
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	Not assigned.
Label(s)	2.1
Hazard No. (ADR)	Not assigned.
Tunnel restriction code	D
ADR/RID - Classification code:	5F
14.4. Packing group	Not assigned.
14.5. Environmental hazards	No
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	Not assigned.
14.4. Packing group	Not assigned.
14.5. Environmental hazards	No
ERG Code	10L
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	Not assigned.
14.4. Packing group	Not assigned.
14.5. Environmental hazards	
Marine pollutant	No
EmS	F-D, S-U
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

14.7. Maritime transport in bulk according to IMO instruments Not established.

ADR; IATA; IMDG



SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

ammonia ….% (CAS 1336-21-6)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

ammonia ….% (CAS 1336-21-6)

Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

ammonia ….% (CAS 1336-21-6)

Propan-2-ol; Isopropyl alcohol; Isopropanol (CAS 67-63-0)

Other regulations	The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.
National regulations	Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.
15.2. Chemical safety assessment	No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road.
AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).
ATE: Acute Toxicity Estimate according to REGULATION (EC) No 1272/2008 (CLP).
CAS: Chemical Abstract Service.
Ceiling: Short Term Exposure Limit Ceiling value.

CEN: European Committee for Standardization.
CLP: Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.
GWP: Global Warming Potential.
IATA: International Air Transport Association.
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.
IMDG: International Maritime Dangerous Goods.
MAC: Maximum Allowed Concentration.
MAK: Threshold limit values Germany (Maximale Arbeitsplatzkonzentration - DFG).
MARPOL: International Convention for the Prevention of Pollution from Ships.
PBT: Persistent, bioaccumulative and toxic.
REACH: Registration, Evaluation and Authorization of Chemicals (REGULATION (EC) No 1907/2006 concerning Registration, Evaluation Authorization and Restriction of Chemicals).
RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer).
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
STEL: Short term exposure limit.
TLV: Threshold Limit Value.
TWA: Time Weighted Average.
VLE: Exposure Limit Value.
VME: Exposure Average Value.
VOC: Volatile organic compounds.
vPvB: Very persistent and very bioaccumulative.
STEL: Short-term Exposure Limit.

References Not available.

Information on evaluation method leading to the classification of mixture The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements, which are not written out in full under sections 2 to 15

H225 Highly flammable liquid and vapour.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Revision information None.

Training information Follow training instructions when handling this material.

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SAFETY DATA SHEET

Ronsonol - Lighter fluid

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	Ronsonol - Lighter fluid
Chemical name	Aliphatic hydrocarbon,Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics
Container size	133mL
REACH registration number	01-2119473851-33-0000
CAS number	64742-49-0
EU index number	649-328-00-1
EC number	920-750-0

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Petroleum lighter refill
Uses advised against	No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier	Aerosol Ltd Unit E2 Haydock cross industrial Estate Killbuck lane wa11 9ux 01942271999
Contact person	Adam@aerosolltd.co.uk

1.4. Emergency telephone number

Emergency telephone	+44 (0)1942 271999 (Mon-Fri 08:00-17:00)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Flam. Liq. 2 - H225
Health hazards	Skin Irrit. 2 - H315 STOT SE 3 - H335 Asp. Tox. 1 - H304
Environmental hazards	Aquatic Chronic 2 - H411

2.2. Label elements

EC number 920-750-0

Pictogram



Signal word Danger

Ronsonol - Lighter fluid

Hazard statements

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing vapour/ spray.
P264 Wash contaminated skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P312 Call a POISON CENTRE/doctor if you feel unwell.
P331 Do NOT induce vomiting.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/ container in accordance with local regulations.

Supplementary precautionary statements

P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P321 Specific treatment (see medical advice on this label).
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
P391 Collect spillage.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name Ronsonol - Lighter fluid

Chemical name Aliphatic hydrocarbon,Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

REACH registration number 01-2119473851-33-0000

EU index number 649-328-00-1

CAS number 64742-49-0

EC number 920-750-0

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

Ronsonol - Lighter fluid

Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention. Place unconscious person on their side in the recovery position and ensure breathing can take place.
Ingestion	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention if symptoms are severe or persist. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately.
Skin contact	Rinse with water.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

4.2. Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing.
Ingestion	May cause irritation. Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
Skin contact	Redness. Irritating to skin.
Eye contact	No specific symptoms known. May be slightly irritating to eyes.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up. Flammable liquid and vapour. Vapours may be ignited by a spark, a hot surface or an ember. Vapours may form explosive mixtures with air. Fire-water run-off in sewers may create fire or explosion hazard.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

5.3. Advice for firefighters

Ronsonol - Lighter fluid

Protective actions during firefighting Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Evacuate area. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Promptly remove any clothing that becomes contaminated. Avoid inhalation of vapours and spray/mists. Use suitable respiratory protection if ventilation is inadequate.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Do not allow material to enter confined spaces, due to the risk of explosion. Absorb small quantities with paper towels and evaporate in a safe place. Once evaporation is complete, place paper in a suitable waste disposal container and seal securely. Large Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. The contaminated absorbent may pose the same hazard as the spilled material. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ronsonol - Lighter fluid

Usage precautions Keep out of the reach of children. Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. The product is flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs. Keep away from oxidising materials, heat and flames. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Long-term exposure limit (8-hour TWA): WEL 1200 mg/m³

WEL = Workplace Exposure Limit

DNEL

Industry - Dermal; Long term systemic effects: 773 mg/kg/day
Industry - Inhalation; Long term systemic effects: 2035 mg/m³
Consumer - Dermal; Long term systemic effects: 699 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 608 mg/m³

8.2. Exposure controls

Protective equipment



Appropriate engineering controls Provide adequate ventilation.

Eye/face protection Avoid contact with eyes. Large Spillages: Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.

Hand protection Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection Wear appropriate clothing to prevent repeated or prolonged skin contact.

Ronsonol - Lighter fluid

Hygiene measures	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.
Respiratory protection	No specific recommendations. Provide adequate ventilation. Large Spillages: If ventilation is inadequate, suitable respiratory protection must be worn.
Environmental exposure controls	Keep container tightly sealed when not in use. Avoid release to the environment.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Clear, yellowish liquid.
Colour	Colourless to pale yellow.
Odour	Characteristic.
pH	No information available.
Melting point	<-20°C
Initial boiling point and range	90 - 165°C @ 760 mm Hg
Flash point	2°C Closed cup.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	0.71 - 0.78 @ 20°C
Solubility(ies)	No information available.
Partition coefficient	No information available.
Auto-ignition temperature	260°C
Decomposition Temperature	No information available.
Viscosity	0.55 cSt @ 40°C
Explosive properties	No information available.
Oxidising properties	Not available.

9.2. Other information

Other information	No information required.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	See the other subsections of this section for further details.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

Ronsonol - Lighter fluid

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions The following materials may react strongly with the product: Oxidising agents.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Containers can burst violently or explode when heated, due to excessive pressure build-up. Static electricity and formation of sparks must be prevented.

10.5. Incompatible materials

Materials to avoid Oxidising materials. Acids - oxidising.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50}) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50}) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l) 23.3

Species Rat

Notes (inhalation LC_{50}) Based on available data the classification criteria are not met.

ATE inhalation (vapours mg/l) 23.3

Skin corrosion/irritation

Animal data Irritating.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

IARC carcinogenicity None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Ronsonol - Lighter fluid

Reproductive toxicity - development	Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure	STOT SE 3 - H335 May cause respiratory irritation.
Target organs	Respiratory system, lungs

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard	Asp. Tox. 1 - H304 May be fatal if swallowed and enters airways. Pneumonia may be the result if vomited material containing solvents reaches the lungs.

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing.
Ingestion	May cause irritation. Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
Skin contact	Redness. Irritating to skin.
Eye contact	No specific symptoms known.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target organs	Respiratory system, lungs

SECTION 12: Ecological Information

Ecotoxicity	Not considered to be a significant hazard due to the small quantities used.

12.1. Toxicity

Toxicity	Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 3 mg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 4.6 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: >10 mg/l, Algae

Chronic aquatic toxicity

Chronic toxicity - fish early life stage	NOEC, 28 days: 0.574 mg/l,
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 1 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability	The degradability of the product is not known.
Biodegradation	- Degradation 98: 28 days

12.3. Bioaccumulative potential

Ronsonol - Lighter fluid

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

12.4. Mobility in soil

Mobility No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

14.1. UN number

UN No. (ADR/RID) 3295

UN No. (IMDG) 3295

UN No. (ICAO) 3295

UN No. (ADN) 3295

14.2. UN proper shipping name

Proper shipping name (ADR/RID) HYDROCARBONS, LIQUID, N.O.S.

Proper shipping name (IMDG) HYDROCARBONS, LIQUID, N.O.S.

Proper shipping name (ICAO) HYDROCARBONS, LIQUID, N.O.S.

Proper shipping name (ADN) HYDROCARBONS, LIQUID, N.O.S.

14.3. Transport hazard class(es)

ADR/RID class 3

ADR/RID classification code F1

ADR/RID label 3

IMDG class 3

ICAO class/division 3

Ronsonol - Lighter fluid

ADN class 3

Transport labels



14.4. Packing group

ADR/RID packing group III

IMDG packing group III

ADN packing group III

ICAO packing group III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS F-E, S-D

ADR transport category 3

Emergency Action Code 3Y

Hazard Identification Number (ADR/RID) 30

Tunnel restriction code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations Health and Safety at Work etc. Act 1974 (as amended).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
EH40/2005 Workplace exposure limits.

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS
None of the ingredients are listed or exempt.

Ronsonol - Lighter fluid

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service.
ATE: Acute Toxicity Estimate.
LC_{50}: Lethal Concentration to 50 % of a test population.
LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose).
EC_{50}: 50% of maximal Effective Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations and acronyms

Flam. Liq. = Flammable liquid
Asp. Tox. = Aspiration hazard
Skin Irrit. = Skin irritation
STOT SE = Specific target organ toxicity-single exposure
Aquatic Chronic = Hazardous to the aquatic environment (chronic)

General information

This product is considered to be a small package and is labelled according to the relevant provisions of the legislation.

Classification procedures according to Regulation (EC) 1272/2008

Asp. Tox. 1 - H304: STOT SE 3 - H335: Skin Irrit. 2 - H315: : Expert judgement. Aquatic Chronic 2 - H411: : Expert judgement. Flam. Liq. 2 - H225: : Expert judgement.

Training advice

Read and follow manufacturer's recommendations.

Revision date

19/01/2018

Revision

1

SDS number

4851

Hazard statements in full

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

Rosco Laboratories Inc.
52 Harbor View Avenue
Stamford, CT, USA, 06902
Phone: (203) 708 8900

This safety data sheet complies with the requirements of CLP regulation EU 1272/2008.

Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard,
29 CFR 1910.1200. Standard must be
consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

Section I: Product and Company Identification

IDENTITY *(As Used on Label and List)* **Lens Cleaner**	**UFI:** N/A
Manufactured for Rosco Laboratories Inc	24-hour Emergency Telephone Contact Number CHEMTREC Domestic North America: **800-424-9300**
Address *(Number, Street, City, State, and ZIP Code)* 52 Harbor View Avenue, Stamford, CT 06902	**Telephone Number for Information** (203) 708 8900
Date Prepared March, 2023	**Date Updated:** May, 2025

Section II: Hazard(s) Identification

Hazardous Components (Specific Chemical Identity; Common Name(s))	**OSHA PEL**	**ACGIH TLV**	**Other Limits Recommended**
Ethanol (CAS:64-17-5) 			
HMIS Rating: Health:1, Flammability: 2, Reactivity: 0			
Routes of Exposure: Eye contact, Skin Contact, Ingestion, Inhalation			
Health Hazards *(Acute and Chronic)* **Hazard Statements** – H302: Harmful if swallowed H315+H320: Causes skin and eye irritation H335: May cause respiratory irritation H226: Flammable liquid and vapor **Precautionary Statements** – P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. P302+352: IF ON SKIN: Wash with plenty of water. P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing P315: Get immediate medical advice/attention.			

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Lens Cleaner

Section II - Hazard(s) Identification (Continued)

Signs and Symptoms of Exposure None known
Medical Conditions Generally Aggravated by Exposure None known

Section III – Composition / Information on Ingredients

Ingredient	CAS Number	% by Weight	ACGIH TLV		OSHA PEL	
			TWA	STEL	PEL	STEL
Ethanol	64-17-5	5 - 20	1000ppm TWA	N/Av	1000ppm TWA:1900 Mg/m3 TWA	N/Av

Section IV: First Aid Measures

Eyes: Flush eyes thoroughly with running water for at least 20 minutes, holding eyelids open to ensure complete flushing. If irritation persists, seek prompt medical attention.
Skin: Remove and wash contaminated clothing before re-use. Wash affected areas with soap and water.
Inhalation: If inhaled, move to fresh air. If irritation persists, seek prompt medical attention.
Ingestion: Do not induce vomiting without medical advice. Drink 1 or 2 glasses of water. Call a physician immediately. Clean mouth with water and drink afterwards plenty of water.

Lens Cleaner

Section V: Fire – Fighting Measures

Flash Point (Method Used)	Flammable Limits	LEL	UEL
44°C (111 °F) (CCC)	N/A	N/A	N/A

Extinguishing Media
Use water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

Special Fire Fighting Procedures
Wear self-contained breathing apparatus and full protective clothing

Unusual Fire and Explosion Hazards
Keep containers tightly closed, isolate from heat, sparks and open flames.

Section VI: Accidental Release Measures

Personal Precautions:
Isolate area. Keep unnecessary personnel away.

Environmental precautions:
Stop spill/release if it can be done safely. Prevent from entering drains, sewers, waterways, or any place where accumulation may occur. If necessary, dike well ahead of the spill to prevent runoff.

Method for Clean Up:
Soak up with inert absorbent material (e.g. sand, silica gel, sawdust). Keep in suitable, well labelled and closed containers for disposal.

Section VII: Handling and Storage

Handling
Keep out of the reach of children. Avoid breathing vapors, contact with eyes, skin and clothing. Do not ingest. Wash hands thoroughly after handling. Use only with adequate ventilation.

Storing
Keep tightly closed and well labelled. Store in a cool, dry, well-ventilated area. Do not freeze. Keep away from heat.

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Lens Cleaner

Section VIII: Exposure Controls/Personal Protection

Respiratory Protection *(Specify Type)* Not normally needed.		
Ventilation General	**Local Exhaust** To capture hot fumes.	**Special**
	Mechanical *(General)*	**Other**
Protective Gloves Chemical Resistant gloves		**Eye Protection** Chemical goggles
Other Protective Clothing or Equipment Suitable protective clothing.		
Work/Hygienic Practices: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking		

Section IX: Physical and Chemical Properties

Boiling Point	N/A	**Specific Gravity (H_2O = 1)**	0.96 – 0.99
Vapor Pressure (mm Hg.)	N/A	**pH**	N/A
Vapor Density (AIR = 1)	N/A	**Evaporation Rate (Butyl Acetate = 1)**	Slower than ether
Flash Point (Method Used): 44°C (111 °F) (CCC)			
Solubility in Water: Complete			
Physical State: Liquid			
Appearance: Light Blue			
Odor: Slight alcohol odor			
Other Information: **Oxidizing Properties:** None			

Lens Cleaner

Section X: Stability and Reactivity

Stability:	Stable under normal conditions	**Hazardous Polymerization:**	Will Not Occur
Incompatibility (Materials to Avoid): Strong oxidizing agents			
Conditions to Avoid: High temperatures. Fire or intense heat may cause violent rupture of packages.			
Possibility of Hazardous Reactions: Will not occur			
Hazardous Decomposition Products: Oxides of Carbon			

Section XI: Toxicological Information

Classification acc. to GHS

Acute toxicity: Shall not be classified as acutely toxic.
Skin corrosion/irritation: Shall not be classified as corrosive/irritant to skin.
Serious eye damage/eye irritation: Causes serious eye irritation.
Respiratory or skin sensitization: Shall not be classified as a respiratory or skin sensitizer.
Germ cell mutagenicity: Shall not be classified as germ cell mutagenic
Reproductive toxicity: Effects reported on human embryo and fetus with exposure to ethanol
Specific target organ toxicity - single exposure: Shall not be classified as a specific target organ toxicant (single exposure).
Specific target organ toxicity - repeated exposure: Shall not be classified as a specific target organ toxicant (repeated exposure).
Aspiration hazard: Shall not be classified as presenting an aspiration hazard.

Carcinogenicity/Other Information:
None of the components are listed by: **NTP, IARC, ACGIH, OSHA**

Lens Cleaner

Section XII: Ecological Information

Toxicity: Shall not be classified as hazardous to the aquatic environment
Biodegradability: The substance is readily biodegradable.
Bio-accumulative potential: Data are not available.
Endocrine disrupting properties: Not available
Additional ecological information: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Section XIII: Disposal Considerations

Disposal Recommendations: Disposal must be in accordance with current applicable local, state and Federal laws and regulations.

Lens Cleaner

Section XIV: Transportation

Land (DOT): UN1170, Class 3, Packaging Group III May be shipped as LIMITED QUANTITY in containers of less than 1.0 L
Land (TDG): Not regulated for Land Transport UN1170, Class 3, Packaging Group III May be shipped as LIMITED QUANTITY in containers of less than 1.0 L in packages not exceeding 30 kg gross mass.
Land (ADR): Not regulated for Land Transport UN1170, Class 3, Packaging Group III May be shipped as LIMITED QUANTITY in containers of less than 1.0 L
Sea (IMDG): UN1170, Class 3, Packaging Group III Packing Code: P001 Packing Special Provisions: P IBC Code: IBC02 IBC Special Provision: - IMO Tank Instructions: T1 UN Tank Instructions: T4 Tank Special Provisions: TP1
Air (IATA): UN1170, Class 3, Packaging Group III
Maritime transport in Bulk according to IMO Instruments: Not applicable

Section XV: Regulatory Information

OSHA Hazard Communication Standard: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.
EPCRA: This material contains no extremely hazardous substances.
SARA (311/312) Reportable Hazard Categories: Flammable
SARA (313) Toxic Release Inventory: This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.
US State Right to Know Laws: NJ, MA, PA. Ethanol CAS#64-17-5 **The Following Ingredients are Cited on the Lists Below:** Ethanol CAS#64-17-5 AICS, IECSC, EINECS, KECI, TSCA, PICCS

Lens Cleaner

Section XVI: Other Information

Other Special Considerations:
None

Shelf Life:
The product has a shelf life of 24 months if it remains unopened, and 12 months once opened with the packaging securely closed. It should be stored out of direct sunlight and kept in an environment with minimal temperature fluctuations.

Disclaimer: This information is to the best of our knowledge and belief, accurate and reliable as of the date complied. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

Safety data sheet

according to Regulation (EC) 2020/878

Printing date 20.01.2025 Version number 1.00 Revision: 11.12.2024

* SECTION 1: Identification of the substance/mixture and of the company/ undertaking

· 1.1 Product identifier

· **Trade name: RS Pro IPA Cleaner**

· **Related Part Number:** RS 136-8530
· **UFI:** A3UC-401T-U002-XH12

· 1.2 Relevant identified uses of the substance or mixture and uses advised against

· **Application of the substance / the mixture** Solvents
· **Uses advised against** Not available

· 1.3 Details of the supplier of the safety data sheet

· **Manufacturer/Supplier:**
RS Components Ltd
Birchington Road
Corby
Northants
NN17 9RS
Great Britain
Tel: +44 (0) 845 850 9900
RCustomerservicesUK@rs-components.com
Glenview Industrial Estate
Herberton Road
Rialto
Dublin 12
Ireland
+353 (0) 1 415 3100
enquiries.ie@rs-components.com

· **Further information obtainable from:** RCustomerservicesUK@rs-components.com

· 1.4 Emergency telephone number:

POISON CENTER INFORMATION
GB: UK NPIS 0344 892 0111 (for Healthcare Providers only)
Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111
IE: National Poisons Information Centre: +353 (1) 809 2166
(8.00 a.m. to 10.00 p.m. 7 days a week)
Healthcare Professionals: +353 (1) 809 2566 (24 hour service)

+44 1865 407 333 (24hr)
+44 1235 239670 (24hr)

* SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

(Contd. on page 2)

(Contd. of page 1)


GHS07

Eye Irrit. 2	H319	Causes serious eye irritation.
STOT SE 3	H336	May cause drowsiness or dizziness.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms**


GHS02 GHS07

· **Signal word** Danger

· **Hazard-determining components of labelling:**
Propan-2-ol
· **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
· **Precautionary statements**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
P501	Dispose of contents and container in accordance with local, regional, and national regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Determination of endocrine-disrupting properties** Endocrine Disruptor substance ≥ 0.1% = none

*
SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**		
CAS: 67-63-0 EINECS: 200-661-7	Propan-2-ol Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	≥50.0%
CAS: 124-38-9 EINECS: 204-696-9	carbon dioxide Press. Gas (Liq.), H280	≥1–<5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

(Contd. on page 3)

Safety data sheet
according to Regulation (EC) 2020/878

Printing date 20.01.2025 Version number 1.00 Revision: 11.12.2024

Trade name: RS Pro IPA Cleaner

(Contd. of page 2)

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **After inhalation:**
Remove person to fresh air and keep comfortable for breathing.
If feeling unwell: Call a POISON CENTRE or doctor.
· **After skin contact:**
Wash with plenty of water or shower.
Take off contaminated clothing and wash it before reuse.
· **After eye contact:**
Rinse cautiously with water for 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice or attention.
· **After swallowing:**
Rinse mouth.
Do NOT induce vomiting.
If symptoms persist consult doctor.

· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

*
SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use water spray to cool containers.

· **5.2 Special hazards arising from the substance or mixture**
Prevent fire-fighting wash from entering waterway or sewer system.
Aerosols containers may erupt with force at temperatures above 50 °C [122 °F].
Vapors are heavier than air. Vapors may travel to sources of ignition near the ground. They can cause flash fire or ignite explosively.
· **Hazardous combustion products:** Carbon Oxides (COx)

· **5.3 Advice for firefighters**
· **Protective equipment:** Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Remove or keep away all sources of extreme heat or open flames.
Avoid breathing mist, spray, or vapors.

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**
Collect liquid in a sealable, chemical-resistant container.
Wash residue with a paper towel and place dirty towels in container.
Use soap and water to remove the last traces of residue.

· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Wear protective gloves and eye protection.
Wash hands and exposed skin thoroughly after handling.
Take off contaminated clothing and wash it before reuse.
Avoid breathing mist, spray, or vapors.
Use only outdoors or in a well-ventilated area.
Do not pierce or burn, even after use.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
Do not spray onto a naked flame or any incandescent material.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurised containers.
Keep in a dry and clean area, away from incompatible substances
Store in a well-ventilated place. Keep cool.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep container tightly sealed.
Protect from heat and direct sunlight.
Do not expose to temperatures exceeding 50 °C [122 °F].
Store locked up.

· **7.3 Specific end use(s)** See section 1.2

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
67-63-0 Propan-2-ol	
WEL (Great Britain)	Short-term value: 1250 mg/m³, 500 ppm Long-term value: 999 mg/m³, 400 ppm
OEL (Ireland)	Short-term value: 400 ppm Long-term value: 200 ppm Skin
124-38-9 carbon dioxide	
WEL (Great Britain)	Short-term value: 27400 mg/m³, 15000 ppm Long-term value: 9150 mg/m³, 5000 ppm
OEL (Ireland)	Long-term value: 9000 mg/m³, 5000 ppm IOELV

· **Additional information:**
The lists valid during the making were used as basis.
Refer to the national or regional occupational exposure limit regulation for abbreviations and acronyms.

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.

(Contd. on page 5)

(Contd. of page 4)

Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.

· **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Advice should be sought from respiratory protection specialists.
If the product is heated or worker has a known allergic reaction, consider using a full mask with organic vapor cartridge or with an independent air supply.

· **Hand protection**



Protective gloves: EN374

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face protection**



Safety glasses or tightly sealed goggles: EN 166

*
SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **Physical state**	Aerosol (gas+liquid)
· **Form:**	Liquid, in aerosol format.
· **Colour:**	Colourless
· **Odour:**	Alcohol-like
· **Odour threshold:**	Not available
· **Boiling point or initial boiling point and boiling range**	82 °C (67-63-0 Propan-2-ol)
· **Flammability**	Not applicable.
· **Lower and upper explosion limit**	
· **Lower:**	2 Vol % (67-63-0 Propan-2-ol)
· **Upper:**	12 Vol % (67-63-0 Propan-2-ol)
· **Flash point:**	12 °C (67-63-0 Propan-2-ol)
· **Auto-ignition temperature:**	425 °C (67-63-0 Propan-2-ol)
· **Solubility**	
· **water:**	Fully miscible.
· **Vapour pressure at 20 °C:**	43 hPa (67-63-0 Propan-2-ol)
· **Relative density:**	Not available
· **Vapour density (air=1):**	Not available
· **Particle characteristics**	Not available

(Contd. on page 6)

(Contd. of page 5)

· **9.2 Other information**

· **9.2.1 Information with regard to physical hazard classes**

· **Aerosols**	Extremely flammable aerosol. Pressurised container: May burst if heated.
· **9.2.2 Other safety characteristics**	
· **Ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Solvent content:**	
· **Organic solvents:**	≥50.00 %
· **VOC (EC)**	≥50.00 %
· **Molecular weight**	60 g/mol

SECTION 10: Stability and reactivity

· **10.1 Reactivity** At elevated temperatures, may react with aluminum and generate hydrogen gas.

· **10.2 Chemical stability** Chemically stable at normal temperatures and pressures.

· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions** No dangerous reactions known.

· **10.4 Conditions to avoid** Temperatures above 50 °C, open flames, and incompatible substances

· **10.5 Incompatible materials:**
Strong acids
Strong bases
Halogenated compounds
Strong oxidizing agents
Aluminum at temperatures ≥49 °C

· **10.6 Hazardous decomposition products:** Hazardous combustion products: see section 5.

* SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
67-63-0 Propan-2-ol		
Oral	LD50	5,045 mg/kg (rat)
Dermal	LD50	12,800 mg/kg (rabbit)
Inhalative	LC50/4 h	30 mg/L (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Causes serious eye irritation.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** May cause drowsiness or dizziness.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

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· **Summary of Effects and Symptoms by Routes of Exposure**
· **Eyes:**
redness, serious irritation
pain
tearing of the eyes
· **Skin:**
dry skin
redness
· **Inhalation:**
dizziness or drowsiness
Severe overexposure may lead to unconsciousness.
narcotic effects
weakness
headache
· **Swallowed:**
May be harmful if swallowed.
see inhalation symptoms
· **Additional toxicological information:**
· **Delayed and immediate effects as well as chronic effects from short and long-term exposure**
Prolonged or repeated exposure may defat skin and cause skin dryness and cracking, and local redness and discomfort.

· **11.2 Information on other hazards**

· **Endocrine disrupting properties**
None of the ingredients is listed.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
67-63-0 Propan-2-ol	
EC50/ 24 h	5,102 mg/L (daphnia)
EC50/ 72 h	>2,000 mg/L (algae)
LC50 96h	9,640 mg/L (minnow)

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects**
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation** This material and its container must be disposed of as hazardous waste.

· **European waste catalogue**	
HP3	Flammable
HP4	Irritant - skin irritation and eye damage
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

· **Uncleaned packaging:**
· **Recommendation:**
Containers may still present a chemical hazard/ danger when empty.
Dispose of contents in accordance with all local, regional, national, and international regulations.
Where possible retain label warnings and SDS and observe all notices pertaining to the product.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, IMDG, IATA** UN1950

· **14.2 UN proper shipping name**
· **ADR, IMDG** AEROSOLS
· **IATA** Aerosols, flammable

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class** 2 5F Gases.
· **Label** 2.1

· **IMDG, IATA**



· **Class** 2.1 Gases.
· **Label** 2.1

· **14.4 Packing group**
· **ADR, IMDG, IATA** Not applicable

· **14.5 Environmental hazards:** Not applicable.

· **14.6 Special precautions for user** Not applicable.
· **Hazard identification number (Kemler code):** -
· **EMS Number:** F-D,S-U

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· **Stowage Code**	SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· **Segregation Code**	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E0 Not permitted as Excepted Quantity
· **Transport category**	2
· **Tunnel restriction code**	D
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E0 Not permitted as Excepted Quantity
· **UN "Model Regulation":**	UN 1950 AEROSOLS, 2.1

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Poisons Act**

· **Regulated explosives precursors (Part 1)**

None of the ingredients is listed.

· **Regulated poisons (Part 2)**

None of the ingredients is listed.

· **Reportable explosives precursors (Part 3)**

None of the ingredients is listed.

· **Reportable poisons (Part 4)**

None of the ingredients is listed.

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category** P3b FLAMMABLE AEROSOLS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

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· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
None of the ingredients is listed.

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**
None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**
None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
None of the ingredients is listed.

· **National regulations:**

· **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

· **Classification according to Regulation (EC) No 1272/2008**	
Aerosols, Section 2.3.1	On basis of test data
Serious eye damage/irritation Specific target organ toxicity (single exposure)	The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

· **Department issuing SDS:** Regulatory department
· **Contact:** RCustomerservicesUK@rs-components.com
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Aerosol 1: Aerosols – Category 1
Press. Gas (Liq.): Gases under pressure – Liquefied gas
Flam. Liq. 2: Flammable liquids – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
· *** Data compared to the previous version altered.**

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SAFETY DATA SHEET
(Prepared According to 29 CFR 1910. 1200)

SECTION 1 - IDENTIFICATION

Trade Name: SLIP NO MOR	Product Use: FLOOR PREPARER	
Supplier: STAGESTEP INC.	Phone #: 1-800-523-0960	Emergency Phone #: 800-255-3924
Address: 4701 BATH STREET BUILDING 46B PHILADELPHIA PA 19137	Code: 38-43A	

SECTION 2 - HAZARDS IDENTIFICATION

Classification: EYE AND SKIN IRRITANT	Signal Word: WARNING	Symbol(s):
GHS Hazard Statement:	Physical Hazards:	
	Health Hazards: EYE AND SKIN IRRITANT	

Precautionary Statements:

Wear eye protection and protective gloves. Wash hands thoroughly after handling. If in eyes: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison control center or doctor. If on skin(or hair): Take off immediately all contaminated clothing. Wash with plenty of water. If skin irritation occurs: Get medical attention. Wash all contaminated clothing before reuse. In case of fire: use CO_2, dry chemical, foam or water spray to extinguish. Store in a cool, well-ventilated place. Dispose of contents and container in accordance with local, state and federal regulations.



SECTION 3 - COMPOSIT/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS NO.	% BY WEIGHT	PEL (TLV)
Amorphous Silicon Dioxide	7631-86-9	5-10	not est.

* The specific chemical identity and exact percentage of this ingredient have been withheld as a trade secret.

SECTION 4 - HEALTH INFORMATION - FIRST AID MEASURES

Symptoms & Acute Effects: Causes skin and eye irritation.

Delayed Effects: None known

Typical Routes of Exposure: are the skin and eyes.

TREATMENT

Eyes: If in eyes: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a physician.

Skin: If on skin(or hair): Immediately remove all contaminated clothing. Wash with plenty of water. If skin irritation occurs: Get medical attention. Wash all contaminated clothing before reuse.

Ingestion: Drink large quantities of milk or water. Call a physician.

Inhalation: Not applicable

SECTION 5 - FIRE-FIGHTING MEASURES

Flash Point: none to boiling	Lower Explosive Limit: Not available	Upper Explosive Limit: Not available
Extinguishing Techniques: In case of fire: use CO2, dry chemical, foam, water spray to extinguish.		
Equipment: Do not enter any confined fire-spaces without protective clothing and self-contained air supply.		
Chemical Hazards from Fire: Carbon monoxide and unidentified organic gases may occur during incomplete combustion.		
Precautions for Fire Fighters: Cool fire exposed containers.		

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Steps to be Taken:	SMALL AMOUNTS - Absorb with suitable absorbent. LARGE AMOUNTS - Absorb with suitable absorbent, then shovel into appropriately labeled containers.
Cleanup Procedures:	Contain with absorbent material and dispose of in accordance with federal, state and local requirements.

SECTION 7 - HANDLING AND STORAGE

Precautions to be Take in Handling & Storage:	Store in a cool, well-ventilated place.
Incompatibility:	Strong oxidizers

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENTS:	EXPOSURE LIMITS
see section 3 above	

Eye Protection: ☑	Protective Gloves: ☑	Respiratory Protection: ☐	
Ventilation Requirements	Local Exaust: ☐	Mechanical: ☑	Room Ventilation is Adequate: ☐

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: Hazy liquid no odor		Flammable Limits: Upper: Not available Lower: Not available	
Boiling Point (^{0}F): Appx. 212	Specific Gravity (H20) (±0.005): 1.047		pH (± 0.5) 10.0
Vapor Pressure (mm Hg) Not available		Vapor Density (Air=1) Not available	
Solubility in Water: ☑ Complete	☐ Insoluble	☐ Emulsifiable (or Dispersible)	☐ Slightly (or Partial)
Evaporation Rate (vs H2O)	☐ Faster	☐ Slower	☑ About the Same
Flash Point (T.C.C.): 212 ^{0}F	Odor Threshold: Not available	Melting point/frozen point: Not available	Partition Coefficient: n-octanol/water: Not available
Auto-Ignition Temperature: Not available	Decomposition Temperature: Not available	Viscosity: Not available	

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable	Incompatibility: Strong oxidizers
Hazardous Decomposition Products:	Carbon monoxide and unidentified organic gases may occur during incomplete combustion.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity: LD50/oral/rat >5,000 mg/kg	Skin Sensitization: Not a sensitizer
Skin Irritation: Causes skin irritation	Mutagenicity: Not a mutagen
Eye Irritation: Causes eye irritation	Reproductive Toxicity: None

Carcinogen/Suspect Carcinogen Ingredients: ☐ NTP ☐ OSHA ☐ ARC ☑ NONE

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: Not reported

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Methods: This product is not of itself regulated as a hazardous waste as defined in 40CFR261. Dispose of in accordance with applicable Federal, State and Local ordinances.

SECTION 14 - TRANSPORT INFORMATION

Not regulated by USDOT.

SECTION 15 - REGULATORY INFORMATIOM

All ingredients in this product are listed on the TSCA Inventory.

SARA 302 Health Hazard: Acute

SARA 313 Chemicals: None

SECTION 16 - OTHER INFORMATION

DATE PREPARED: 10/16/2019

HMIS HAZARD RATINGS:	
HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION EQUIPMENT	B

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Mixture
Trade name	:	STRONGARM
UFI	:	0GW3-X0Y0-1003-PP7Q
Product code	:	F040
Type of product	:	Detergent

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses

Main use category	:	Professional use
Industrial/Professional use spec	:	For professional use only
Use of the substance/mixture	:	Heavy-duty detergent

1.3. Details of the supplier of the safety data sheet

SELDEN RESEARCH LIMITED

STADEN LANE
BUXTON
DERBYSHIRE
SK17 9RZ
UNITED KINGDOM

Tel: 01298 26226
Email: safety@selden.co.uk

SELDEN EUROPE B.V.

WATERMOLEN 13
6229 PM
MAASTRICHT
NETHERLANDS

Tel: +31 (0) 43 363 42 89
Email: sds@selden.eu

1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 1, Sub-Category 1B	H314
Serious eye damage/eye irritation, Category 1	H318

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

Signal word (CLP)	:	Danger
Contains	:	sodium hydroxide; caustic soda
Hazard statements (CLP)	:	H314 - Causes severe skin burns and eye damage.
Precautionary statements (CLP)	:	P264 - Wash hands thoroughly after handling. P280 - Wear eye protection, protective gloves. P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P315 - Get immediate medical advice/attention. P405 - Store locked up.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Butoxydiglycol substance with national workplace exposure limit(s) (IE, GB)	CAS-No.: 112-34-5 EC-No.: 203-961-6 EC Index-No.: 603-096-00-8 REACH-no: 01-2119475104-44	1 – 5	Eye Irrit. 2, H319
Alcohol Alkoxylate	CAS-No.: 166736-08-9 REACH-no: Exempt/Polymer	1 – 5	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
sodium hydroxide; caustic soda substance with national workplace exposure limit(s) (IE, GB)	CAS-No.: 1310-73-2 EC-No.: 215-185-5 EC Index-No.: 011-002-00-6 REACH-no: 01-2119457892-27	1 – 5	Skin Corr. 1A, H314
N,N-dimethyldecylamine N-oxide	CAS-No.: 2605-79-0 EC-No.: 220-020-5 REACH-no: 01-2119959297-22	0.1 – 1	Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411 Acute Tox. 4 (Oral), H302

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Alcohol Alkoxylate	CAS-No.: 166736-08-9 REACH-no: Exempt/Polymer	(1 < C ≤ 10) Eye Irrit. 2; H319 (10 < C < 100) Eye Dam. 1; H318
sodium hydroxide; caustic soda	CAS-No.: 1310-73-2 EC-No.: 215-185-5 EC Index-No.: 011-002-00-6 REACH-no: 01-2119457892-27	(0.5 ≤ C < 2) Skin Irrit. 2; H315 (0.5 ≤ C < 2) Eye Irrit. 2; H319 (2 ≤ C < 5) Skin Corr. 1B; H314 (5 ≤ C ≤ 100) Skin Corr. 1A; H314

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Get medical advice/attention if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion : Do NOT induce vomiting. Rinse mouth. Drink plenty of water. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : Burns.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry powder. Foam.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Corrosive vapours.

5.3. Advice for firefighters

No additional information available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

For emergency responders

Protective equipment : Use personal protective equipment as required.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes.
Hygiene measures : Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Does not require any specific or particular technical measures.
Storage conditions : Keep container closed when not in use.
Incompatible products : Oxidizing agent. Strong acids.
Incompatible materials : Metals.
Special rules on packaging : Keep only in original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

Butoxydiglycol (112-34-5)	
Ireland - Occupational Exposure Limits	
Local name	2-(2-Butoxyethoxy)ethanol
OEL TWA	67.5 mg/m³
	10 ppm
OEL STEL	101.2 mg/m³
	15 ppm
United Kingdom - Occupational Exposure Limits	
Local name	2-(2-Butoxyethoxy)ethanol
WEL TWA (OEL TWA)	67.5 mg/m³
	10 ppm
WEL STEL (OEL STEL)	101.2 mg/m³
	15 ppm

sodium hydroxide; caustic soda (1310-73-2)	
Ireland - Occupational Exposure Limits	
Local name	Sodium hydroxide
OEL STEL	2 mg/m³
Remark	Advisory OELV (Advisory Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2024
United Kingdom - Occupational Exposure Limits	
Local name	Sodium hydroxide
WEL STEL (OEL STEL)	2 mg/m³
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.2. Exposure controls

Personal protection equipment

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:
Safety glasses. Wear eye protection. ISO 16321-1

Skin protection

Skin and body protection:
Not required for normal conditions of use

Hand protection:
Wear protective gloves. Chemical resistant gloves (according to European standard ISO 374-1 or equivalent). Nitrile rubber gloves

Other skin protection
Materials for protective clothing:
Not required for normal conditions of use

Respiratory protection

Respiratory protection:
Not required for normal conditions of use

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Colourless.
Appearance	:	Liquid.
Odour	:	characteristic.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	≥ 100 °C
Flammability	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	13
Viscosity, kinematic	:	Not available
Solubility	:	Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	Not available
Relative density	:	1.05
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Acids.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Butoxydiglycol (112-34-5)	
LD50 oral	5660 mg/kg bodyweight
LD50 dermal	2764 mg/kg bodyweight
LC50 Inhalation - Rat (Dust/Mist)	> 196 mg/l

Alcohol Alkoxylate (166736-08-9)	
LD50 oral rat	300 – 2000 mg/kg

N,N-dimethyldecylamine N-oxide (2605-79-0)	
LD50 oral	> 300 mg/kg bodyweight
LD50 dermal	> 2000 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns.
pH: 13

Alcohol Alkoxylate (166736-08-9)	
pH	≈ 7

Serious eye damage/irritation : Causes serious eye damage.
pH: 13

Alcohol Alkoxylate (166736-08-9)	
pH	≈ 7

Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

Butoxydiglycol (112-34-5)	
LC50 - Fish [1]	1300 mg/l
EC50 - Other aquatic organisms [1]	> 1000 mg/l waterflea
EC50 - Other aquatic organisms [2]	> 100 mg/l

Alcohol Alkoxylate (166736-08-9)	
LC50 - Fish [1]	10 – 100 mg/l
EC50 - Crustacea [1]	10 – 100 mg/l
ErC50 other aquatic plants	10 – 100 mg/l

sodium hydroxide; caustic soda (1310-73-2)	
LC50 - Fish [1]	> 35 mg/l
EC50 - Other aquatic organisms [1]	> 33 mg/l waterflea

N,N-dimethyldecylamine N-oxide (2605-79-0)	
LC50 - Fish [1]	> 10 mg/l
EC50 - Other aquatic organisms [1]	4.4 mg/l waterflea
EC50 - Other aquatic organisms [2]	0.11 mg/l

12.2. Persistence and degradability

Persistence and degradability	Rapidly degradable

Butoxydiglycol (112-34-5)	
Persistence and degradability	Rapidly degradable

Alcohol Alkoxylate (166736-08-9)	
Persistence and degradability	Rapidly degradable

sodium hydroxide; caustic soda (1310-73-2)	
Persistence and degradability	Rapidly degradable

N,N-dimethyldecylamine N-oxide (2605-79-0)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

Butoxydiglycol (112-34-5)	
Partition coefficient n-octanol/water (Log Pow)	0.56
sodium hydroxide; caustic soda (1310-73-2)	
Partition coefficient n-octanol/water (Log Pow)	-3.88
N,N-dimethyldecylamine N-oxide (2605-79-0)	
Partition coefficient n-octanol/water (Log Pow)	3.69

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Dispose of in accordance with relevant local regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
European List of Waste (LoW, EC 2000/532) : 20 01 29* - detergents containing dangerous substances

SECTION 14: Transport information

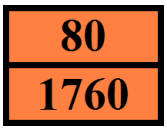
In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
14.1. UN number or ID number		
UN 1760	UN 1760	UN 1760
14.2. UN proper shipping name		
CORROSIVE LIQUID, N.O.S.	CORROSIVE LIQUID, N.O.S.	Corrosive liquid, n.o.s.
Transport document description		
UN 1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE), 8, III, (E)	UN 1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE), 8, III	UN 1760 Corrosive liquid, n.o.s., 8, III
14.3. Transport hazard class(es)		
8	8	8
		

ADR	IMDG	IATA
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No EmS-No. (Fire): F-A EmS-No. (Spillage): S-B	Dangerous for the environment: No
No supplementary information available		

14.6. Special precautions for user

Overland transport

Classification code (ADR)	:	C9
Special provisions (ADR)	:	274
Limited quantities (ADR)	:	5l
Excepted quantities (ADR)	:	E1
Packing instructions (ADR)	:	P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	:	MP19
Portable tank and bulk container instructions (ADR)	:	T7
Portable tank and bulk container special provisions (ADR)	:	TP1, TP28
Tank code (ADR)	:	L4BN
Vehicle for tank carriage	:	AT
Transport category (ADR)	:	3
Special provisions for carriage - Packages (ADR)	:	V12
Hazard identification number (Kemler No.)	:	80
Orange plates	:	
Tunnel restriction code (ADR)	:	E
EAC code	:	2X

Transport by sea

Special provisions (IMDG)	:	223, 274
Limited quantities (IMDG)	:	5 L
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	P001, LP01
IBC packing instructions (IMDG)	:	IBC03
Tank instructions (IMDG)	:	T7
Tank special provisions (IMDG)	:	TP1, TP28
Stowage category (IMDG)	:	A

Air transport

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y841
PCA limited quantity max net quantity (IATA)	:	1L
PCA packing instructions (IATA)	:	852
PCA max net quantity (IATA)	:	5L
CAO packing instructions (IATA)	:	856
CAO max net quantity (IATA)	:	60L
Special provisions (IATA)	:	A3, A803
ERG code (IATA)	:	8L

14.7. Maritime transport in bulk according to IMO instruments

IBC code	:	Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations

CESIO recommendations : The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Other information, restriction and prohibition regulations : Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 and all its amendments and modifications. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 and all its amendments and modifications. Detergent Regulation (EC 648/2004).

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Detergent Regulation (EC 648/2004)

Labelling of contents	
Component	**%**
non-ionic surfactants	<5%

Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Detergent Regulation (EC 648/2004).

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:	
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Skin Corr. 1B	H314	Calculation method
Eye Dam. 1	H318	Expert judgement

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: Swan Butane Lighter Refill

Trade name: Aerosol propellant

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Aerosol gassing

Uses advised against Temperatures above 50 degrees C

1.3 Details of the supplier of the safety data sheet

Supplier

Keen Newport Global Ltd
31 Kingfisher Court,
Berkshire, RG14 5SJ.

Telephone: 01635 34600

E-mail: info@keen-newport.com

1.4 Emergency telephone number: 01635 34600

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC as amended.

F+; R12

The full text for all R-phrases is displayed in section 16.

Classification according to Regulation (EC) No 1272/2008 as amended.

Hazard statement

Extremely Flammable gas	H220	Flammable gas 1
Gases under pressure	H280	Contains gas under pressure, may explode is heated.

2.2 Label Elements



Signal Words: Danger

Hazard Statement(s): H350: May cause cancer, state route of exposure if it is conclusively proven.
H340: May cause genetic defects, state route of exposure if it is conclusively proven.

Precautionary Statement

Prevention: P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P281: Use personal protective equipment as required. P102/202: Keep out of reach of children. Read and understand safety precautions.

Response: P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely. P381: Eliminate all ignition sources if safe to do so.

Storage: P401/P403: Protect from sunlight. Store in a well-ventilated place.

Disposal: None.

2.3 Other hazards: Contact with evaporating liquid may cause frostbite or freezing of skin.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical name	Chemical formula	Concentration	CAS-No.	EC No.	REACH Registration No.	Notes
Butane	C4H10	54 %	106-97-8	203-448-7	01-2119474691-32	#
Isobutane	C4H10	24 %	75-28-5	200-857-2	01-2119485395-27	
propane	C3H8	22 %	74-98-6	200-827-9	01-2119486944-21	

The concentrations of the components in the SDS header, product name on page one and in section 3.2 are in mol due to regulatory requirements.
All concentrations are nominal.
This substance has workplace exposure limit(s).
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.

Classification

Chemical name	Classification		Notes
Butane	DSD:	F+; R12	
	CLP:	Flam. Gas 1; H220, Press. Gas Liquef. Gas; H280	
Isobutane	DSD:	F+; R12	
	CLP:	Flam. Gas 1; H220, Press. Gas Liquef. Gas; H280	
Propane	DSD:	F+; R12	
	CLP:	Flam. Gas 1; H220, Press. Gas Liquef. Gas; H280	

DSD: Directive 67/548/EEC.
CLP: Regulation No. 1272/2008.

The full text for all R-phrases and H-statements is displayed in section 16.

SECTION 4: First Aid Measures

General: In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

4.1 Description of first aid measures

Inhalation: In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

Eye contact: Rinse the eye with water immediately. Remove contact lenses, if present and easy to do. Continue rinsing. Flush thoroughly with water for at least 15 minutes. Get immediate medical assistance. If medical assistance is not immediately available, flush an additional 15 minutes.

Skin Contact: Contact with evaporating liquid may cause frostbite or freezing of skin.

Ingestion: Ingestion is not considered a potential route of exposure.

4.2 Most important symptoms and effects, both acute and delayed: Respiratory arrest. Contact with liquefied gas can cause damage (frostbite) due to rapid evaporative cooling. Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

4.3 Indication of any immediate medical attention and special treatment needed

Hazards: Respiratory arrest. Contact with liquefied gas can cause damage (frostbite) due to rapid evaporative cooling.

Treatment: Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.

SECTION 5: Firefighting Measures

General Fire Hazards: Heat may cause the containers to explode.

5.1 Extinguishing media

Suitable extinguishing media: Water Spray or Fog. Dry powder. Foam.

Unsuitable extinguishing media: Carbon dioxide.

5.2 Special hazards arising from the substance or mixture: Incomplete combustion may form carbon monoxide

5.3 Advice for firefighters

Special fire fighting procedures:	In case of fire: Stop leak if safe to do so. Do not extinguish flames at leak because possibility of uncontrolled explosive re-ignition exists. Continue water spray from protected position until container stays cool. Use extinguishants to contain the fire. Isolate the source of the fire or let it burn out.
Special protective equipment for firefighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Guideline: EN 469 Protective clothing for firefighters. Performance requirements for protective clothing for firefighting. EN 15090 Footwear for firefighters. EN 659 Protective gloves for firefighters. EN 443 Helmets for fire fighting in buildings and other structures. EN 137 Respiratory protective devices - Self-contained open-circuit compressed air breathing apparatus with full face mask - Requirements, testing, marking.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:	Evacuate area. Provide adequate ventilation. Consider the risk of potentially explosive atmospheres . Eliminate all ignition sources if safe to do so. Monitor the concentration of the released product. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. EN 137 Respiratory protective devices - Self-contained open-circuit compressed air breathing apparatus with full face mask - Requirements, testing, marking.
6.2 Environmental Precautions:	Prevent further leakage or spillage if safe to do so.
6.3 Methods and material for containment and cleaning up:	Provide adequate ventilation. Eliminate sources of ignition.
6.4 Reference to other sections:	Refer to sections 8 and 13.

SECTION 7: Handling and Storage:

7.1 Precautions for safe handling:

Only experienced and properly instructed persons should handle gases under pressure. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Purge system with dry inert gas (e.g. helium or nitrogen) before gas is introduced and when system is placed out of service. Purge air from system before introducing gas. Containers, which contain or have contained flammable or explosive substances, must not be inerted with liquid carbon dioxide. Assess the risk of a potentially explosive atmosphere and the need for suitable equipment i.e. explosion-proof. Take precautionary measures against static discharges. Keep away from ignition sources (including static discharges). Provide electrical earthing of equipment and electrical equipment usable in explosive atmospheres. Use only non-sparking tools. Refer to supplier's handling instructions. The substance must be handled in accordance with good industrial hygiene and safety procedures. Ensure the complete system has been (or is regularly) checked for leaks before use. Protect containers from physical damage; do not drag, roll, slide or drop. Do not remove or deface labels provided by the supplier for the identification of the container contents. When moving containers, even for short distances, use appropriate equipment eg. trolley, hand truck, fork truck etc. Secure cylinders in an upright position at all times, close all valves when not in use. Provide adequate ventilation. Suck back of water into the container must be prevented. Do not allow backfeed into the container. Avoid suckback of water, acid and alkalis. Keep container below 50°C in a well ventilated place. Observe all regulations and local requirements regarding storage of containers. When using do not eat, drink or smoke. Store in accordance with local/regional/national/international regulations. Never use direct flame or electrical heating devices to raise the pressure of a container. Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use. Damaged valves should be reported immediately to the supplier Close container valve after each use and when empty, even if still connected to equipment. Never attempt to repair or modify container valves or safety relief devices. Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment. Keep container valve outlets clean and free from contaminates particularly oil and water. If user experiences any difficulty operating container valve discontinue use and contact supplier. Never attempt to transfer gases from one container to another. Container valve guards or caps should be in place.

7.2 Conditions for safe storage, including any incompatibilities:

All electrical equipment in the storage areas should be compatible with the risk of a potentially explosive atmosphere. Segregate from oxidant gases and other oxidants being stored. Containers should not be stored in conditions likely to encourage corrosion. Stored containers should be periodically checked for general conditions and leakage. Container valve guards or caps should be in place. Store containers in location free from fire risk and away from sources of heat and ignition. Keep away from combustible material.

7.3 Specific end use(s):

None.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	type	Exposure Limit Values	Source
Butane	TWA	600 ppm 1,450 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (12 2011)
	STEL	750 ppm 1,810 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (12 2011)

8.2 Exposure controls

Appropriate engineering controls: Consider a work permit system e.g. for maintenance activities. Ensure adequate air ventilation. Provide adequate general and local exhaust ventilation. Keep concentrations well below lower explosion limits. Gas detectors should be used when quantities of flammable gases or vapours may be released. Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Systems under pressure should be regularly checked for leakages. Product to be handled in a closed system. Use only permanent leak tight installations (e.g. welded pipes). Take precautionary measures against static discharges.

Individual protection measures, such as personal protective equipment

General information: A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk. The following recommendations should be considered. Keep self contained breathing apparatus readily available for emergency use. Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment. Do not eat, drink or smoke when using the product.

Eye/face protection: Safety eyewear, goggles or face-shield to EN166 should be used to avoid exposure to liquid splashes. Wear eye protection to EN 166 when using gases. Guideline: EN 166 Personal Eye Protection.

Skin protection

Hand Protection: Wear working gloves while handling containers
Guideline: EN 388 Protective gloves against mechanical risks.

Body protection: Wear fire/flame resistant/retardant clothing.
Guideline: ISO/TR 2801:2007 Clothing for protection against heat and flame -- General recommendations for selection, care and use of protective clothing.

Other: Wear safety shoes while handling containers
Guideline: ISO 20345 Personal protective equipment - Safety footwear.

Respiratory Protection: Not required.

Thermal hazards: No precautionary measures are necessary.

Hygiene measures:	Specific risk management measures are not required beyond good industrial hygiene and safety procedures. Do not eat, drink or smoke when using the product.
Environmental exposure controls:	For waste disposal, see section 13.

SECTION 9: Physical And Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state:	Gas
Form:	Liquefied gas
Colour:	C4H10: Colourless C3H8: Colourless C4H10: Colourless,
Odour:	C4H10: Gasoline-like or natural gas odour C3H8: Odourless C4H10: Slight odour, Gasoline-like or natural gas odour
Odour Threshold:	Odour threshold is subjective and is inadequate to warn of over exposure.
pH:	not applicable.
Melting Point:	No data available.
Boiling Point:	-11 °C
Sublimation Point:	not applicable.
Critical Temp. (°C):	No data available.
Flash Point:	Not applicable to gases and gas mixtures.
Evaporation Rate:	Not applicable to gases and gas mixtures.
Flammability (solid, gas):	Flammable Gas
Flammability limit - upper (%)–:	No data available.
Flammability limit - lower(%)–:	No data available.
Vapour pressure:	2.73 bar (20 °C) 2.62 - 2.90 bar (70 °F)
Vapour density (air=1):	1.94 (calculated) (15 °C)
Relative density:	0.559 (Reference material: Water)
Solubility(ies)	
Solubility in Water:	No data available.
Partition coefficient (n-octanol/water):	Not known.
Autoignition Temperature:	not applicable.
Decomposition Temperature:	Not known.
Viscosity	
Kinematic viscosity:	No data available.
Dynamic viscosity:	No data available.
Explosive properties:	Not applicable.
Oxidising Properties:	not applicable.

9.2 Other information: Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

SECTION 10: Stability and Reactivity

10.1 Reactivity: No reactivity hazard other than the effects described in sub-section below.

10.2 Chemical Stability: Stable under normal conditions.

10.3 Possibility of Hazardous Reactions: Can form a potentially explosive atmosphere in air. May react violently with oxidants.

10.4 Conditions to Avoid: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible Materials: Air and oxidisers. For material compatibility see latest version of ISO-11114.

10.6 Hazardous Decomposition Products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological Information

General information: None.

11.1 Information on toxicological effects

Acute toxicity - Oral
Product Based on available data, the classification criteria are not met.

Acute toxicity - Dermal
Product Based on available data, the classification criteria are not met.

Acute toxicity - Inhalation
Product

Component information

Butane	LC 50 (Rat, 4 h): 658 mg/l
Isobutane	LC 50 (Rat, 15 min): 570,000 ppm
Propane	LC 50 (Rat. 4 h): 658mg/L

Repeated dose toxicity
Component information

Isobutane	NOAEL (Rat(Female, Male), Inhalation): 21,394 mg/m3

Skin Corrosion/Irritation

Product Based on available data, the classification criteria are not met.

Serious Eye Damage/Eye Irritation

Product Based on available data, the classification criteria are not met.

Component information

Butane Not irritating

Respiratory or Skin Sensitisation

Product Based on available data, the classification criteria are not met.

Germ Cell Mutagenicity

Product Based on available data, the classification criteria are not met.

Carcinogenicity

Product Based on available data, the classification criteria are not met.

Reproductive toxicity

Product Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Single Exposure

Product Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Repeated Exposure

Product Based on available data, the classification criteria are not met.

Aspiration Hazard

Product Not applicable to gases and gas mixtures..

SECTION 12: Ecological Information

12.1 Toxicity

Acute toxicity

Product No ecological damage caused by this product.

Acute toxicity - Fish

Component information

Isobutane LC 50 (Various, 96 h): 27.98 mg/l (QSAR) Remarks: QSAR

Propane LC50 (Fish, 96 h): 49.9 mg/l

Acute toxicity - Aquatic Invertebrates

Component information

Propane EC50 (Water flea (Daphnia magna), 48 h): 27.1 mg/l

Toxicity to microorganisms

Component information

Propane	EC50 (Alga, 72 h): 11.9 mg/l

12.2 Persistence and Degradability

Product Not applicable to gases and gas mixtures..

12.3 Bioaccumulative Potential

Product The product is expected to biodegrade and is not expected to persist for long periods in an aquatic environment.

12.4 Mobility in Soil

Product Because of its high volatility, the product is unlikely to cause ground or water pollution.

12.5 Results of PBT and vPvB assessment

Product Not classified as PBT or vPvB.

12.6 Other Adverse Effects:

Global Warming Potential

Global warming potential: 3.6

Contains greenhouse gas(es) not covered by 842/2006/EC. Contains greenhouse gas(es). When discharged in large quantities may contribute to the greenhouse effect.

Component information

Butane	Global warming potential: 4
Isobutane	Global warming potential: 3
propane	Global warming potential: 3

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

General information: Do not discharge into any place where its accumulation could be dangerous. Consult supplier for specific recommendations. Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arrestor.

Disposal methods: Refer to the EIGA code of practice (Doc.30 "Disposal of Gases", downloadable at http://www.eiga.org) for more guidance on suitable disposal methods. Dispose of container via supplier only. Discharge, treatment, or disposal may be subject to national, state, or local laws.

European Waste Codes

Container: 16 05 04*: gases in pressure containers (including halons) containing dangerous substances

SECTION 14: Transport Information

ADR

14.1 UN Number:	UN 1950
14.2 UN Proper Shipping Name:	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S.(Propane, n-Butane, Iso-butane)
14.3 Transport Hazard Class(es)	
Class:	2
Label(s):	2.1
Hazard No. (ADR):	2
Tunnel restriction code:	(B/D)
Emergency Action Code:	2YE
14.4 ADR Packing Group:	5F
14.5 Environmental hazards:	not applicable
14.6 Special precautions for user:	–

RID

14.1 UN Number:	UN 1950
14.2 UN Proper Shipping Name	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S.(Propane, n-Butane, Iso-butane)
14.3 Transport Hazard Class(es)	
Class:	2
Label(s):	2.1
14.4 Packing Group:	–
14.5 Environmental hazards:	not applicable
14.6 Special precautions for user:	–

IMDG

14.1 UN Number:	UN 1950
14.2 UN Proper Shipping Name:	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S.(Propane, n-Butane, Iso-butane)
14.3 Transport Hazard Class(es)	
Class:	2.1
Label(s):	2.1
EMS No:	2-13
14.3 Packing Group:	–
14.5 Environmental hazards:	not applicable
14.6 Special precautions for user:	–

IATA

14.1 UN Number:	UN 1950
14.2 Proper Shipping Name:	Hydrocarbon gas mixture, liquefied, N.O.S.(Propane, n-Butane, Iso-butane)
14.3 Transport Hazard Class(es):	
Class:	2.1
Label(s):	2.1
14.4 Packing Group:	–
14.5 Environmental hazards:	not applicable
14.6 Special precautions for user:	–
Other information	
Passenger and cargo aircraft:	Forbidden.
Cargo aircraft only:	Allowed.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: not applicable

Additional identification: Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers ensure that they are firmly secured. Ensure that the container valve is closed and not leaking. Container valve guards or caps should be in place. Ensure adequate air ventilation.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

EU Regulations

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:

Chemical name	CAS-No.	Concentration
Butane	106-97-8	50 - 60 %
Propane	74-98-6	20 - 30 %

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.:

Chemical name	CAS-No.	Concentration
Propane	74-98-6	20 - 30 %

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.:

Chemical name	CAS-No.	Concentration
Propane	74-98-6	20 - 30 %

Directive 96/82/EC (Seveso II): on the control of major accident hazards involving dangerous substances:

Chemical name	CAS-No.	Concentration
Butane	106-97-8	50 - 60 %
Isobutane	75-28-5	20 - 30 %
Propane	74-98-6	20 - 30 %

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

Chemical name	CAS-No.	Concentration
Butane	106-97-8	50 - 60 %
Isobutane	75-28-5	20 - 30 %
Propane	74-98-6	20 - 30 %

National Regulations

Dangerous Substances and Explosive Atmospheres Regulations (DSEAR 2002 No. 2776). Management of Health and Safety at Work Regulations (1999 No. 3242). The Regulatory Reform (Fire Safety) Order 2005 (2005 No. 1541). Control of Substances Hazardous to Health Regulations (COSHH, 2002 No. 2677). Provision and Use of Work Equipment Regulations (PUWER, 1998 No. 2306). Personal Protective Equipment Regulations (1992 No. 2966). Control of Major Accident Hazards Regulations (COMAH, 2015 No. 483). Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations (EPS, 1996 No. 192). Chemical Hazards Information and Packaging for Supply (CHIP, 1994 No. 3247) Pressure Systems Safety Regulations (PSSR, 2000 No. 128). Only products that comply with the food regulations (EC) No. 1333/2008 and (EU) No. 231/2012 and are labelled as such may be used as food additives.
This Safety Data Sheet has been produced to comply with Regulation (EU) 453/2010.

15.2 Chemical safety assessment: No Chemical Safety Assessment has been carried out.

SECTION 16: Other Information

Revision Information: Not relevant.

Key literature references and sources for data:

Various sources of data have been used in the compilation of this SDS, they include but are not exclusive to:
Agency for Toxic Substances and Diseases Registry (ATSDR) (http://www.atsdr.cdc.gov/).
European Chemical Agency: Guidance on the Compilation of Safety Data Sheets.
European Chemical Agency: Information on Registered Substances http://apps.echa.europa.eu/registered/registered-sub.aspx#search
European Industrial Gases Association (EIGA) Doc. 169 Classification and Labelling guide.
Matheson Gas Data Book, 7th Edition.
National Institute for Standards and Technology (NIST) Standard Reference Database Number 69.
The ESIS (European chemical Substances 5 Information System) platform of the former European Chemicals Bureau (ECB) ESIS (http://ecb.jrc.ec.europa.eu/esis/).
The European Chemical Industry Council (CEFIC) ERICards.
United States of America's National Library of Medicine's toxicology data network TOXNET (http://toxnet.nlm.nih.gov/index.html)
Threshold Limit Values (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH).
Substance specific information from suppliers.
Details given in this document are believed to be correct at the time of publication.
H40 (as amended) Workplace exposure limits.

Wording of the R-phrases and H-statements in sections 2 and 3

R12	Extremely flammable.
H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.

Training information:

Users of breathing apparatus must be trained. Ensure operators understand the flammability hazard.

Classification according to Regulation (EC) No 1272/2008 as amended.

Flam. Gas 1, H220

Press. Gas Liq. Gas, H280

Other information:

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out. Ensure adequate air ventilation. Ensure all national/local regulations are observed. Ensure equipment is adequately earthed. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted. Note: When the Product Name appears in the SDS header the decimal sign and its position comply with rules for the structure and drafting of international standards, and is a comma on the line. As an example 2,000 is two (to three decimal places) and not two thousand, whilst 1.000 is one thousand and not one (to three decimal places).

Last revised date: 01.04.2016

Disclaimer:

MSDS 1860
This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

Safety Data Sheet

acc. to The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)

Cleaning Fluid

Version number: 19.0
Replaces version of: 2018-08-06 (18)

Revision: 2022-11-07
First version: 2009-08-04

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name **Cleaning Fluid**

Product number 9972100 / 9972101 / 9972103

CAS number not relevant (mixture)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Cleaning Fluid for Safety Spectacles

1.3 Details of the supplier of the safety data sheet

UVEX ARBEITSSCHUTZ GMBH
Würzburger Str. 181 - 189
90766 Fürth
Germany

Telephone: +49 911 97360
e-mail: SDB@uvex.de

e-mail (competent person) sdb@csb-compliance.com

Please do not use this e-mail address to ask for the latest safety data sheet. For this purpose contact UVEX ARBEITSSCHUTZ GMBH.

National contact Strategic Research & Development
SDB@uvex.de

1.4 Emergency telephone number

As above or nearest toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (acc. to GB CLP)

This mixture does not meet the criteria for classification.

2.2 Label elements

Labelling (acc. to GB CLP)

Signal word Not required.

Pictograms Not required.

Supplemental hazard information

EUH210 Safety data sheet available on request.

Additional labelling requirements see section 15 of the safety data sheet

2.3 Other hazards

There is no additional information.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Endocrine disrupting properties

None of the ingredients are listed.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

Hazardous ingredients

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
propan-2-ol	CAS No 67-63-0 EC No 200-661-7 Index No 603-117-00-0	5 – < 10	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336		-

for full text of H-phrases: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.
Mouth to mouth resuscitation should be avoided. Use alternative methods, preferably with oxygen or compressed air driven apparatus.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion

Rinse mouth. Do not induce vomiting.
Get medical advice/attention if you feel unwell.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

These information are not available.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO2)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Co-ordinate firefighting measures to the fire surroundings.
Do not allow firefighting water to enter drains or water courses.
Collect contaminated firefighting water separately.
Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

use suitable breathing apparatus

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Ventilate affected area.
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.
Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to clean up a spill

Collect spillage.
Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections

Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Specific notes/details

None.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.
Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

frost

Consideration of other advice

Keep away from food, drink and animal feeding stuffs.

Ventilation requirements

Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Storage temperature recommended storage temperature: 5 - 25 °C

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Notation	Source
GB	propan-2-ol	67-63-0	WEL	400	999	500	1,250	-	EH40/2005

Notation

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
propan-2-ol	67-63-0	DNEL	500 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
propan-2-ol	67-63-0	DNEL	888 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

8.2 Exposure controls

Appropriate engineering controls

Use local and general ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Short-term (single instance): Not required.
Long-term (repeated): Use protective eyewear to guard against splash of liquids.

Hand protection

Protective gloves		
Material	**Material thickness**	**Breakthrough times of the glove material**
these information are not available	these information are not available	these information are not available

Wear suitable gloves.
Chemical protection gloves are suitable, which are tested according to EN 374.
Check leak-tightness/impermeability prior to use.
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.
Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/ White).

Environmental exposure controls

Use appropriate container to avoid environmental contamination.
Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	alcohol-like
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	94 °C
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	39 °C (Abel-Pensky c.c.)
Auto-ignition temperature	not determined
Decomposition temperature	not relevant

pH (value)	7
Kinematic viscosity	not determined
Dynamic viscosity	not determined
Solubility(ies)	
Water solubility	miscible in any proportion
Partition coefficient n-octanol/water (log value)	not determined
Vapour pressure	not determined
Density and/or relative density	
Density	0.98 $^{g}/_{cm^3}$ at 20 °C
Relative vapour density	this information is not available
Particle characteristics	not relevant (liquid)

9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure

If not otherwise specified the classification is based on:
Ingredients of the mixture (additivity formula).

Classification acc. to GHS

This mixture does not meet the criteria for classification.

Acute toxicity

Test data are not available for the complete mixture.

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
propan-2-ol	67-63-0	oral	LD50	5,840 $^{mg}/_{kg}$	rat
propan-2-ol	67-63-0	dermal	LD50	13,100 $^{mg}/_{kg}$	rabbit

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation
Skin sensitisation

Shall not be classified as a skin sensitiser.

Respiratory sensitisation

Shall not be classified as a respiratory sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

Endocrine disrupting properties

None of the ingredients are listed.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Test data are not available for the complete mixture.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Exposure time	Value	Species
propan-2-ol	67-63-0	LC50	96 h	9,640 $^{mg}/_{l}$	fathead minnow (Pimephales promelas)
propan-2-ol	67-63-0	LC50	24 h	>10,000 $^{mg}/_{l}$	daphnia magna

Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Exposure time	Value	Species
propan-2-ol	67-63-0	NOELR	28 d	>1,000 $^{mg}/_{l}$	fish
propan-2-ol	67-63-0	NOELR	21 d	>1,000 $^{mg}/_{l}$	daphnia magna

12.2 Persistence and degradability

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time
propan-2-ol	67-63-0	oxygen depletion	53 %	5 d

Biodegradation

No data available.

Persistence

No data available.

12.3 Bioaccumulative potential

Test data are not available for the complete mixture.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW
propan-2-ol	67-63-0	-	0.05 (20 °C)

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): 1

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Completely emptied packages can be recycled.
Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1	**UN number**	not assigned
14.2	**UN proper shipping name**	-
14.3	**Transport hazard class(es)**	-
14.4	**Packing group**	-
14.5	**Environmental hazards**	-
14.6	**Special precautions for user**	-

14.7 Maritime transport in bulk according to IMO instruments

-

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant provisions of the European Union (EU)

Seveso Directive

Not assigned.

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

None of the ingredients are listed.

Regulation on the marketing and use of explosives precursors

None of the ingredients are listed.

Regulation on drug precursors

None of the ingredients are listed.

Regulation on substances that deplete the ozone layer (ODS)

None of the ingredients are listed.

Regulation concerning the export and import of hazardous chemicals (PIC)

None of the ingredients are listed.

Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

National regulations (GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

none of the ingredients are listed

Restrictions according to GB REACH, Annex 17

Dangerous substances with restrictions (GB REACH, Annex 17)

Name of substance	Name acc. to inventory	CAS No	Conditions of restriction
propan-2-ol	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	-	R3
propan-2-ol	flammable / pyrophoric	-	R40

Legend

R3 1. Shall not be used in:
— ornamental articles intended to produce light or colour effects by means of different phases, for example

Legend

in ornamental lamps and ashtrays,
— tricks and jokes,
— games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
2. Articles not complying with paragraph 1 shall not be placed on the market.
3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
— can be used as fuel in decorative oil lamps for supply to the general public, and,
— present an aspiration hazard and are labelled with R65 or H304,
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the British Standard Specification on Decorative oil lamps (BS EN 14059) adopted by the British Standards Institute.
5. Without prejudice to the implementation of other legislation relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
(a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010 'Just a sip of lamp oil
— or even sucking the wick of lamps
— may lead to life-threatening lung damage';
(b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as
follows: 'Just a sip of grill lighter may lead to life-threatening lung damage';
(c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the Agency.

R40 1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:
— metallic glitter intended mainly for decoration,
— artificial snow and frost,
— 'whoopee' cushions,
— silly string aerosols,
— imitation excrement,
— horns for parties,
— decorative flakes and foams,
— artificial cobwebs,
— stink bombs.
2. Without prejudice to the application of other legislation on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:
'For professional users only'.
3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/324/EEC (***).
4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.
(***) OJ L 147, 9.6.1975, p. 40.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)
1.1	Registration number (REACH): Not relevant (mixture)	-
2.1	Classification according to Regulation (EC) No 1272/2008 (CLP): This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.	Classification (acc. to GB CLP): This mixture does not meet the criteria for classification.
2.2	-	Signal word: Not required.
2.2	-	Pictograms: Not required.
8.2	Individual protection measures (personal protective equipment): Short-term (single instance):Wear protective gloves/protective clothing/eye protection/face protection not required.	Individual protection measures (personal protective equipment)
8.2	-	Eye/face protection: Short-term (single instance): Not required. Long-term (repeated): Use protective eyewear to guard against splash of liquids.
8.2	Respiratory protection: In case of inadequate ventilation wear respiratory protection.	Respiratory protection: In case of inadequate ventilation wear respiratory protection. Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/White).
15.1	-	Restrictions according to REACH, Annex XVII: change in the listing (table)
15.1	List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list: None of the ingredients are listed.	-

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)

Abbr.	Descriptions of used abbreviations
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GB CLP	The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended)
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
NLP	No-Longer Polymer
NOELR	No Observed Effect Loading Rate
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

Abbr.	Descriptions of used abbreviations
WEL	Workplace exposure limit

Key literature references and sources for data

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended).
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended).
GB mandatory classification and labelling.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).
Regulations concerning the International Carriage of Dangerous Goods by Rail (RID).
International Maritime Dangerous Goods Code (IMDG).
Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties.
Health hazards.
Environmental hazards.
The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Responsible for the safety data sheet

C.S.B. GmbH
Dujardinstr. 5
47829 Krefeld, Germany

Telephone: +49 (0) 2151 - 652086 - 0
Telefax: +49 (0) 2151 - 652086 - 9
e-Mail: info@csb-compliance.com
Website: www.csb-compliance.com

Disclaimer

This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II (last amended by Regulation (EU) 2020/878)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

WD-40® MULTI-USE PRODUCT - [Aerosol]

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture:

Corrosion protection
Grease

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

GB

WD-40 Company Limited
252 Upper Third Street
Milton Keynes, MK9 1DZ, United Kingdom

WD-40 Company Limited
PO Box 440
GB-Kiln Farm, Milton Keynes, MK11 3LF, United Kingdom

Tel.: +44 (0) 1908 555400
Fax: +44 (0) 1908 266900
E-Mail: Compliance@wd40.co.uk
Homepage: www.wd40.co.uk

WD-40 Company Limited
Noorderpoort 93E
NL- 5916PJ Venlo

Tel.: +31 85 487 46 91

M

Danka Import Export
548 St Joseph High Road
SVR 1018 St Venera

Tel.: +356 21233649
Fax: +356 21233501
E-Mail: Danka@maltanet.net

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

M

Medicines & Poisons Info Office - Mater Dei Hospital, Msida MSD 2090, Malta - Tel.: +356 2545 6508
Emergency Ambulance - Tel.: 112

IRL

National Poisons Information Centre, Beaumont Hospital, Dublin 9, Ireland, Tel.:
+353 (0)1 809 2166 (Public Poisons Info Line, 8am-10pm, 7 days a week)
+353 (0)1 809 2566 (Info for Healthcare Professionals ONLY, 24 h, 7 days a week)

Telephone number of the company in case of emergencies:
+44 20 3807 3798

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Asp. Tox.	1	H304-May be fatal if swallowed and enters airways.
STOT SE	3	H336-May cause drowsiness or dizziness.
Aerosol	1	H222-Extremely flammable aerosol.
Aerosol	1	H229-Pressurised container: May burst if heated.

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)



Danger

H336-May cause drowsiness or dizziness. H222-Extremely flammable aerosol. H229-Pressurised container: May burst if heated.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.
P210-Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211-Do not spray on an open flame or other ignition source. P251-Do not pierce or burn, even after use. P261-Avoid breathing vapours or spray. P271-Use only outdoors or in a well-ventilated area.
P301+P310-IF SWALLOWED: Immediately call a POISON CENTER / doctor. P312-Call a POISON CENTRE / doctor if you feel unwell. P331-Do NOT induce vomiting.
P405-Store locked up. P410+P412-Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
P501-Dispose of contents / container to an approved waste disposal facility.

EUH066-Repeated exposure may cause skin dryness or cracking.

Without adequate ventilation, formation of explosive mixtures may be possible.
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

SECTION 3: Composition/information on ingredients

3.1 Substances

n.a.

3.2 Mixtures

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	

Registration number (REACH)	01-2119463258-33-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	919-857-5
CAS	---
content %	60-80
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	EUH066 Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304

Carbon dioxide	**Substance for which an EU exposure limit value applies.**
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	204-696-9
CAS	124-38-9
content %	1-<3
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	---

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.
The substances named in this section are given with their actual, appropriate classification!
For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.
If, for example, the note P is applied for a hydrocarbon then this has already been taken into account for the classification named here.
Quote: "Note P - The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7)."
Article 4 of the regulation (EC) no. 1272/2008 (CLP regulation) was also observed and taken into account for the classification named here.
The addition of the highest concentrations listed here can result in a classification. Only when this classification is listed in Section 2 does it apply. In all other cases the total concentration is below the classification.

SECTION 4: First aid measures

4.1 Description of first aid measures
First-aiders should ensure they are protected!
Never pour anything into the mouth of an unconscious person!

Inhalation
Supply person with fresh air.
Remove person from danger area.
Respiratory arrest - Artificial respiration apparatus necessary.

Skin contact
Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

Eye contact
Remove contact lenses.
Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion
Rinse the mouth thoroughly with water.
Consult doctor immediately - keep Data Sheet available.
Do not induce vomiting.
Danger of aspiration.

4.2 Most important symptoms and effects, both acute and delayed
If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.
The following may occur:
Irritation of the eyes
Inhalation:
Headaches
Nausea
Dizziness
Irritation of the respiratory tract
Effects/damages the central nervous system
With long-term contact:
Dermatitis (skin inflammation)

Ingestion:
Nausea
Vomiting
Diarrhoea
Danger of aspiration.
In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

4.3 Indication of any immediate medical attention and special treatment needed

n.c.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam
CO2
Extinction powder
Water jet spray

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:
Oxides of carbon
Danger of bursting (explosion) when heated
Danger of explosion by prolonged heating.
Explosive vapour/air or gas/air mixtures.

5.3 Advice for firefighters

For personal protective equipment see Section 8.
According to size of fire
Protective respirator with independent air supply.
Cool container at risk with water.
Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.
Ensure sufficient ventilation, remove sources of ignition.
Avoid dust formation with solid or powder products.
Leave the danger zone if possible, use existing emergency plans if necessary.
Remove possible causes of ignition - do not smoke.
Ensure sufficient supply of air.
Avoid inhalation, and contact with eyes or skin.
Do not carry cleaning cloths soaked in product in trouser pockets.

6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

6.2 Environmental precautions

If leakage occurs, dam up.
Resolve leaks if this possible without risk.
Prevent from entering drainage system.
Prevent surface and ground-water infiltration, as well as ground penetration.

6.3 Methods and material for containment and cleaning up

If spray or gas escapes, ensure ample fresh air is available.
Active substance:
Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations
Ensure good ventilation.
Keep away from sources of ignition - Do not smoke.
Do not use on hot surfaces.
Observe directions on label and instructions for use.
Use working methods according to operating instructions.
Take measures against electrostatic charging, if appropriate.

7.1.2 Notes on general hygiene measures at the workplace
General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities
Keep out of access to unauthorised individuals.
Not to be stored in gangways or stair wells.
Observe special regulations for aerosols!
Observe special storage conditions.
Keep protected from direct sunlight and temperatures over 50°C.
Store in a dry place.
Store cool.
Store in a well ventilated place.

7.3 Specific end use(s)
No information available at present.
Observe the instructions for good working practice and the recommendations for risk assessment.
Consult hazardous substance information systems, e.g. from the professional associations, the chemical industry or different industries,
depending on the application (building materials, wood, chemistry, laboratory, leather, metal).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Workplace exposure limit (WEL) of the total hydrocarbon solvent content of the mixture (RCP method according to EH40):
800 mg/m3

GB **Chemical Name**	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	
WEL-TWA: 800 mg/m3	WEL-STEL: ---	---
Monitoring procedures:	- Draeger - Hydrocarbons 0,1%/c (81 03 571) - Draeger - Hydrocarbons 2/a (81 03 581) - Compur - KITA-187 S (551 174)	
BMGV: ---		Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40)

IRL **Chemical Name**	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	
OELV-8h: 100 ppm (573 mg/m3) ("Stoddard solvent", [White spirit])	OELV-15min: ---	---
Monitoring procedures:	- Draeger - Hydrocarbons 0,1%/c (81 03 571) - Draeger - Hydrocarbons 2/a (81 03 581) - Compur - KITA-187 S (551 174)	
BLV: ---		Other information: ---

GB **Chemical Name**	Carbon dioxide	
WEL-TWA: 5000 ppm (9150 mg/m3) (WEL-TWA), 5000 ppm (9000 mg/m3) (EU)	WEL-STEL: 15000 ppm (27400 mg/m3) (WEL-STEL)	---
Monitoring procedures:	- Draeger - Carbon Dioxide 0,1%/a (CH 23 501) - Draeger - Carbon Dioxide 0,5%/a (CH 31 401) - Draeger - Carbon Dioxide 1%/a (CH 25 101) - Draeger - Carbon Dioxide 100/a (81 01 811) - Draeger - Carbon Dioxide 5%/A (CH 20 301) - Compur - KITA-126 B (549 475) - Compur - KITA-126 SA (549 467) - Compur - KITA-126 SB (548 816) - Compur - KITA-126 SF (549 491) - Compur - KITA-126 SG (550 210) - Compur - KITA-126 SH (549 509)	

- Compur - KITA-126 UH (549 517) - NIOSH 6603 (Carbon dioxide) - 1994 - OSHA ID-172 (Carbon dioxide in workplace atmospheres) - 1990	
BMGV: ---	Other information: ---

IRL **Chemical Name**	Carbon dioxide	
OELV-8h: 5000 ppm (9000 mg/m3) (OELV-8h, EU)	OELV-15min: ---	---
Monitoring procedures: - Draeger - Carbon Dioxide 0,1%/a (CH 23 501) - Draeger - Carbon Dioxide 0,5%/a (CH 31 401) - Draeger - Carbon Dioxide 1%/a (CH 25 101) - Draeger - Carbon Dioxide 100/a (81 01 811) - Draeger - Carbon Dioxide 5%/A (CH 20 301) - Compur - KITA-126 B (549 475) - Compur - KITA-126 SA (549 467) - Compur - KITA-126 SB (548 816) - Compur - KITA-126 SF (549 491) - Compur - KITA-126 SG (550 210) - Compur - KITA-126 SH (549 509) - Compur - KITA-126 UH (549 517) - NIOSH 6603 (Carbon dioxide) - 1994 - OSHA ID-172 (Carbon dioxide in workplace atmospheres) - 1990		
BLV: ---	Other information: IOELV	

M **Chemical Name**	Carbon dioxide	
OELV-8h: 5000 ppm (9000 mg/m3) (OELV-8h, EU)	OELV-ST: ---	---
Monitoring procedures: - Draeger - Carbon Dioxide 0,1%/a (CH 23 501) - Draeger - Carbon Dioxide 0,5%/a (CH 31 401) - Draeger - Carbon Dioxide 1%/a (CH 25 101) - Draeger - Carbon Dioxide 100/a (81 01 811) - Draeger - Carbon Dioxide 5%/A (CH 20 301) - Compur - KITA-126 B (549 475) - Compur - KITA-126 SA (549 467) - Compur - KITA-126 SB (548 816) - Compur - KITA-126 SF (549 491) - Compur - KITA-126 SG (550 210) - Compur - KITA-126 SH (549 509) - Compur - KITA-126 UH (549 517) - NIOSH 6603 (Carbon dioxide) - 1994 - OSHA ID-172 (Carbon dioxide in workplace atmospheres) - 1990		
BMGV: ---	Other information: ---	

GB **Chemical Name**	Oil mist, mineral	
WEL-TWA: 5 mg/m3 (Mineral oil, excluding metal working fluids, ACGIH)	WEL-STEL: ---	---
Monitoring procedures: - Draeger - Oil Mist 1/a (67 33 031)		
BMGV: ---	Other information: ---	

IRL **Chemical Name**	Oil mist, mineral	
OELV-8h: 5 mg/m3 (Mineral oil, pure, highly and severely refined (inhalable))	OELV-15min: ---	---
Monitoring procedures: - Draeger - Oil Mist 1/a (67 33 031)		
BLV: ---	Other information: ---	

GB **Chemical Name**	Paraffin waxes	
WEL-TWA: 2 mg/m3 (paraffin wax, fume)	WEL-STEL: 6 mg/m3 (paraffin wax, fume)	---
Monitoring procedures: - Compur - KITA-187 S (551 174)		
BMGV: ---	Other information: ---	

IRL **Chemical Name**	Paraffin waxes	
OELV-8h: 2 mg/m3 (paraffin wax, fume)	OELV-15min: 6 mg/m3 (paraffin wax, fume)	---
Monitoring procedures: - Compur - KITA-187 S (551 174)		
BLV: ---	Other information: ---	

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note

Consumer	Human - dermal	Long term, systemic effects	DNEL	46	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	185	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	46	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	77	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	871	mg/m3	

GB - United Kingdom | WEL-TWA = Workplace Exposure Limit - Long-term exposure limit - 8-hour TWA (= time weighted average) reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/CE, 2017/164/EU). (9) = Respirable fraction (2004/37/CE, 2017/164/EU). (11) = Inhalable fraction (2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (2004/37/CE). |
| WEL-STEL = Workplace Exposure Limit - Short-term exposure limit - 15-minute reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). |
| BMGV = Biological monitoring guidance value (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 98/24/EC or 2004/37/EC or SCOEL (Biological Limit Value - BLV, Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL)) |
| Other information (EH40/2005 Workplace exposure limits (Fourth Edition 2020)): Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, 2019/1831/EU or 2024/869/EU:
(13) = The substance can cause sensitisation of the skin and of the respiratory tract (98/24/EC, 2004/37/CE), (14) = The substance can cause sensitisation of the skin (2004/37/CE), (15) = Substantial contribution to the total body burden via dermal exposure possible. |

IRL - Ireland/Éire | OELV-8h = Occupational Exposure Limit Value - 8-hour reference period (Chemical Agents and Carcinogens CoP (Code of Practice) 2024, HSA (Health and Safety Authority)): (IFV) = Inhalable Fraction and Vapour. (I) = Inhalable Fraction. (R) = Respirable Fraction.
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (11) = Inhalable fraction (2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (2004/37/CE). |
| OELV-15min = Occupational Exposure Limit Value - 15-minute reference period (Chemical Agents and Carcinogens CoP (Code of Practice) 2024, HSA (Health and Safety Authority)): (IFV) = Inhalable Fraction and Vapour. (I) = Inhalable Fraction. (R) = Respirable Fraction.
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). |
| BMGV = Biological Monitoring Guidance Value (Biological Monitoring Guidelines 2011, HSA (Health and Safety Authority)): ACGIH-BEI = BMGV have been sourced from Biological Exposure Indices (BEI) as issued by the American Conference of Governmental Industrial Hygienists (ACGIH). SCOEL = BMGV have been sourced from the Scientific Committee on Occupational Exposure Limit Values (SCOEL) which was set up by a Commission Decision (95/320/EC) with the mandate to advise the European Commission on occupational exposure limits for chemicals in the workplace. HSE = BMGV have been sourced from the Health and Safety Executive (HSE), UK.
(EU) = Directive 98/24/EC or 2004/37/EC or SCOEL (Biological Limit Value - BLV, Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL)) |
| Other information (Chemical Agents and Carcinogens CoP (Code of Practice) 2024, HSA (Health and Safety Authority)): Carc1A, Carc1B = carcinogenic substance, Cat. 1A or 1B. Muta1A, Muta1B = mutagenic substance, Cat. 1A or 1B. Repr1A, Repr1B = Substances known to be toxic for reproduction, Cat. 1A or 1B. Skin = Can be absorbed through skin. Asphx = asphyxiant. Sens = The substance can cause sensitisation. BOELV = Binding Occupational Exposure Limit Values. IOELV = Indicative Occupational Exposure Limit Values.
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, 2019/1831/EU or 2024/869/EU:
(13) = The substance can cause sensitisation of the skin and of the respiratory tract (98/24/EC, 2004/37/CE), (14) = The substance can cause sensitisation of the skin (2004/37/CE), (15) = Substantial contribution to the total body burden via dermal exposure possible. |

M - Malta | OELV-8h = Occupational Exposure Limit Value - 8 h (8-hour reference period as a time-weighted average) [S.L.646.16, last amended by L.N. 356 of 2021 and Act XXXIII of 2024]: [9] = Inhalable fraction, [10] = Respirable fraction.

(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (11) = Inhalable fraction (2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (2004/37/CE). |
| OELV-ST = Occupational Exposure Limit Value - Short-term (15-minute reference period) [S.L.646.16, last amended by L.N. 356 of 2021 and Act XXXIII of 2024]: [8] = Short-term exposure limit value in relation to a reference period of 1 minute, [9] = Inhalable fraction, [10] = Respirable fraction.
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). |
| BMGV = Biological monitoring guidance value (EH40/2005 Workplace exposure limits (Fourth Edition 2020), United Kingdom) / BBLV = Binding Biological Limit Value (S.L.646.16, last amended by L.N. 356 of 2021 and Act XXXIII of 2024).
(EU) = Directive 98/24/EC or 2004/37/EC or SCOEL (Biological Limit Value - BLV, Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL)) |
| Other information [S.L.646.16, last amended by L.N. 356 of 2021 and Act XXXIII of 2024]: Skin = Possibility of a significant uptake through the skin. [11] = When selecting an appropriate exposure monitoring method , account should be taken of potential limitations and interferences that may arise in the presence of other sulphur compounds. [12] = The mist is defined as the thoracic fraction. [13] = Established in accordance with the Annex to Directive 91/322/EEC. [14] = During exposure monitoring for mercury and its divalent inorganic compounds, account should be taken of relevant biological monitoring techniques that complement the OELV.
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, 2019/1831/EU or 2024/869/EU:
(EU13) = The substance can cause sensitisation of the skin and of the respiratory tract (2004/37/CE), (EU14) = The substance can cause sensitisation of the skin (2004/37/CE), (EU15) = Substantial contribution to the total body burden via dermal exposure possible. |

8.2 Exposure controls
8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.
If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
Applies only if maximum permissible exposure values are listed here.
Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.
These are specified by e.g. EN 14042.
EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment
General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:
Tight fitting protective goggles with side protection (EN ISO 16321-1).

Skin protection - Hand protection:
Protective nitrile gloves (EN ISO 374).
Minimum layer thickness in mm:
>= 0,4
Permeation time (penetration time) in minutes:
>= 480
The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.
The recommended maximum wearing time is 50% of breakthrough time.
Protective hand cream recommended.

Skin protection - Other:
Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:
Normally not necessary.
If the workplace limit value is exceeded.
Filter A P3 (EN 14387), code colour brown, white
Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:
Not applicable

Additional information on hand protection - No tests have been performed.
In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.
Selection of materials derived from glove manufacturer's indications.
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.
The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls
No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Aerosol. Active substance: liquid.
Colour:	Light brown
Odour:	Characteristic
Melting point/freezing point:	<-66 °C (ASTM D 97, Active substance)
Boiling point or initial boiling point and boiling range:	176 °C (Active substance)
Flammability:	Does not apply to aerosols.
Lower explosion limit:	0,6 Vol-% ((Particulars of main substances contained))
Upper explosion limit:	8,0 Vol-% ((Particulars of main substances contained))
Flash point:	43 °C (Liquid concentrate)
Auto-ignition temperature:	Does not apply to aerosols.
Decomposition temperature:	There is no information available on this parameter.
pH:	Mixture is non-soluble (in water).
Kinematic viscosity:	<=20,5 mm2/s (40°C)
Solubility:	Insoluble
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	9,4 bar (50°C)
Vapour pressure:	7,2 bar (20°C)
Density and/or relative density:	0,817 g/ml (Active substance)
Relative vapour density:	Does not apply to aerosols.
Particle characteristics:	Does not apply to aerosols.

9.2 Other information

Explosives:	There is no information available on this parameter.
Aerosols:	Enclosed space ignition test (UN RTDG, Manual of Tests and Criteria, Part III, 31.5): <= 300 g/m3 (deflagration density)
Aerosols:	Enclosed space ignition test (UN RTDG, Manual of Tests and Criteria, Part III, 31.5): <= 300 s/m3 (time equivalent)
Aerosols:	Ignition distance test (UN RTDG, Manual of Tests and Criteria, Part III, 31.4): >= 75 cm
Oxidising liquids:	No

SECTION 10: Stability and reactivity

10.1 Reactivity
The product has not been tested.

10.2 Chemical stability
Stable with proper storage and handling.

10.3 Possibility of hazardous reactions
No dangerous reactions are known.

10.4 Conditions to avoid
See also section 7.
Heating, open flame, ignition sources
Pressure increase will result in danger of bursting.

Pressurized container:	protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

10.5 Incompatible materials
See also section 7.
Avoid contact with strong oxidizing agents.

10.6 Hazardous decomposition products

See also Subsection 10.1 to 10.5.
See also section 5.2
No decomposition when used as directed.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Possibly more information on health effects, see Section 2.1 (classification).

WD-40® MULTI-USE PRODUCT - [Aerosol]						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LD50	>18,5	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant, Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative, Analogous conclusion
Germ cell mutagenicity:				Human being	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative, Analogous conclusion
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative, Analogous conclusion
Germ cell mutagenicity:				Rat	OECD 478 (Genetic Toxicology - Rodent dominant Lethal Test)	Negative, Analogous conclusion

Germ cell mutagenicity:					OECD 479 (Genetic Toxicology - In Vitro Sister Chromatid Exchange assay in Mammalian Cells)	Negative, Analogous conclusion Chinese hamster
Carcinogenicity:	NOAEC	1100	mg/m3	Mouse	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Female
Carcinogenicity:	NOAEC	>= 2200	mg/m3	Mouse	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Male
Reproductive toxicity:					OECD 414 (Prenatal Developmental Toxicity Study)	Negative, Analogous conclusion
Reproductive toxicity (Effects on fertility):	NOAEL	>= 3000	mg/kg bw/d	Rat	OECD 415 (One-Generation Reproduction Toxicity Study)	Male
Reproductive toxicity (Effects on fertility):	NOAEL	>= 1500	mg/kg bw/d	Rat	OECD 415 (One-Generation Reproduction Toxicity Study)	Female
Specific target organ toxicity - single exposure (STOT-SE):						May cause drowsiness or dizziness., STOT SE 3, H336
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	3000	mg/kg/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Analogous conclusion
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	1444	ppm	Rat	OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	Analogous conclusion
Aspiration hazard:						Yes
Symptoms:						unconsciousness, headaches, dizziness, discoloration of the skin, vomiting, diarrhoea

Carbon dioxide						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Symptoms:						unconsciousness, blisters by skin-contact, vomiting, frostbite, annoyance, palpitations, itching, headaches, cramps, ear noises, dizziness

11.2. Information on other hazards

WD-40® MULTI-USE PRODUCT - [Aerosol]						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Endocrine disrupting properties:						Does not apply to mixtures.

Other information:						No other relevant information available on adverse effects on health.

Carbon dioxide						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Endocrine disrupting properties:						No

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

WD-40® MULTI-USE PRODUCT - [Aerosol]							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:		28d	>20-<60	%		OECD 310 (Ready Biodegradability - CO2 in sealed vessels (Headspace Test))	Not readily but inherent biodegradable.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Endocrine disrupting properties:							Does not apply to mixtures.
12.7. Other adverse effects:							No information available on other adverse effects on the environment.
Other information:							DOC-elimination degree(complexing organic substance)>= 80%/28d: n.a.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	NOELR	28d	0,13	mg/l	Oncorhynchus mykiss	QSAR	
12.1. Toxicity to fish:	LC50	96h	>1000	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	ErC50	72h	>1000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EbC50	72h	>1000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	

12.1. Toxicity to algae:	NOELR	72h	100	mg/l	Raphidocelis subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOELR	72h	3	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	80	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
12.3. Bioaccumulative potential:			5-6,7				High
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EL50	48h	0,95	mg/l			QSAR

Carbon dioxide							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	35	mg/l	Salmo gairdneri		
12.3. Bioaccumulative potential:	Log Kow		0,83				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
12.7. Other adverse effects:							Greenhouse effect
Global warming potential (GWP):			1				

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:
The waste codes are recommendations based on the scheduled use of this product.
Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)
16 05 04 gases in pressure containers (including halons) containing hazardous substances
Recommendation:
Sewage disposal shall be discouraged.
Pay attention to local and national official regulations.
E.g. suitable incineration plant.

For contaminated packing material

Pay attention to local and national official regulations.
15 01 04 metallic packaging
15 01 01 paper and cardboard packaging
Dispose using dual system.

SECTION 14: Transport information

General statements

Transport by road/by rail (ADR/RID)

14.1. UN number or ID number:	1950
14.2. UN proper shipping name:	
UN 1950 AEROSOLS	
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
14.5. Environmental hazards:	Not applicable
Tunnel restriction code:	D
Classification code:	5F
LQ:	1 L



Transport category: 2

Transport by sea (IMDG-code)

14.1. UN number or ID number: 1950
14.2. UN proper shipping name:
UN 1950 AEROSOLS



14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
14.5. Environmental hazards: Not applicable
Marine Pollutant: Not applicable
EmS: F-D, S-U

Transport by air (IATA)

14.1. UN number or ID number: 1950
14.2. UN proper shipping name:
UN 1950 Aerosols, flammable



14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
14.5. Environmental hazards: Not applicable

14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.
All persons involved in transporting must observe safety regulations.
Precautions must be taken to prevent damage.

14.7. Maritime transport in bulk according to IMO instruments

Freighted as packaged goods rather than in bulk, therefore not applicable.
Minimum amount regulations have not been taken into account.
Danger code and packing code on request.
Comply with special provisions.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Observe restrictions:
Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!
Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

Hazard categories	Notes to Annex I	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements
P3b	11.1, 11.2	5000 (netto)	50000 (netto)

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC): 65,5 %

National requirements/regulations on safety and health protection must be applied when using work equipment.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

EUF0002
Revised sections: 8, 9
Employee training in handling dangerous goods is required.
These details refer to the product as it is delivered.
Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Asp. Tox. 1, H304	Classification according to calculation procedure.
STOT SE 3, H336	Classification according to calculation procedure.
Aerosol 1, H222	Classification according to calculation procedure.
Aerosol 1, H229	Classification based on the form or physical state.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents.
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.

Asp. Tox. — Aspiration hazard
STOT SE — Specific target organ toxicity - single exposure - narcotic effects
Aerosol — Aerosols
Flam. Liq. — Flammable liquid

Key literature references and sources for data:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.
Guidelines for the preparation of safety data sheets as amended (ECHA).
Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).
Safety data sheets for the constituent substances.
ECHA Homepage - Information about chemicals.
GESTIS Substance Database (Germany).
German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).
EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.
National Lists of Occupational Exposure Limits for each country as amended.
Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

Any abbreviations and acronyms used in this document:

acc., acc. to according, according to
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ASTM ASTM International (American Society for Testing and Materials)
ATE Acute Toxicity Estimate
BAM Bundesanstalt für Materialforschung und -prüfung (= Federal Institute for Materials Research and Testing, Germany)
BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
BCF Bioconcentration factor
BSEF The International Bromine Council
CAS Chemical Abstracts Service
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR carcinogenic, mutagenic, reproductive toxic
DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
DOC Dissolved organic carbon
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)
EC European Community
ECHA European Chemicals Agency
ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect
EEC European Economic Community
EINECS European Inventory of Existing Commercial Chemical Substances
ELINCS European List of Notified Chemical Substances
EN European Norms
EPA United States Environmental Protection Agency (United States of America)

ErCx, EμCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)
etc. et cetera
EU European Union
EVAL Ethylene-vinyl alcohol copolymer
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
Koc Adsorption coefficient of organic carbon in the soil
Kow octanol-water partition coefficient
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC (Code) International Bulk Chemical (Code)
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLID International Uniform Chemical Information Database
IUPAC International Union for Pure Applied Chemistry
LC50 Lethal Concentration to 50 % of a test population
LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)
Log Koc Logarithm of adsorption coefficient of organic carbon in the soil
Log Kow, Log Pow Logarithm of octanol-water partition coefficient
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
mg/kg bw mg/kg body weight
mg/kg bw/d, mg/kg bw/day mg/kg body weight/day
mg/kg dw mg/kg dry weight
mg/kg wwt mg/kg wet weight
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
NIOSH National Institute for Occupational Safety and Health (USA)
NLP No-longer-Polymer
NOEC, NOEL No Observed Effect Concentration/Level
OECD Organisation for Economic Co-operation and Development
org. organic
OSHA Occupational Safety and Health Administration (USA)
PBT persistent, bioaccumulative and toxic
PE Polyethylene
PNEC Predicted No Effect Concentration
ppm parts per million
PVC Polyvinylchloride
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 6/7/8/9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SVHC Substances of Very High Concern
Tel. Telephone
TOC Total organic carbon
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.
These statements were made by:
Chemical Check GmbH, Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0
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Lighter Fuel

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.
Issue date: 12/12/2024 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : Lighter Fuel
UFI : FF00-G0CQ-R005-48NY

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Intended for general public
Main use category : Consumer use
Use of the substance/mixture : Fuels
Lighters

1.2.2. Uses advised against

Uses other than those recommended

1.3. Details of the supplier of the safety data sheet

Zippo UK Ltd.
Barley Mow Centre
10 Barley Mow Passage
Chiswick Greater London W4 4PH
United Kingdom
+ 44 (0) 208 964 0666
EMEAinfo@zippo.com

1.4. Emergency telephone number

Emergency number : ChemTel LLC +1-(813)-248-0585 (24 h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to GB CLP (SI 2019:720 as amended)

Flammable liquids, Category 2	H225
Skin corrosion/irritation, Category 2	H315
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336
Aspiration hazard, Category 1	H304
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. May cause drowsiness or dizziness. Causes skin irritation. May be fatal if swallowed and enters airways. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to GB CLP (SI 2019:720 as amended)

Hazard pictograms (GB CLP) :



GHS02 GHS07 GHS08 GHS09

Signal word (GB CLP) : Danger
Contains : Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics; Hydrocarbons, C6, isoalkanes, <5% n-hexane; cyclohexane; Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics; hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Hazard statements (GB CLP)	:	H225 - Highly flammable liquid and vapour. H304 - May be fatal if swallowed and enters airways. H315 - Causes skin irritation. H336 - May cause drowsiness or dizziness. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (GB CLP)	:	P102 - Keep out of reach of children. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P273 - Avoid release to the environment. P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P331 - Do NOT induce vomiting. P501 - Dispose of contents and container to an approved waste disposal plant.

2.3. Other hazards

Component	
Substance(s) not meeting the PBT criteria of UK REACH regulation, in accordance with Annex XIII	Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics (-), Hydrocarbons, C6, isoalkanes, <5% n-hexane (-), cyclohexane (110-82-7), Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics, hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Substance(s) not meeting the vPvB criteria of UK REACH regulation, in accordance with Annex XIII	Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics (-), Hydrocarbons, C6, isoalkanes, <5% n-hexane (-), cyclohexane (110-82-7), Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics, hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Component	
Substance(s) not included in the list established in accordance with Article 59(1) of UK REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in GB BPR and GB PPP	Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics(-), Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics, Hydrocarbons, C6, isoalkanes, <5% n-hexane(-), hydrocarbons, C7, n-alkanes, isoalkanes, cyclics, cyclohexane(110-82-7)

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to GB CLP (SI 2019:720 as amended)
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	CAS-No.: - EC-No.: 920-750-0	≤ 70	Flam. Liq. 2, H225 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics	EC-No.: 927-241-2	≤ 30	Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
Hydrocarbons, C6, isoalkanes, <5% n-hexane	CAS-No.: - EC-No.: 931-254-9	< 10	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Name	Product identifier	%	Classification according to GB CLP (SI 2019:720 as amended)
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	EC-No.: 927-510-4	< 10	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
cyclohexane	CAS-No.: 110-82-7 EC-No.: 203-806-2	< 2	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Move the affected person to the fresh air. Get medical attention immediately if symptoms occur.

First-aid measures after skin contact : Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. If symptoms persist, consult a doctor. Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult an eye specialist. Rinse eyes with water as a precaution.

First-aid measures after ingestion : Immediately get medical attention. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : May cause drowsiness or dizziness.

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard. In high concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination.

Symptoms/effects after skin contact : Irritation. Redness. Burning sensation. May cause skin dryness or cracking.

Symptoms/effects after eye contact : Exposed may experience eye tearing, redness and discomfort.

Symptoms/effects after ingestion : Risk of lung oedema. Ingestion may cause nausea and vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Medical personnel should be made aware of substance(s) involved and take measures for self protection. Wear suitable protective clothing. Aspiration into lungs can cause a chemical pneumonia. Immediately get medical attention. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : For small fire: Dry chemical. Carbon dioxide (CO2). Sand. For large fire: Foam. Water spray jet. Water mist. Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : high volume water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard : The vapours are heavier than air and can accumulate in high concentrations on the ground, in cavities, channels and cellars. Highly flammable liquid and vapour.

Explosion hazard	:	No direct explosion hazard.
Hazardous decomposition products in case of fire	:	Thermal decomposition may produce : Carbon monoxide.

5.3. Advice for firefighters

Firefighting instructions	:	Use water spray jet to protect personnel and to cool endangered containers. Use water curtains to contain the toxic clouds. Do not enter fire area without proper protective equipment, including respiratory protection.
Protective equipment for firefighters	:	Wear self-contained breathing apparatus and protective suit (see section 8). Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment	:	Avoid contact with skin, eyes and clothing. Mark out the contaminated area with signs and prevent access to unauthorized personnel. Do not breathe fumes. Ensure adequate ventilation. Remove ignition sources. Use non-sparking tools.
Emergency procedures	:	Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing vapours, mist. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment. Prevent spread over a wide area (e.g. by containment or oil barriers). Keep away from all drains, surface and ground water. Use the appropriate container to avoid environmental contamination. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

For containment	:	Cover spill with non combustible material, e.g.: sand/earth. Ensure waste is collected and contained. Ventilate affected area. Isolated drainage to prevent discharge to soil. Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up	:	Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	:	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For disposal of contaminated materials refer to section 13 : "Disposal considerations". For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	:	Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Handle in accordance with good industrial hygiene and safety procedures. Provide for sufficient ventilation. This can be achieved by local exhaust or general exhaust air collection. Wear a suitable respirator if the ventilation is not sufficient to keep the solvent vapour concentration below the occupational limit values. Wear personal protective clothing (see chapter 8). Wash hands before breaks and after work. Keep container tightly closed and in a well-ventilated place. Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment). Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing vapours, mist. Avoid contact with skin and eyes.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store tightly closed in a dry, cool and well-ventilated place. Keep containers tightly closed and properly labelled. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Refer to the detailed list of incompatible materials in section 10 Stability/Reactivity. Keep away from food, drink and animal feedingstuffs. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking. Keep out of the reach of children. Smoking is forbidden. Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Packaging materials : Store always product in container of same material as original container.

7.3. Specific end use(s)

May not be used for other purposes than specified in section 1.2 of this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

cyclohexane (110-82-7)	
United Kingdom - Occupational Exposure Limits	
Local name	Cyclohexane
WEL TWA (OEL TWA)	350 mg/m³
	100 ppm
WEL STEL (OEL STEL)	1050 mg/m³
	300 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics (-)	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	≥ µg/m³
Long-term - systemic effects, dermal	773 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2035 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	699 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	608 mg/m³
Long-term - systemic effects, dermal	699 mg/kg bodyweight/day

Hydrocarbons, C6, isoalkanes, <5% n-hexane (-)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	13964 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	5306 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	1301 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1131 mg/m³
Long-term - systemic effects, dermal	1377 mg/kg bodyweight/day

cyclohexane (110-82-7)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	1400 mg/m³
Acute - local effects, inhalation	1400 mg/m³
Long-term - systemic effects, dermal	2016 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	700 mg/m³
Long-term - local effects, inhalation	700 mg/m³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	412 mg/m³
Acute - local effects, inhalation	412 mg/m³
Long-term - systemic effects,oral	59.4 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	206 mg/m³
Long-term - systemic effects, dermal	1186 mg/kg bodyweight/day
Long-term - local effects, inhalation	206 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	44.7 µg/l
PNEC aqua (marine water)	4.47 µg/l
PNEC aqua (intermittent, freshwater)	9 µg/l
PNEC aqua (intermittent, marine water)	0.9 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	3.6 mg/kg dwt
PNEC sediment (marine water)	0.36 mg/kg dwt

cyclohexane (110-82-7)	
PNEC (Soil)	
PNEC soil	0.694 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	3.24 mg/l

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	77 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	871 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	46 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	185 mg/m³
Long-term - systemic effects, dermal	46 mg/kg bodyweight/day

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	300 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2085 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	149 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	447 mg/m³
Long-term - systemic effects, dermal	149 mg/kg bodyweight/day

8.1.5. Control banding

No additional information available

8.2. Exposure controls

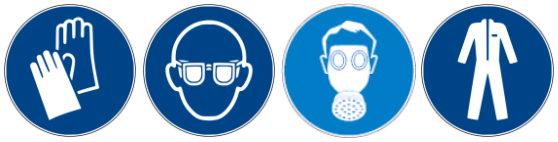
8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Provide adequate ventilation. Ensure good ventilation of the work station. Exposures should be minimized in accordance with good industrial hygiene practices.

8.2.2. Personal protection equipment

Personal protective equipment:
Wear recommended personal protective equipment. Gloves. Wear eye protection. Use breathing mask and filter suitable for organic gases and vapours.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:
Safety glasses. EN 166

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Safety gloves. ISO 374-1/EN 374. Breakthrough time : > 480 min. Layer thickness : > 0,11 mm. Use gloves respecting all the conditions and within the limits set by the manufacturer. Replace gloves immediately in case of cuts, holes or other signs of damages or degradation. If necessary, refer to the EN 374 standard.

Other skin protection
Materials for protective clothing:
protective clothing.

8.2.2.3. Respiratory protection

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment. Avoid inhalation of vapours. Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.
Other information:
Regulation on Use of Personal Protective Equipments in Workplaces published in the Official Journal numbered 28695 on July 2, 2013. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing prior to re-use. Avoid contact with skin and eyes.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Colourless.
Odour	:	Characteristic.
Odour threshold	:	Not available
pH	:	Not available
Melting point	:	Not applicable
Freezing point	:	Not available
Boiling point	:	> 104.1 °C
Flash point	:	- 1 °C
Lower explosion limit	:	1.8 vol %
Upper explosion limit	:	9.6 vol %
Vapour pressure	:	Not determined
Vapour pressure at 50°C	:	Not determined
Relative vapour density at 20°C	:	Not available
Relative density	:	Not available
Density	:	≈ 0.747 g/cm³
Solubility	:	Insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Auto-ignition temperature	:	270 °C
Decomposition temperature	:	Not available
Viscosity, kinematic	:	Not determined
Explosive properties	:	Not available

9.2. Other information

Particle characteristics	:	Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions. Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Avoid high temperatures. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take action to prevent static discharges. Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics (-)	
LD50 oral rat	> 5000 mg/kg
LD50 oral	> 5840 mg/kg bodyweight
LD50 dermal rat	2800 – 3100 mg/kg bodyweight Animal: rat
LD50 dermal	> 2920 mg/kg bodyweight
LC50 Inhalation - Rat	> 23.3 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
LC50 Inhalation - Rat (Dust/Mist)	> 23300 mg/l

Hydrocarbons, C6, isoalkanes, <5% n-hexane (-)	
LD50 oral rat	> 5000 mg/kg OECD 401
LD50 dermal rat	> 3000 mg/kg OECD 402
LC50 Inhalation - Rat (Dust/Mist)	> 20 mg/l/4h OECD 403

cyclohexane (110-82-7)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 32.88 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure : May cause drowsiness or dizziness.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics (-)	
STOT-single exposure	May cause drowsiness or dizziness.

Hydrocarbons, C6, isoalkanes, <5% n-hexane (-)	
STOT-single exposure	May cause drowsiness or dizziness.

cyclohexane (110-82-7)	
STOT-single exposure	May cause drowsiness or dizziness.

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics	
STOT-single exposure	May cause drowsiness or dizziness.

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics (-)	
NOAEC (inhalation, rat, vapour, 90 days)	24.3 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

Aspiration hazard : May be fatal if swallowed and enters airways.

Lighter Fuel	
Viscosity, kinematic	Not determined

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics (-)	
Viscosity, kinematic	0.715 – 0.786 mm²/s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm²/s)'

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	
Viscosity, kinematic	0.67 mm²/s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm²/s)'

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The substance/mixture has no endocrine disrupting properties

11.2.2. Other information

Other information : No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short–term (acute) : Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long–term (chronic) : Toxic to aquatic life with long lasting effects.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics (-)	
LC50 - Fish [1]	1 – 10 ppm
EC50 - Crustacea [1]	1 – 10
EC50 - Other aquatic organisms [1]	4.6 mg/l waterflea
EC50 - Other aquatic organisms [2]	10 mg/l
LOEC (chronic)	0.32 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics (-)	
NOEC (chronic)	0.17 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Hydrocarbons, C6, isoalkanes, <5% n-hexane (-)	
LC50 - Fish [1]	18.27 mg/l Oncorhynchus mikiss - ECHA
EC50 - Crustacea [1]	31.9 mg/l Daphnia magna - ECHA
ErC50 algae	13.56 mg/l Pseudokirchneriella subcapitata - CONCAWE, Brussels, Belgium (2009)
NOEC chronic fish	4.089 mg/l Oncorhynchus mykiss - CONCAWE, Brussels, Belgium (2009)
NOEC chronic crustacea	4.888 mg/l Daphnia magna - CONCAWE, Brussels, Belgium

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	
LOEC (chronic)	0.32 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

12.2. Persistence and degradability

Lighter Fuel	
Persistence and degradability	Rapidly degradable

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics (-)	
Persistence and degradability	Readily biodegradable.

Hydrocarbons, C6, isoalkanes, <5% n-hexane (-)	
Persistence and degradability	Rapidly degradable

cyclohexane (110-82-7)	
Persistence and degradability	Readily biodegradable.

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics	
Persistence and degradability	Biodegradable.

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics (-)	
Partition coefficient n-octanol/water (Log Pow)	4.85

Hydrocarbons, C6, isoalkanes, <5% n-hexane (-)	
BCF - Fish [1]	501.187 Pimephales promelas
Partition coefficient n-octanol/water (Log Pow)	3.6

12.4. Mobility in soil

Lighter Fuel	
Additional information	Material insoluble in water

12.5. Results of PBT and vPvB assessment

Component	
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics (-)	This product does not contain substances at ≥0.1% that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at ≥0.1% that meet the vPvB criteria of UK REACH regulation, annex XIII
Hydrocarbons, C6, isoalkanes, <5% n-hexane (-)	This product does not contain substances at ≥0.1% that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at ≥0.1% that meet the vPvB criteria of UK REACH regulation, annex XIII
cyclohexane (110-82-7)	This product does not contain substances at ≥0.1% that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at ≥0.1% that meet the vPvB criteria of UK REACH regulation, annex XIII
Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics	This product does not contain substances at ≥0.1% that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at ≥0.1% that meet the vPvB criteria of UK REACH regulation, annex XIII
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	This product does not contain substances at ≥0.1% that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at ≥0.1% that meet the vPvB criteria of UK REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Waste packaging should be recycled. Recycle or dispose of in compliance with current legislation. Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Disposal must be done according to official regulations.

Additional information : Flammable vapours may accumulate in the container. Do not re-use empty containers.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 3295	UN 3295	UN 3295	UN 3295	UN 3295
14.2. UN proper shipping name				
HYDROCARBONS, LIQUID, N.O.S. (Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics ; Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics)	HYDROCARBONS, LIQUID, N.O.S. (Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics ; Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics)	Hydrocarbons, liquid, n.o.s. (Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics ; hydocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics)	HYDROCARBONS, LIQUID, N.O.S. (Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics ; hydocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics)	HYDROCARBONS, LIQUID, N.O.S. (Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics ; hydocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics)

ADR	IMDG	IATA	ADN	RID
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment: True	Dangerous for the environment: True Marine pollutant: Yes	Dangerous for the environment: True	Dangerous for the environment: True	Dangerous for the environment: True
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	:	F1
Special provisions (ADR)	:	640C
Limited quantities (ADR)	:	1l
Excepted quantities (ADR)	:	E2
Packing instructions (ADR)	:	P001
Mixed packing provisions (ADR)	:	MP19
Portable tank and bulk container instructions (ADR)	:	T7
Portable tank and bulk container special provisions (ADR)	:	TP1, TP8, TP28
Tank code (ADR)	:	L1.5BN
Vehicle for tank carriage	:	FL
Transport category (ADR)	:	2
Special provisions for carriage - Operation (ADR)	:	S2, S20
Hazard identification number (Kemler No.)	:	33
Orange plates	:	
Tunnel restriction code (ADR)	:	D/E
EAC code	:	3YE

Transport by sea

Limited quantities (IMDG)	:	1 L
Excepted quantities (IMDG)	:	E2
Packing instructions (IMDG)	:	P001
IBC packing instructions (IMDG)	:	IBC02
Tank instructions (IMDG)	:	T7
Tank special provisions (IMDG)	:	TP1, TP8, TP28
EmS-No. (Fire)	:	F-E
EmS-No. (Spillage)	:	S-D
Stowage category (IMDG)	:	B
Properties and observations (IMDG)	:	Immiscible with water.

Air transport

PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y341
PCA limited quantity max net quantity (IATA)	:	1L
PCA packing instructions (IATA)	:	353
PCA max net quantity (IATA)	:	5L

CAO packing instructions (IATA)	:	364
CAO max net quantity (IATA)	:	60L
Special provisions (IATA)	:	A3, A324
ERG code (IATA)	:	3H

Inland waterway transport

Classification code (ADN)	:	F1
Special provisions (ADN)	:	640C
Limited quantities (ADN)	:	1 L
Excepted quantities (ADN)	:	E2
Carriage permitted (ADN)	:	T
Equipment required (ADN)	:	PP, EX, A
Ventilation (ADN)	:	VE01
Number of blue cones/lights (ADN)	:	1

Rail transport

Classification code (RID)	:	F1
Special provisions (RID)	:	640C
Limited quantities (RID)	:	1L
Excepted quantities (RID)	:	E2
Packing instructions (RID)	:	P001
Mixed packing provisions (RID)	:	MP19
Portable tank and bulk container instructions (RID)	:	T7
Portable tank and bulk container special provisions (RID)	:	TP1, TP8, TP28
Tank codes for RID tanks (RID)	:	L1.5BN
Transport category (RID)	:	2
Colis express (express parcels) (RID)	:	CE7
Hazard identification number (RID)	:	33

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

UK REACH Annex XVII (Restriction List)

UK restriction list (REACH Annex XVII)

Reference code	Applicable on	Entry title or description
3(a)	Lighter Fuel ; Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics ; Hydrocarbons, C6, isoalkanes, <5% n-hexane ; cyclohexane ; Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics ; hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F

UK restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
3(b)	Lighter Fuel ; Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics ; Hydrocarbons, C6, isoalkanes, <5% n-hexane ; cyclohexane ; Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics ; hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	Lighter Fuel ; Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics ; Hydrocarbons, C6, isoalkanes, <5% n-hexane ; cyclohexane ; Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics ; hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
40.	Lighter Fuel ; Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics ; Hydrocarbons, C6, isoalkanes, <5% n-hexane ; cyclohexane ; Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics ; hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in the GB classification and labelling list or not.
57.	cyclohexane	Cyclohexane

UK REACH Annex XIV (Authorisation List)

This product contains no substance(s) listed on UK REACH Annex XIV (Authorisation List) equal to or above the 0.1% level of disclosure

UK REACH Candidate List (SVHC)

Contains no substance(s) listed on the UK REACH Candidate List

Seveso Directive (Disaster Risk Reduction)

Seveso Additional information : P5a, P5b, P5c

GB PIC regulation (Prior Informed Conset)

This product contains no substance(s) listed on the GB PIC List equal to or above the level of SDS disclosure

POP Regulation (Persistent Organic Pollutants)

This product contains no substance(s) listed on the GB POP List equal to or above the level of SDS disclosure

Ozone Regulation (S.I. No. 168 of 2015)

This product contains no substance(s) listed on the GB Ozone Depletion List equal to or above the level of SDS disclosure

Control of Poisons and Explosives Precursors Act

This product contains no substance(s) listed as a reportable poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains no substance(s) listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure
This product contains no substance(s) listed as a reportable explosive precursor on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure
This substance is not listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations

Drug Precursors Regulation (273/2004)

This product contains no substance(s) listed on the GB Drug Precursors List equal to or above the level of SDS disclosure

15.1.2. Other Information

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Effective concentration for 50 percent of test population (median effective concentration)
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Lethal concentration for 50 percent of test population (median lethal concentration)
LD50	Lethal dose for 50 percent of test population (median lethal dose)
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulation concerning the International Carriage of Dangerous Goods by Railways
SDS	Safety Data Sheet
STP	Sewage treatment plant

Abbreviations and acronyms:	
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Full text of H- and EUH-statements:	
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Flam. Liq. 2	H225	On basis of test data
Skin Irrit. 2	H315	Calculation method
STOT SE 3	H336	Calculation method
Asp. Tox. 1	H304	Expert judgement
Aquatic Chronic 2	H411	Calculation method

Safety Data Sheet (SDS), UK

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SAFETY DATA SHEET

Suede and NuBuck Leather Cleaner

Revision: 07/01/2025
Supersedes Revision: 06/10/2019

This SDS complies with the US OSHA HCS 2012.

1. Product and Company Identification

Product Code: 131

Product Name: Suede and NuBuck Leather Cleaner

Company Name: Servpro Professional Cleaning Products, LLC.
801 Industrial Blvd.
Gallatin, TN 37066 (800)535-5053

Emergency Contact: Infotrac

2. Hazards Identification

GHS Signal Word: **None**

GHS Hazard Phrases:
H302 Harmful if swallowed.
H315 Causes skin irritation.
H320 + H318 Causes eye irritation. Causes serious eye damage.
H335 May cause respiratory irritation

GHS Precautionary Phrases:
P262 Do not get in eyes, on skin, or on clothing.
P261: Avoid breathing dust/fumes/gas/mist/vapors/spray
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/eye protection/face protection.

GHS Response Phrases:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P311 Call a POISON CENTER or doctor/physician.
P302 + P350 If on skin: Wash with plenty of water.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P315 Get immediate medical advice/attention.

GHS Storage and Disposal Phrases:
P235 Keep cool.
P410 Protect from sunlight.
P403+233: Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration

Additional Chemical Information Not classified as hazardous according to GHS and is generally recognized as safe (GRAS) when diluted per label instructions. Exact component names withheld as intellectual property.

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation:
Inhalation:
If fumes, aerosols or combustion products are inhaled, or if you have trouble breathing, leave the area to obtain fresh air.
Other measures are usually unnecessary.
If continued difficulty is experienced, get medical assistance immediately

In Case of Skin Contact:
If skin contact occurs:
Immediately remove all contaminated clothing, including footwear.
Flush skin and hair with running water (and soap if available).
Seek medical attention if irritation develops or persists.

In Case of Eye Contact:
If this product comes in contact with eyes:
Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open.
Do not rub eyes.
Remove contact lenses, if present and easy to do. Seek medical attention if removal is not possible.
Seek medical attention if irritation develops or persists.

In Case of Ingestion:
In case of ingestion:
Call a physician or poison control center immediately.
Do not induce vomiting. If vomiting occurs naturally, have the victim lean forward.
If the victim is conscious and alert, immediately give a glass of water.
Possible aspiration hazard.

5. Fire Fighting Measures

Flash Point: 75.00 C

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: No data.

Suitable Extinguishing Media:
Suitable Extinguishing Media:
Use dry chemical, dry sand, CO2, water spray (fog) or foam.

Unsuitable Extinguishing Media:
Unsuitable Extinguishing Media:
Do not use water jet. Water may be ineffective.

Fire Fighting Instructions:
Protective Actions:
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
No action shall be taken involving any personal risk or without suitable training.
Move containers from the fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Protective Equipment:
Fire-fighters should wear appropriate protective equipment, a self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode, MSHA/NIOSH (approved or equivalent), and appropriate protective gear.

Flammable Properties and Hazards: No data available.

Hazardous Combustion Products: No data available.

6. Accidental Release Measures

Environmental Precautions:

Environmental Statement:
Avoid release to the environment.
Do not allow the product to enter waterways, sewers, or soil.
If there is a spill, contain it and clean up immediately.
Waste must be disposed of in accordance with federal, state, and local environmental regulations. Consult your local waste disposal authority for guidance.

Steps To Be Taken In Case Material Is Released Or Spilled:

Spills/Leaks:
Do not attempt to act without suitable protective equipment. For further information, refer to section 8.
Dike far ahead to contain the spillage. Cap or cover all drains.
Absorb spills with inert material, such as vermiculite, sand or dry earth, then place materials into a suitable container.
Waste must be disposed of in accordance with federal, state, and local environmental regulations. Consult your local waste disposal authority for guidance.
Avoid runoff into storm sewers and ditches which lead to waterways.
Do not allow entry to septic systems.
Provide adequate ventilation.
A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor but may not prevent ignition in closed spaces. Use water spray to dilute spill to a non-flammable mixture.
Eliminate all ignition sources (no smoking, flares, or flames in immediate area.)
Use only non-sparking tools and equipment and take measures to avoid static discharge.

7. Handling and Storage

Precautions To Be Taken in Handling:

HANDLING:
Wear Personal Protective Equipment when handling.
Avoid contact with eyes, nose, mouth, skin and clothing.
Wash skin thoroughly with soap and water, after handling and before eating, drinking or smoking.
Do not allow clothing wet with material to stay in contact with skin.
Remove contaminated clothing and launder before reuse or dispose of properly.
Use only with adequate ventilation. Avoid breathing fumes, vapors, or mist.
Take precautionary measures against static discharges.
Use cautionary measures when transferring or transporting material.
Do not pressurize, cut, weld, braze, solder, drill or grind containers. Do not expose containers to heat, sparks or open flames.

Precautions To Be Taken in Storing:

STORAGE
Store in a cool, dry, well-ventilated area away from incompatible substances.
Do not store in direct sunlight.
Keep container tightly closed when not in use.
Keep away from heat, sparks and flames.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits

Respiratory Equipment (Specify Type):	Respiratory Equipment Not required under normal conditions of use and with adequate ventilation. If adequate ventilation is not available, exposure limits are exceeded, or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN 149 approved respirator with an organic vapor cartridge
Eye Protection:	Eye Protection Wear appropriate protective eyeglasses, chemical safety goggles, or face shield as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Protective Gloves:	Protective Gloves Wear appropriate chemical resistant gloves. Gloves must be inspected prior to use. Dispose of contaminated gloves after use in accordance with applicable laws.
Other Protective Clothing:	Protective Clothing Wear appropriate protective clothing to prevent skin exposure.
Engineering Controls (Ventilation etc.):	Engineering Controls Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Facilities storing this material should be equipped with an eyewash facility and a safety shower.
Work/Hygienic/Maintenance Practices:	Work/Hygienic/Maintenance: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reusing.
Environmental Exposure Controls:	Environmental Statement: Avoid release to the environment. Do not allow the product to enter waterways, sewers, or soil. If there is a spill, contain it and clean up immediately. Waste must be disposed of in accordance with federal, state, and local environmental regulations. Consult your local waste disposal authority for guidance.

9. Physical and Chemical Properties

Physical States:	[ ] Gas [X] Liquid [ ] Solid
Appearance and Odor:	Milky. Opaque. Mild odor
pH:	- 6 - 9
Melting Point:	No data.
Boiling Point:	100.00 C
Flash Point:	75.00 C
Evaporation Rate:	No data.
Flammability (solid, gas):	No data available.
Explosive Limits:	LEL: No data. UEL: No data.
Vapor Pressure:	No data.
Vapor Density (vs. Air=1):	No data.
Specific Gravity (Water=1):	No data.
Solubility in Water:	No data.
Saturated Vapor Concentration:	No data.

Octanol/Water Partition Coefficient:	No data.
Autoignition Pt:	No data.
Decomposition Temperature:	No data.
Viscosity:	No data.

10. Stability and Reactivity

Reactivity:	The product is stable and non-reactive under normal conditions of use, storage and transport.
Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	No data available.
Incompatibility - Materials To Avoid:	No data available.
Hazardous Decomposition or Byproducts:	No data available.
Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

Toxicological Information:	Likely routes of exposure, inhalation, ingestion, skin contact, and/or eye contact.
Irritation or Corrosion:	No Data Available
Symptoms related to Toxicological Characteristics:	No Data Available
Chronic Toxicological Effects:	No Data Available
Carcinogenicity/Other Information:	Carcinogenicity. No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, NTP, and OSHA.
Carcinogenicity:	NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

No data available.

13. Disposal Considerations

Waste Disposal Method: Waste must be disposed of in accordance with federal, state, and local environmental regulations. Consult your local waste disposal authority for guidance.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not regulated as a hazardous material.
DOT Hazard Class:
UN/NA Number:

15. Regulatory Information

16. Other Information

Revision Date: 07/01/2025 **Previous revision:** 06/10/2019

Additional Information About This Product: No data available.

Company Policy or Disclaimer: The information provided in this Safety Data Sheet is correct to the best of the manufacturer's knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. No warranty or guarantee is given in respect of the properties of the products. However, because the conditions of handling, use, and storage of these materials are beyond the manufacturer's control, the manufacturer assumes no responsibility or liability for personal injury or property damage incurred by the use of these materials or any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

Dark Brown Dirty Down Ageing Spray

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 - Product identifier

Trade name/designation Dark Brown Dirty Down Ageing Spray
Chemical name
Product-type Mixture
UFI: 4800-U0RP-T00A-1103

1.2 - Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses - Dye

1.3 - Details of the supplier of the safety data sheet

Screen products Ltd,
Lytchett House, 13 Freeland Park,
BH16 6FA Lytchett Matravers, Dorset United Kingdom
Telephone : 0044 7376 722 827
Website www.dirtydown.co.uk
Screen products Ltd: info@screenproducts.co.uk

1.4 - Emergency telephone number

SECTION 2: Hazards identification

2.1 - Classification of the substance or mixture

Aerosol 1	Aerosol - Category 1
Eye Irrit. 2	Eye irritation - Category 2

2.2 - Label elements

Signal word : Danger
Hazard pictograms



Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.

Precautionary statements

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing spray/vapours.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection/face protection/protective clothing/protective gloves.

P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of container/contents to an appropriate recycling or disposal facility in accordance with local regulation.

EUH-phrases : None

2.3 - Other hazards

SECTION 3: Composition / information on ingredients

3.1 - Substances

Not applicable

3.2 - Mixtures

Chemical name	No	%	Class(es)	Specific concentration limit
ethanol, ethyl alcohol INCI: ALCOHOL	CAS No. : 64-17-5 Index No. : 603-002-00-5 EC No. : 200-578-6 REACH No. : 01-2119457610-43-XXXX	30 - 60	Flam. Liq. 2 - H225	Not applicable
propane INCI: PROPANE	CAS No. : 74-98-6 Index No. : 601-003-00-5 EC No. : 200-827-9	10 - 30	Flam. Gas 1 - H220 Press. Gas	Not applicable
Butane INCI: BUTANE	CAS No. : 106-97-8 Index No. : 601-004-00-0 EC No. : 203-448-7	10 - 30	Flam. Gas 1 - H220 Press. Gas	Not applicable
acetone; propan-2-one; propanone INCI: ACETONE	CAS No. : 67-64-1 Index No. : 606-001-00-8 EC No. : 200-662-2 REACH No. : 01-2119471330-49-XXXX	5 - 15	Eye Irrit. 2 - H319 Flam. Liq. 2 - H225 STOT SE 3 - H336 EUH066	Not applicable
ethyl acetate INCI: ETHYL ACETATE	CAS No. : 141-78-6 Index No. : 607-022-00-5 EC No. : 205-500-4	< 1	Eye Irrit. 2 - H319 Flam. Liq. 2 - H225 STOT SE 3 - H336 EUH066	Not applicable

SECTION 4: First aid measures

4.1 - Description of first aid measures

Following inhalation
- Provide fresh air.
- When in doubt or if symptoms are observed, get medical advice.

Following skin contact
- After contact with skin, wash immediately with plenty of water and soap.

After eye contact
- In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion
- When in doubt or if symptoms are observed, get medical advice.
- Do NOT induce vomiting.

4.2 - Most important symptoms and effects, both acute and delayed

Symptoms and effects - Following inhalation
- EffectsAllergic reactions

Symptoms and effects - Following skin contact
- Causes skin irritation.
- Dryness.

Symptoms and effects - After eye contact	- Causes eye irritation. - Redness. - Itching.
Symptoms and effects - After ingestion	- No information available.

4.3 - Indication of any immediate medical attention and special treatment needed

- Treat symptomatically.

SECTION 5: Firefighting measures

5.1 - Extinguishing media

Suitable extinguishing media	- Carbon dioxide (CO2) - Extinguishing powder - Water spray jet
Unsuitable extinguishing media	- Full water jet

5.2 - Special hazards arising from the substance or mixture

Special hazards arising from the substance or mixture	- Hazardous combustion products
Hazardous decomposition products	- No information available.

5.3 - Advice for firefighters

- Wear a self-contained breathing apparatus and chemical protective clothing.

SECTION 6: Accidental release measures

6.1 - Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	- Goggles. - Remove all sources of ignition. - Wear protective gloves. - Use appropriate respiratory protection.
For emergency responders	- Remove persons to safety. - Use personal protection equipment. - Remove all sources of ignition. - Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.2 - Environmental precautions

- Do not allow to enter into surface water or drains.
- Ensure waste is collected and contained.

6.3 - Methods and material for containment and cleaning up

Methods and material for containment	- Build a dam around the spill to prevent it from spreading to the surrounding area.

Dark Brown Dirty Down Ageing Spray

	- Soak up inert absorbent and dispose as waste requiring special attention.
Methods and material for cleaning up	- Ventilate affected area. - Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Inappropriate techniques	- No information available.

6.4 - Reference to other sections

- Disposal: See section 13
- Personal protection equipment: see section 8
- Safe handling: See section 7

SECTION 7: Handling and storage

7.1 - Precautions for safe handling

Recommendation	- Do not spray on naked flames or any incandescent material. - Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. - Use only in well-ventilated areas. - Vapours can form explosive mixtures with air.
Advices on general occupational hygiene	- Avoid contact with skin, eyes and clothes. - Wash hands before breaks and after work. - When using do not smoke. - Work in well-ventilated zones or use proper respiratory protection.

7.2 - Conditions for safe storage, including any incompatibilities

- Ensure adequate ventilation of the storage area.
- Storage class : Flammable liquids
- Protect against:Heat

7.3 - Specific end use(s)

- Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1 - Control parameters

ethanol, ethyl alcohol (64-17-5)	
TWA EH40 ppm (UK)	1000 ppm
TWA EH40 mg/m³ (UK)	1920 mg/m³
STEL EH40 ppm (UK)	3000 ppm
STEL EH40 mg/m³ (UK)	5760 mg/m³
acetone; propan-2-one; propanone (67-64-1)	
TWA EH40 ppm (UK)	500 ppm
TWA EH40 mg/m³ (UK)	1210 mg/m³
STEL EH40 ppm (UK)	1500 ppm
STEL EH40 mg/m³ (UK)	3620 mg/m³
ethyl acetate (141-78-6)	
TWA EH40 ppm (UK)	200 ppm

TWA EH40 mg/m³ (UK)	734 mg/m³
STEL EH40 ppm (UK)	400 ppm
STEL EH40 mg/m³ (UK)	1468 mg/m³

Butane (106-97-8)	
TWA EH40 ppm (UK)	1000 ppm
TWA EH40 mg/m³ (UK)	1750 mg/m³
STEL EH40 ppm (UK)	1250 ppm
STEL EH40 mg/m³ (UK)	2180 mg/m³

- No data available.

DNEL / PNEC

ethanol, ethyl alcohol (64-17-5)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	87 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	950 mg/m³	Workers	Systemic
DNEL long-term inhalative	114 mg/m³	Consumers	Systemic
DNEL long-term dermal	343 mg/kg bw/day	Workers	Systemic

acetone; propan-2-one; propanone (67-64-1)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	62 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	200 mg/m³	Consumers	Systemic
DNEL long-term inhalative	2420 mg/m³	Workers	Systemic
DNEL long-term dermal	186 mg/kg bw/day	Workers	Systemic
PNEC aquatic, freshwater	10,6 mg/l		
PNEC aquatic, marine water	1,06 mg/l		
PNEC aquatic, intermittent release	21 mg/l		
PNEC sediment, freshwater	30,4 mg/l		
PNEC sediment, marine water	3,04 mg/l		
PNEC soil	29,5 mg/l		
PNEC sewage treatment plant (STP)	100 mg/l		

ethyl acetate (141-78-6)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	4,5 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	367 mg/m³	Consumers	Systemic
DNEL long-term inhalative	734 mg/m³	Workers	Systemic
DNEL long-term dermal	63 mg/kg bw/day	Workers	Systemic
PNEC aquatic, freshwater	0,24 mg/l		
PNEC aquatic, marine water	0,024 mg/l		
PNEC aquatic, intermittent release	1,65 mg/l		
PNEC sediment, freshwater	1,15 mg/l		
PNEC sediment, marine water	0,115 mg/l		
PNEC soil	0,148 mg/l		
PNEC sewage treatment plant (STP)	650 mg/l		

Butane (106-97-8)			
Type	**Value**	**User**	**Effect**
DNEL long-term dermal	23,4 mg/kg bw/day	Workers	Systemic

8.2 - Exposure controls

Appropriate engineering controls - No information available.

Individual protection measures, such as personal protective equipment	- Protective gloves - Spectacles with side protection.
Environmental exposure controls	- No data available.



SECTION 9: Physical and chemical properties

9.1 - Information on basic physical and chemical properties

Physical state	Liquid	Appearance	Aerosol
Colour	cloudy	Odour	characteristic

Odour threshold	No data available
pH	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	-41 °C <= V <= 82 °C
Flash point	-40 °C
Evaporation rate	No data available
flammability	No data available
Lower explosion limit	1,8 % Vol.
Upper explosion limit	15 % Vol.
Vapour pressure	No data available
Vapour density	No data available
Relative density	0,685
Density	No data available
Solubility (Water)	No data available
Solubility (Ethanol)	No data available
Solubility (Acetone)	No data available
Solubility (Organic solvents)	No data available
Log KOC	No data available
Auto-ignition temperature	399 °C
Decomposition temperature	No data available
Kinematic viscosity	No data available
Dynamic viscosity	No data available

9.2 - Other information

VOC content	No data available
Minimum ignition energy	No data available
Conductivity	No data available
Refractive index	No data available
Solids content	No data available
Surface tension	No data available
Saturation concentration	No data available

- No data available.

Dark Brown Dirty Down Ageing Spray

SECTION 10: Stability and reactivity

10.1 - Reactivity

- This material is considered to be non-reactive under normal use conditions.

10.2 - Chemical stability

- The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 - Possibility of hazardous reactions

- No hazardous reaction when handled and stored according to provisions.

10.4 - Conditions to avoid

- Avoid high temperatures or direct sunlight.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Electrostatic discharge

10.5 - Incompatible materials

- No data available.

10.6 - Hazardous decomposition products

- No data available.

SECTION 11: Toxicological information

11.1 - Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity - Not classified

Toxicity : Mixture

LD50 oral (rat)	No data available
LD50 dermal (rat)	No data available
LD50 dermal (rabbit)	No data available
LC50 inhalation (rat)	No data available
LC50 inhalation dusts and mists (rat)	No data available
LC50 inhalation vapours (rat)	No data available

- No data available.

Toxicity : Substances

ethanol, ethyl alcohol (64-17-5)	
LD50 oral (rat)	7060 mg/kg
LC50 inhalation vapours (rat)	116,9 mg/l

acetone; propan-2-one; propanone (67-64-1)	
LD50 oral (rat)	5800 mg/kg
LD50 dermal (rabbit)	> 15700 mg/kg

ethyl acetate (141-78-6)	
LD50 oral (rat)	5320 mg/kg
LD50 dermal (rabbit)	> 18000 mg/kg
LC50 inhalation (rat)	4000 ppmV

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Skin corrosion/irritation	- Not classified
	- May cause skin irritation.
Serious eye damage/eye irritation	- Eye irritation - Category 2 - Causes serious eye irritation.
	- May cause eye irritation.
Respiratory or skin sensitisation	- Not classified
	- May cause drowsiness or dizziness. - May cause respiratory irritation.
Germ cell mutagenicity	- Not classified
	- No data available.
Carcinogenicity	- Not classified
	- No data available.
Reproductive toxicity	- Not classified
	- No data available.
STOT-single exposure	- Not classified
	- No data available.
STOT-repeated exposure	- Not classified
	- No data available.
Aspiration hazard	- Not classified
	- Not applicable

SECTION 12: Ecological information

12.1 - Toxicity

Toxicity : Mixture

EC50 48 hr crustacea	No data available
LC50 96 hr fish	No data available
ErC50 algae	No data available
ErC50 other aquatic plants	No data available
NOEC chronic fish	No data available
NOEC chronic crustacea	No data available
NOEC chronic algae	No data available
NOEC chronic other aquatic plants	No data available

- No data available.

Toxicity : Substances

ethanol, ethyl alcohol (64-17-5)	
EC50 48 hr crustacea	9268 mg/l <= V <= 14221 mg/l

LC50 96 hr fish	12 mg/l <= V <= 16 mg/l
acetone; propan-2-one; propanone (67-64-1)	
EC50 48 hr crustacea	10294 mg/l <= V <= 17704 mg/l
LC50 96 hr fish	4,74 mg/l <= V <= 6,33 mg/l
ethyl acetate (141-78-6)	
EC50 48 hr crustacea	560 mg/l
LC50 96 hr fish	220 mg/l <= V <= 250 mg/l

12.2 - Persistence and degradability

Biochemical oxygen demand (BOD)	No data available
Chemical oxygen demand (COD)	No data available
% of biodegradation in 28 days	No data available

- No data available.

12.3 - Bioaccumulative potential

Bioconcentration factor (BCF)	No data available
Log KOC	No data available

- No data available.

12.4 - Mobility in soil

- No data available.

12.5 - Results of PBT and vPvB assessment

12.6 - Other adverse effects

- No data available.

SECTION 13: Disposal considerations

13.1 - Waste treatment methods

Waste treatment methods	- Avoid release to the environment. - Dispose of waste according to applicable legislation. - Handle contaminated packages in the same way as the substance itself.
Sewage disposal	- No information available.
Special precautions for waste treatment	- No information available.
Community or national or regional provisions	- Dispose of waste according to applicable legislation.

SECTION 14: Transport information

14.1 - UN number or ID number

Dark Brown Dirty Down Ageing Spray

UN number (ADR)	:	UN1950
UN number (RID)	:	UN1950
UN number (IMDG)	:	UN1950
UN number (IATA)	:	UN1950

14.2 - UN proper shipping name

UN proper shipping name (ADR)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (RID)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (IMDG)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (IATA)	:	AEROSOLS, FLAMMABLE (acetone; propan-2-one; propanone)

14.3 - Transport hazard class(es)

ADR Transport hazard class(es) : 2.1

ADR Classification code: : 5F

Pictograms



Transport hazard class(es) (RID) : 2.1

Pictograms



Transport hazard class(es) (IMDG) : 2.1

Pictograms



Transport hazard class(es) (IATA) : 2.1

Pictograms



14.4 - Packing group

Packing group	:	N/A
Packing group (RID)	:	N/A
Packing group (IMDG)	:	N/A
Packing group (IATA)	:	N/A

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14.5 - Environmental hazards

Environmental hazards	:	No
Marine pollutant	:	No

14.6 - Special precautions for user

ADR

ADR Classification code:	:	5F
ADR Special provisions	:	190+327+344+625
ADR Limited quantity (LQ)	:	1L
ADR Excepted quantities	:	E0
ADR Packing instructions	:	P207 LP200
ADR Special packing provisions	:	PP87 RR6 L2
ADR Mixed packing provisions	:	MP9
Instructions for portable tanks and bulk containers	:	
Special provisions for portable tanks and bulk containers	:	
ADR tank code	:	
ADR tanks special provisions	:	
Vehicle for tank carriage	:	
ADR Transport category	:	2
ADR Tunnel restriction code	:	D
ADR Special provisions loading, unloading and handling	:	CV9 CV12
Special provisions - Packages	:	V14
Special provisions - Bulk	:	
Special provisions - Operation	:	S2
ADR Hazard identification number (Kemler No.)	:	

RID

Special provisions	:	190+327+344+625
Limited quantity (LQ)	:	1L
Excepted quantities	:	

IMDG

Special provisions	:	63 190 277 327 344 381 959
Limited quantity (LQ)	:	
Excepted quantities	:	E0
Packing instructions	:	P207 LP200
Special packing provisions	:	PP87 L2
IBC instruction(s)	:	
IBC provisions	:	
Instructions for portable tanks and bulk containers	:	
Special provisions for portable tanks and bulk containers	:	
EmS codes	:	F-D, S-U
Stowage and handling	:	Category None SW1 SW22
Segregation	:	SG69
Properties and observations	:	

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IATA

PCA - Excepted quantities	:	E0
PCA - Limited Quantity - Packing Instructions	:	Y203
PCA - Limited Quantity - Maximum Net Quantity per Package	:	30kg
PCA - Packing Instructions	:	203
PCA - Maximum Net Quantity per Package	:	75kg
CAO - Packing Instructions	:	203
CAO - Maximum Net Quantity per Package	:	150kg
Special Provisions	:	A145 A167 A802
ERG Code	:	10L

14.7 - Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

15.1 - Safety, health and environmental regulations/legislation specific for the substance or mixture

Substances REACH candidates	None
Substances Annex XIV	None
Substances Annex XVII	isopentane; 2-methylbutane (Index No.: 601-085-00-2 - EC No.: 201-142-8 - CAS No.: 78-78-4)
VOC content	No data available

15.2 - Chemical Safety Assessment

Chemical safety assessment carried out for the product - No information available.

SECTION 16: Other information

SDS versions

Version	Issue date	Author	Description of the amendments
1,2	25/11/2024		
1,1	13/11/2024		
1	12/11/2024		

Texts of the regulatory sentences

Aerosol 1	Aerosol - Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Aquatic Chronic 2
Eye Irrit. 2	Eye irritation - Category 2
Flam. Gas 1	Flammable gas. - Category 1
Flam. Liq. 2	Flammable liquid and vapour. - Category 2
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

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Press. Gas	Gases under pressure
STOT SE 3	STOT-single exposure - Category 3 (H336)

The information provided in this Safety Data Sheet (SDS) is current on the date the SDS was prepared or revised. Implementation of measures that are provided on SDS is under downstream user companies' responsibility. Downstream users may change the measures in the SDS according to the conditions in their own business.

*** *** ***

Dark Brown Dirty Down Ageing Spray

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 - Product identifier

Trade name/designation Dark Brown Dirty Down Ageing Spray
Chemical name
Product-type Mixture
UFI: 4800-U0RP-T00A-1103

1.2 - Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses - Dye

1.3 - Details of the supplier of the safety data sheet

Screen products Ltd,
Lytchett House, 13 Freeland Park,
BH16 6FA Lytchett Matravers, Dorset United Kingdom
Telephone : 0044 7376 722 827
Website www.dirtydown.co.uk
Screen products Ltd: info@screenproducts.co.uk

1.4 - Emergency telephone number

SECTION 2: Hazards identification

2.1 - Classification of the substance or mixture

Aerosol 1	Aerosol - Category 1
Eye Irrit. 2	Eye irritation - Category 2

2.2 - Label elements

Signal word : Danger
Hazard pictograms



Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.

Precautionary statements

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing spray/vapours.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection/face protection/protective clothing/protective gloves.

P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of container/contents to an appropriate recycling or disposal facility in accordance with local regulation.

EUH-phrases : None

2.3 - Other hazards

SECTION 3: Composition / information on ingredients

3.1 - Substances

Not applicable

3.2 - Mixtures

Chemical name	No	%	Class(es)	Specific concentration limit
ethanol, ethyl alcohol INCI: ALCOHOL	CAS No. : 64-17-5 Index No. : 603-002-00-5 EC No. : 200-578-6 REACH No. : 01-2119457610-43-XXXX	30 - 60	Flam. Liq. 2 - H225	Not applicable
propane INCI: PROPANE	CAS No. : 74-98-6 Index No. : 601-003-00-5 EC No. : 200-827-9	10 - 30	Flam. Gas 1 - H220 Press. Gas	Not applicable
Butane INCI: BUTANE	CAS No. : 106-97-8 Index No. : 601-004-00-0 EC No. : 203-448-7	10 - 30	Flam. Gas 1 - H220 Press. Gas	Not applicable
acetone; propan-2-one; propanone INCI: ACETONE	CAS No. : 67-64-1 Index No. : 606-001-00-8 EC No. : 200-662-2 REACH No. : 01-2119471330-49-XXXX	5 - 15	Eye Irrit. 2 - H319 Flam. Liq. 2 - H225 STOT SE 3 - H336 EUH066	Not applicable
ethyl acetate INCI: ETHYL ACETATE	CAS No. : 141-78-6 Index No. : 607-022-00-5 EC No. : 205-500-4	< 1	Eye Irrit. 2 - H319 Flam. Liq. 2 - H225 STOT SE 3 - H336 EUH066	Not applicable

SECTION 4: First aid measures

4.1 - Description of first aid measures

Following inhalation
- Provide fresh air.
- When in doubt or if symptoms are observed, get medical advice.

Following skin contact
- After contact with skin, wash immediately with plenty of water and soap.

After eye contact
- In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion
- When in doubt or if symptoms are observed, get medical advice.
- Do NOT induce vomiting.

4.2 - Most important symptoms and effects, both acute and delayed

Symptoms and effects - Following inhalation
- EffectsAllergic reactions

Symptoms and effects - Following skin contact
- Causes skin irritation.
- Dryness.

Symptoms and effects - After eye contact	- Causes eye irritation. - Redness. - Itching.
Symptoms and effects - After ingestion	- No information available.

4.3 - Indication of any immediate medical attention and special treatment needed

- Treat symptomatically.

SECTION 5: Firefighting measures

5.1 - Extinguishing media

Suitable extinguishing media	- Carbon dioxide (CO2) - Extinguishing powder - Water spray jet
Unsuitable extinguishing media	- Full water jet

5.2 - Special hazards arising from the substance or mixture

Special hazards arising from the substance or mixture	- Hazardous combustion products
Hazardous decomposition products	- No information available.

5.3 - Advice for firefighters

- Wear a self-contained breathing apparatus and chemical protective clothing.

SECTION 6: Accidental release measures

6.1 - Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	- Goggles. - Remove all sources of ignition. - Wear protective gloves. - Use appropriate respiratory protection.
For emergency responders	- Remove persons to safety. - Use personal protection equipment. - Remove all sources of ignition. - Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.2 - Environmental precautions

- Do not allow to enter into surface water or drains.
- Ensure waste is collected and contained.

6.3 - Methods and material for containment and cleaning up

Methods and material for containment	- Build a dam around the spill to prevent it from spreading to the surrounding area.

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	- Soak up inert absorbent and dispose as waste requiring special attention.
Methods and material for cleaning up	- Ventilate affected area. - Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Inappropriate techniques	- No information available.

6.4 - Reference to other sections

- Disposal: See section 13
- Personal protection equipment: see section 8
- Safe handling: See section 7

SECTION 7: Handling and storage

7.1 - Precautions for safe handling

Recommendation	- Do not spray on naked flames or any incandescent material. - Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. - Use only in well-ventilated areas. - Vapours can form explosive mixtures with air.
Advices on general occupational hygiene	- Avoid contact with skin, eyes and clothes. - Wash hands before breaks and after work. - When using do not smoke. - Work in well-ventilated zones or use proper respiratory protection.

7.2 - Conditions for safe storage, including any incompatibilities

- Ensure adequate ventilation of the storage area.
- Storage class : Flammable liquids
- Protect against:Heat

7.3 - Specific end use(s)

- Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1 - Control parameters

ethanol, ethyl alcohol (64-17-5)	
TWA EH40 ppm (UK)	1000 ppm
TWA EH40 mg/m³ (UK)	1920 mg/m³
STEL EH40 ppm (UK)	3000 ppm
STEL EH40 mg/m³ (UK)	5760 mg/m³
acetone; propan-2-one; propanone (67-64-1)	
TWA EH40 ppm (UK)	500 ppm
TWA EH40 mg/m³ (UK)	1210 mg/m³
STEL EH40 ppm (UK)	1500 ppm
STEL EH40 mg/m³ (UK)	3620 mg/m³
ethyl acetate (141-78-6)	
TWA EH40 ppm (UK)	200 ppm

TWA EH40 mg/m³ (UK)	734 mg/m³
STEL EH40 ppm (UK)	400 ppm
STEL EH40 mg/m³ (UK)	1468 mg/m³

Butane (106-97-8)	
TWA EH40 ppm (UK)	1000 ppm
TWA EH40 mg/m³ (UK)	1750 mg/m³
STEL EH40 ppm (UK)	1250 ppm
STEL EH40 mg/m³ (UK)	2180 mg/m³

- No data available.

DNEL / PNEC

ethanol, ethyl alcohol (64-17-5)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	87 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	950 mg/m³	Workers	Systemic
DNEL long-term inhalative	114 mg/m³	Consumers	Systemic
DNEL long-term dermal	343 mg/kg bw/day	Workers	Systemic

acetone; propan-2-one; propanone (67-64-1)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	62 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	200 mg/m³	Consumers	Systemic
DNEL long-term inhalative	2420 mg/m³	Workers	Systemic
DNEL long-term dermal	186 mg/kg bw/day	Workers	Systemic
PNEC aquatic, freshwater	10,6 mg/l		
PNEC aquatic, marine water	1,06 mg/l		
PNEC aquatic, intermittent release	21 mg/l		
PNEC sediment, freshwater	30,4 mg/l		
PNEC sediment, marine water	3,04 mg/l		
PNEC soil	29,5 mg/l		
PNEC sewage treatment plant (STP)	100 mg/l		

ethyl acetate (141-78-6)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	4,5 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	367 mg/m³	Consumers	Systemic
DNEL long-term inhalative	734 mg/m³	Workers	Systemic
DNEL long-term dermal	63 mg/kg bw/day	Workers	Systemic
PNEC aquatic, freshwater	0,24 mg/l		
PNEC aquatic, marine water	0,024 mg/l		
PNEC aquatic, intermittent release	1,65 mg/l		
PNEC sediment, freshwater	1,15 mg/l		
PNEC sediment, marine water	0,115 mg/l		
PNEC soil	0,148 mg/l		
PNEC sewage treatment plant (STP)	650 mg/l		

Butane (106-97-8)			
Type	**Value**	**User**	**Effect**
DNEL long-term dermal	23,4 mg/kg bw/day	Workers	Systemic

8.2 - Exposure controls

Appropriate engineering controls - No information available.

Individual protection measures, such as personal protective equipment	- Protective gloves - Spectacles with side protection.
Environmental exposure controls	- No data available.



SECTION 9: Physical and chemical properties

9.1 - Information on basic physical and chemical properties

Physical state	Liquid	Appearance	Aerosol
Colour	cloudy	Odour	characteristic

Odour threshold	No data available
pH	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	-41 °C <= V <= 82 °C
Flash point	-40 °C
Evaporation rate	No data available
flammability	No data available
Lower explosion limit	1,8 % Vol.
Upper explosion limit	15 % Vol.
Vapour pressure	No data available
Vapour density	No data available
Relative density	0,685
Density	No data available
Solubility (Water)	No data available
Solubility (Ethanol)	No data available
Solubility (Acetone)	No data available
Solubility (Organic solvents)	No data available
Log KOC	No data available
Auto-ignition temperature	399 °C
Decomposition temperature	No data available
Kinematic viscosity	No data available
Dynamic viscosity	No data available

9.2 - Other information

VOC content	No data available
Minimum ignition energy	No data available
Conductivity	No data available
Refractive index	No data available
Solids content	No data available
Surface tension	No data available
Saturation concentration	No data available

- No data available.

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SECTION 10: Stability and reactivity

10.1 - Reactivity

- This material is considered to be non-reactive under normal use conditions.

10.2 - Chemical stability

- The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 - Possibility of hazardous reactions

- No hazardous reaction when handled and stored according to provisions.

10.4 - Conditions to avoid

- Avoid high temperatures or direct sunlight.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Electrostatic discharge

10.5 - Incompatible materials

- No data available.

10.6 - Hazardous decomposition products

- No data available.

SECTION 11: Toxicological information

11.1 - Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity - Not classified

Toxicity : Mixture

LD50 oral (rat)	No data available
LD50 dermal (rat)	No data available
LD50 dermal (rabbit)	No data available
LC50 inhalation (rat)	No data available
LC50 inhalation dusts and mists (rat)	No data available
LC50 inhalation vapours (rat)	No data available

- No data available.

Toxicity : Substances

ethanol, ethyl alcohol (64-17-5)	
LD50 oral (rat)	7060 mg/kg
LC50 inhalation vapours (rat)	116,9 mg/l

acetone; propan-2-one; propanone (67-64-1)	
LD50 oral (rat)	5800 mg/kg
LD50 dermal (rabbit)	> 15700 mg/kg

ethyl acetate (141-78-6)	
LD50 oral (rat)	5320 mg/kg
LD50 dermal (rabbit)	> 18000 mg/kg
LC50 inhalation (rat)	4000 ppmV

Dark Brown Dirty Down Ageing Spray

Skin corrosion/irritation	- Not classified
	- May cause skin irritation.
Serious eye damage/eye irritation	- Eye irritation - Category 2 - Causes serious eye irritation.
	- May cause eye irritation.
Respiratory or skin sensitisation	- Not classified
	- May cause drowsiness or dizziness. - May cause respiratory irritation.
Germ cell mutagenicity	- Not classified
	- No data available.
Carcinogenicity	- Not classified
	- No data available.
Reproductive toxicity	- Not classified
	- No data available.
STOT-single exposure	- Not classified
	- No data available.
STOT-repeated exposure	- Not classified
	- No data available.
Aspiration hazard	- Not classified
	- Not applicable

SECTION 12: Ecological information

12.1 - Toxicity

Toxicity : Mixture

EC50 48 hr crustacea	No data available
LC50 96 hr fish	No data available
ErC50 algae	No data available
ErC50 other aquatic plants	No data available
NOEC chronic fish	No data available
NOEC chronic crustacea	No data available
NOEC chronic algae	No data available
NOEC chronic other aquatic plants	No data available

- No data available.

Toxicity : Substances

ethanol, ethyl alcohol (64-17-5)	
EC50 48 hr crustacea	9268 mg/l <= V <= 14221 mg/l

LC50 96 hr fish	12 mg/l <= V <= 16 mg/l
acetone; propan-2-one; propanone (67-64-1)	
EC50 48 hr crustacea	10294 mg/l <= V <= 17704 mg/l
LC50 96 hr fish	4,74 mg/l <= V <= 6,33 mg/l
ethyl acetate (141-78-6)	
EC50 48 hr crustacea	560 mg/l
LC50 96 hr fish	220 mg/l <= V <= 250 mg/l

12.2 - Persistence and degradability

Biochemical oxygen demand (BOD)	No data available
Chemical oxygen demand (COD)	No data available
% of biodegradation in 28 days	No data available

- No data available.

12.3 - Bioaccumulative potential

Bioconcentration factor (BCF)	No data available
Log KOC	No data available

- No data available.

12.4 - Mobility in soil

- No data available.

12.5 - Results of PBT and vPvB assessment

12.6 - Other adverse effects

- No data available.

SECTION 13: Disposal considerations

13.1 - Waste treatment methods

Waste treatment methods	- Avoid release to the environment. - Dispose of waste according to applicable legislation. - Handle contaminated packages in the same way as the substance itself.
Sewage disposal	- No information available.
Special precautions for waste treatment	- No information available.
Community or national or regional provisions	- Dispose of waste according to applicable legislation.

SECTION 14: Transport information

14.1 - UN number or ID number

Dark Brown Dirty Down Ageing Spray

UN number (ADR)	:	UN1950
UN number (RID)	:	UN1950
UN number (IMDG)	:	UN1950
UN number (IATA)	:	UN1950

14.2 - UN proper shipping name

UN proper shipping name (ADR)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (RID)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (IMDG)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (IATA)	:	AEROSOLS, FLAMMABLE (acetone; propan-2-one; propanone)

14.3 - Transport hazard class(es)

ADR Transport hazard class(es) : 2.1

ADR Classification code: : 5F

Pictograms



Transport hazard class(es) (RID) : 2.1

Pictograms



Transport hazard class(es) (IMDG) : 2.1

Pictograms



Transport hazard class(es) (IATA) : 2.1

Pictograms



14.4 - Packing group

Packing group	:	N/A
Packing group (RID)	:	N/A
Packing group (IMDG)	:	N/A
Packing group (IATA)	:	N/A

Dark Brown Dirty Down Ageing Spray

14.5 - Environmental hazards

Environmental hazards	:	No
Marine pollutant	:	No

14.6 - Special precautions for user

ADR

ADR Classification code:	:	5F
ADR Special provisions	:	190+327+344+625
ADR Limited quantity (LQ)	:	1L
ADR Excepted quantities	:	E0
ADR Packing instructions	:	P207 LP200
ADR Special packing provisions	:	PP87 RR6 L2
ADR Mixed packing provisions	:	MP9
Instructions for portable tanks and bulk containers	:	
Special provisions for portable tanks and bulk containers	:	
ADR tank code	:	
ADR tanks special provisions	:	
Vehicle for tank carriage	:	
ADR Transport category	:	2
ADR Tunnel restriction code	:	D
ADR Special provisions loading, unloading and handling	:	CV9 CV12
Special provisions - Packages	:	V14
Special provisions - Bulk	:	
Special provisions - Operation	:	S2
ADR Hazard identification number (Kemler No.)	:	

RID

Special provisions	:	190+327+344+625
Limited quantity (LQ)	:	1L
Excepted quantities	:	

IMDG

Special provisions	:	63 190 277 327 344 381 959
Limited quantity (LQ)	:	
Excepted quantities	:	E0
Packing instructions	:	P207 LP200
Special packing provisions	:	PP87 L2
IBC instruction(s)	:	
IBC provisions	:	
Instructions for portable tanks and bulk containers	:	
Special provisions for portable tanks and bulk containers	:	
EmS codes	:	F-D, S-U
Stowage and handling	:	Category None SW1 SW22
Segregation	:	SG69
Properties and observations	:	

Dark Brown Dirty Down Ageing Spray

IATA

PCA - Excepted quantities	:	E0
PCA - Limited Quantity - Packing Instructions	:	Y203
PCA - Limited Quantity - Maximum Net Quantity per Package	:	30kg
PCA - Packing Instructions	:	203
PCA - Maximum Net Quantity per Package	:	75kg
CAO - Packing Instructions	:	203
CAO - Maximum Net Quantity per Package	:	150kg
Special Provisions	:	A145 A167 A802
ERG Code	:	10L

14.7 - Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

15.1 - Safety, health and environmental regulations/legislation specific for the substance or mixture

Substances REACH candidates	None
Substances Annex XIV	None
Substances Annex XVII	isopentane; 2-methylbutane (Index No.: 601-085-00-2 - EC No.: 201-142-8 - CAS No.: 78-78-4)
VOC content	No data available

15.2 - Chemical Safety Assessment

Chemical safety assessment carried out for the product - No information available.

SECTION 16: Other information

SDS versions

Version	Issue date	Author	Description of the amendments
1,2	25/11/2024		
1,1	13/11/2024		
1	12/11/2024		

Texts of the regulatory sentences

Aerosol 1	Aerosol - Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Aquatic Chronic 2
Eye Irrit. 2	Eye irritation - Category 2
Flam. Gas 1	Flammable gas. - Category 1
Flam. Liq. 2	Flammable liquid and vapour. - Category 2
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Dark Brown Dirty Down Ageing Spray

Press. Gas	Gases under pressure
STOT SE 3	STOT-single exposure - Category 3 (H336)

The information provided in this Safety Data Sheet (SDS) is current on the date the SDS was prepared or revised. Implementation of measures that are provided on SDS is under downstream user companies' responsibility. Downstream users may change the measures in the SDS according to the conditions in their own business.

*** *** ***

Dark Brown Dirty Down Ageing Spray

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 - Product identifier

Trade name/designation Dark Brown Dirty Down Ageing Spray
Chemical name
Product-type Mixture
UFI: 4800-U0RP-T00A-1103

1.2 - Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses - Dye

1.3 - Details of the supplier of the safety data sheet

Screen products Ltd,
Lytchett House, 13 Freeland Park,
BH16 6FA Lytchett Matravers, Dorset United Kingdom
Telephone : 0044 7376 722 827
Website www.dirtydown.co.uk
Screen products Ltd: info@screenproducts.co.uk

1.4 - Emergency telephone number

SECTION 2: Hazards identification

2.1 - Classification of the substance or mixture

Aerosol 1	Aerosol - Category 1
Eye Irrit. 2	Eye irritation - Category 2

2.2 - Label elements

Signal word : Danger
Hazard pictograms



Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.

Precautionary statements

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing spray/vapours.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection/face protection/protective clothing/protective gloves.

P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of container/contents to an appropriate recycling or disposal facility in accordance with local regulation.

EUH-phrases : None

2.3 - Other hazards

SECTION 3: Composition / information on ingredients

3.1 - Substances

Not applicable

3.2 - Mixtures

Chemical name	No	%	Class(es)	Specific concentration limit
ethanol, ethyl alcohol INCI: ALCOHOL	CAS No. : 64-17-5 Index No. : 603-002-00-5 EC No. : 200-578-6 REACH No. : 01-2119457610-43-XXXX	30 - 60	Flam. Liq. 2 - H225	Not applicable
propane INCI: PROPANE	CAS No. : 74-98-6 Index No. : 601-003-00-5 EC No. : 200-827-9	10 - 30	Flam. Gas 1 - H220 Press. Gas	Not applicable
Butane INCI: BUTANE	CAS No. : 106-97-8 Index No. : 601-004-00-0 EC No. : 203-448-7	10 - 30	Flam. Gas 1 - H220 Press. Gas	Not applicable
acetone; propan-2-one; propanone INCI: ACETONE	CAS No. : 67-64-1 Index No. : 606-001-00-8 EC No. : 200-662-2 REACH No. : 01-2119471330-49-XXXX	5 - 15	Eye Irrit. 2 - H319 Flam. Liq. 2 - H225 STOT SE 3 - H336 EUH066	Not applicable
ethyl acetate INCI: ETHYL ACETATE	CAS No. : 141-78-6 Index No. : 607-022-00-5 EC No. : 205-500-4	< 1	Eye Irrit. 2 - H319 Flam. Liq. 2 - H225 STOT SE 3 - H336 EUH066	Not applicable

SECTION 4: First aid measures

4.1 - Description of first aid measures

Following inhalation
- Provide fresh air.
- When in doubt or if symptoms are observed, get medical advice.

Following skin contact
- After contact with skin, wash immediately with plenty of water and soap.

After eye contact
- In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion
- When in doubt or if symptoms are observed, get medical advice.
- Do NOT induce vomiting.

4.2 - Most important symptoms and effects, both acute and delayed

Symptoms and effects - Following inhalation
- EffectsAllergic reactions

Symptoms and effects - Following skin contact
- Causes skin irritation.
- Dryness.

Symptoms and effects - After eye contact	- Causes eye irritation. - Redness. - Itching.
Symptoms and effects - After ingestion	- No information available.

4.3 - Indication of any immediate medical attention and special treatment needed

- Treat symptomatically.

SECTION 5: Firefighting measures

5.1 - Extinguishing media

Suitable extinguishing media	- Carbon dioxide (CO2) - Extinguishing powder - Water spray jet
Unsuitable extinguishing media	- Full water jet

5.2 - Special hazards arising from the substance or mixture

Special hazards arising from the substance or mixture	- Hazardous combustion products
Hazardous decomposition products	- No information available.

5.3 - Advice for firefighters

- Wear a self-contained breathing apparatus and chemical protective clothing.

SECTION 6: Accidental release measures

6.1 - Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	- Goggles. - Remove all sources of ignition. - Wear protective gloves. - Use appropriate respiratory protection.
For emergency responders	- Remove persons to safety. - Use personal protection equipment. - Remove all sources of ignition. - Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.2 - Environmental precautions

- Do not allow to enter into surface water or drains.
- Ensure waste is collected and contained.

6.3 - Methods and material for containment and cleaning up

Methods and material for containment	- Build a dam around the spill to prevent it from spreading to the surrounding area.

Dark Brown Dirty Down Ageing Spray

	- Soak up inert absorbent and dispose as waste requiring special attention.
Methods and material for cleaning up	- Ventilate affected area. - Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Inappropriate techniques	- No information available.

6.4 - Reference to other sections

- Disposal: See section 13
- Personal protection equipment: see section 8
- Safe handling: See section 7

SECTION 7: Handling and storage

7.1 - Precautions for safe handling

Recommendation	- Do not spray on naked flames or any incandescent material. - Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. - Use only in well-ventilated areas. - Vapours can form explosive mixtures with air.
Advices on general occupational hygiene	- Avoid contact with skin, eyes and clothes. - Wash hands before breaks and after work. - When using do not smoke. - Work in well-ventilated zones or use proper respiratory protection.

7.2 - Conditions for safe storage, including any incompatibilities

- Ensure adequate ventilation of the storage area.
- Storage class : Flammable liquids
- Protect against:Heat

7.3 - Specific end use(s)

- Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1 - Control parameters

ethanol, ethyl alcohol (64-17-5)	
TWA EH40 ppm (UK)	1000 ppm
TWA EH40 mg/m³ (UK)	1920 mg/m³
STEL EH40 ppm (UK)	3000 ppm
STEL EH40 mg/m³ (UK)	5760 mg/m³
acetone; propan-2-one; propanone (67-64-1)	
TWA EH40 ppm (UK)	500 ppm
TWA EH40 mg/m³ (UK)	1210 mg/m³
STEL EH40 ppm (UK)	1500 ppm
STEL EH40 mg/m³ (UK)	3620 mg/m³
ethyl acetate (141-78-6)	
TWA EH40 ppm (UK)	200 ppm

TWA EH40 mg/m³ (UK)	734 mg/m³
STEL EH40 ppm (UK)	400 ppm
STEL EH40 mg/m³ (UK)	1468 mg/m³

Butane (106-97-8)	
TWA EH40 ppm (UK)	1000 ppm
TWA EH40 mg/m³ (UK)	1750 mg/m³
STEL EH40 ppm (UK)	1250 ppm
STEL EH40 mg/m³ (UK)	2180 mg/m³

- No data available.

DNEL / PNEC

ethanol, ethyl alcohol (64-17-5)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	87 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	950 mg/m³	Workers	Systemic
DNEL long-term inhalative	114 mg/m³	Consumers	Systemic
DNEL long-term dermal	343 mg/kg bw/day	Workers	Systemic

acetone; propan-2-one; propanone (67-64-1)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	62 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	200 mg/m³	Consumers	Systemic
DNEL long-term inhalative	2420 mg/m³	Workers	Systemic
DNEL long-term dermal	186 mg/kg bw/day	Workers	Systemic
PNEC aquatic, freshwater	10,6 mg/l		
PNEC aquatic, marine water	1,06 mg/l		
PNEC aquatic, intermittent release	21 mg/l		
PNEC sediment, freshwater	30,4 mg/l		
PNEC sediment, marine water	3,04 mg/l		
PNEC soil	29,5 mg/l		
PNEC sewage treatment plant (STP)	100 mg/l		

ethyl acetate (141-78-6)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	4,5 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	367 mg/m³	Consumers	Systemic
DNEL long-term inhalative	734 mg/m³	Workers	Systemic
DNEL long-term dermal	63 mg/kg bw/day	Workers	Systemic
PNEC aquatic, freshwater	0,24 mg/l		
PNEC aquatic, marine water	0,024 mg/l		
PNEC aquatic, intermittent release	1,65 mg/l		
PNEC sediment, freshwater	1,15 mg/l		
PNEC sediment, marine water	0,115 mg/l		
PNEC soil	0,148 mg/l		
PNEC sewage treatment plant (STP)	650 mg/l		

Butane (106-97-8)			
Type	**Value**	**User**	**Effect**
DNEL long-term dermal	23,4 mg/kg bw/day	Workers	Systemic

8.2 - Exposure controls

Appropriate engineering controls - No information available.

Individual protection measures, such as personal protective equipment	- Protective gloves - Spectacles with side protection.
Environmental exposure controls	- No data available.



SECTION 9: Physical and chemical properties

9.1 - Information on basic physical and chemical properties

Physical state	Liquid	Appearance	Aerosol
Colour	cloudy	Odour	characteristic

Odour threshold	No data available
pH	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	-41 °C <= V <= 82 °C
Flash point	-40 °C
Evaporation rate	No data available
flammability	No data available
Lower explosion limit	1,8 % Vol.
Upper explosion limit	15 % Vol.
Vapour pressure	No data available
Vapour density	No data available
Relative density	0,685
Density	No data available
Solubility (Water)	No data available
Solubility (Ethanol)	No data available
Solubility (Acetone)	No data available
Solubility (Organic solvents)	No data available
Log KOC	No data available
Auto-ignition temperature	399 °C
Decomposition temperature	No data available
Kinematic viscosity	No data available
Dynamic viscosity	No data available

9.2 - Other information

VOC content	No data available
Minimum ignition energy	No data available
Conductivity	No data available
Refractive index	No data available
Solids content	No data available
Surface tension	No data available
Saturation concentration	No data available

- No data available.

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SECTION 10: Stability and reactivity

10.1 - Reactivity

- This material is considered to be non-reactive under normal use conditions.

10.2 - Chemical stability

- The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 - Possibility of hazardous reactions

- No hazardous reaction when handled and stored according to provisions.

10.4 - Conditions to avoid

- Avoid high temperatures or direct sunlight.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Electrostatic discharge

10.5 - Incompatible materials

- No data available.

10.6 - Hazardous decomposition products

- No data available.

SECTION 11: Toxicological information

11.1 - Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity - Not classified

Toxicity : Mixture

LD50 oral (rat)	No data available
LD50 dermal (rat)	No data available
LD50 dermal (rabbit)	No data available
LC50 inhalation (rat)	No data available
LC50 inhalation dusts and mists (rat)	No data available
LC50 inhalation vapours (rat)	No data available

- No data available.

Toxicity : Substances

ethanol, ethyl alcohol (64-17-5)	
LD50 oral (rat)	7060 mg/kg
LC50 inhalation vapours (rat)	116,9 mg/l

acetone; propan-2-one; propanone (67-64-1)	
LD50 oral (rat)	5800 mg/kg
LD50 dermal (rabbit)	> 15700 mg/kg

ethyl acetate (141-78-6)	
LD50 oral (rat)	5320 mg/kg
LD50 dermal (rabbit)	> 18000 mg/kg
LC50 inhalation (rat)	4000 ppmV

Dark Brown Dirty Down Ageing Spray

Skin corrosion/irritation	- Not classified
	- May cause skin irritation.
Serious eye damage/eye irritation	- Eye irritation - Category 2 - Causes serious eye irritation.
	- May cause eye irritation.
Respiratory or skin sensitisation	- Not classified
	- May cause drowsiness or dizziness. - May cause respiratory irritation.
Germ cell mutagenicity	- Not classified
	- No data available.
Carcinogenicity	- Not classified
	- No data available.
Reproductive toxicity	- Not classified
	- No data available.
STOT-single exposure	- Not classified
	- No data available.
STOT-repeated exposure	- Not classified
	- No data available.
Aspiration hazard	- Not classified
	- Not applicable

SECTION 12: Ecological information

12.1 - Toxicity

Toxicity : Mixture

EC50 48 hr crustacea	No data available
LC50 96 hr fish	No data available
ErC50 algae	No data available
ErC50 other aquatic plants	No data available
NOEC chronic fish	No data available
NOEC chronic crustacea	No data available
NOEC chronic algae	No data available
NOEC chronic other aquatic plants	No data available

- No data available.

Toxicity : Substances

ethanol, ethyl alcohol (64-17-5)	
EC50 48 hr crustacea	9268 mg/l <= V <= 14221 mg/l

LC50 96 hr fish	12 mg/l <= V <= 16 mg/l
acetone; propan-2-one; propanone (67-64-1)	
EC50 48 hr crustacea	10294 mg/l <= V <= 17704 mg/l
LC50 96 hr fish	4,74 mg/l <= V <= 6,33 mg/l
ethyl acetate (141-78-6)	
EC50 48 hr crustacea	560 mg/l
LC50 96 hr fish	220 mg/l <= V <= 250 mg/l

12.2 - Persistence and degradability

Biochemical oxygen demand (BOD)	No data available
Chemical oxygen demand (COD)	No data available
% of biodegradation in 28 days	No data available

- No data available.

12.3 - Bioaccumulative potential

Bioconcentration factor (BCF)	No data available
Log KOC	No data available

- No data available.

12.4 - Mobility in soil

- No data available.

12.5 - Results of PBT and vPvB assessment

12.6 - Other adverse effects

- No data available.

SECTION 13: Disposal considerations

13.1 - Waste treatment methods

Waste treatment methods	- Avoid release to the environment. - Dispose of waste according to applicable legislation. - Handle contaminated packages in the same way as the substance itself.
Sewage disposal	- No information available.
Special precautions for waste treatment	- No information available.
Community or national or regional provisions	- Dispose of waste according to applicable legislation.

SECTION 14: Transport information

14.1 - UN number or ID number

Dark Brown Dirty Down Ageing Spray

UN number (ADR)	:	UN1950
UN number (RID)	:	UN1950
UN number (IMDG)	:	UN1950
UN number (IATA)	:	UN1950

14.2 - UN proper shipping name

UN proper shipping name (ADR)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (RID)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (IMDG)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (IATA)	:	AEROSOLS, FLAMMABLE (acetone; propan-2-one; propanone)

14.3 - Transport hazard class(es)

ADR Transport hazard class(es) : 2.1

ADR Classification code: : 5F

Pictograms



Transport hazard class(es) (RID) : 2.1

Pictograms



Transport hazard class(es) (IMDG) : 2.1

Pictograms



Transport hazard class(es) (IATA) : 2.1

Pictograms



14.4 - Packing group

Packing group	:	N/A
Packing group (RID)	:	N/A
Packing group (IMDG)	:	N/A
Packing group (IATA)	:	N/A

Dark Brown Dirty Down Ageing Spray

14.5 - Environmental hazards

Environmental hazards	:	No
Marine pollutant	:	No

14.6 - Special precautions for user

ADR

ADR Classification code:	:	5F
ADR Special provisions	:	190+327+344+625
ADR Limited quantity (LQ)	:	1L
ADR Excepted quantities	:	E0
ADR Packing instructions	:	P207 LP200
ADR Special packing provisions	:	PP87 RR6 L2
ADR Mixed packing provisions	:	MP9
Instructions for portable tanks and bulk containers	:	
Special provisions for portable tanks and bulk containers	:	
ADR tank code	:	
ADR tanks special provisions	:	
Vehicle for tank carriage	:	
ADR Transport category	:	2
ADR Tunnel restriction code	:	D
ADR Special provisions loading, unloading and handling	:	CV9 CV12
Special provisions - Packages	:	V14
Special provisions - Bulk	:	
Special provisions - Operation	:	S2
ADR Hazard identification number (Kemler No.)	:	

RID

Special provisions	:	190+327+344+625
Limited quantity (LQ)	:	1L
Excepted quantities	:	

IMDG

Special provisions	:	63 190 277 327 344 381 959
Limited quantity (LQ)	:	
Excepted quantities	:	E0
Packing instructions	:	P207 LP200
Special packing provisions	:	PP87 L2
IBC instruction(s)	:	
IBC provisions	:	
Instructions for portable tanks and bulk containers	:	
Special provisions for portable tanks and bulk containers	:	
EmS codes	:	F-D, S-U
Stowage and handling	:	Category None SW1 SW22
Segregation	:	SG69
Properties and observations	:	

Dark Brown Dirty Down Ageing Spray

IATA

PCA - Excepted quantities	:	E0
PCA - Limited Quantity - Packing Instructions	:	Y203
PCA - Limited Quantity - Maximum Net Quantity per Package	:	30kg
PCA - Packing Instructions	:	203
PCA - Maximum Net Quantity per Package	:	75kg
CAO - Packing Instructions	:	203
CAO - Maximum Net Quantity per Package	:	150kg
Special Provisions	:	A145 A167 A802
ERG Code	:	10L

14.7 - Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

15.1 - Safety, health and environmental regulations/legislation specific for the substance or mixture

Substances REACH candidates	None
Substances Annex XIV	None
Substances Annex XVII	isopentane; 2-methylbutane (Index No.: 601-085-00-2 - EC No.: 201-142-8 - CAS No.: 78-78-4)
VOC content	No data available

15.2 - Chemical Safety Assessment

Chemical safety assessment carried out for the product - No information available.

SECTION 16: Other information

SDS versions

Version	Issue date	Author	Description of the amendments
1,2	25/11/2024		
1,1	13/11/2024		
1	12/11/2024		

Texts of the regulatory sentences

Aerosol 1	Aerosol - Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Aquatic Chronic 2
Eye Irrit. 2	Eye irritation - Category 2
Flam. Gas 1	Flammable gas. - Category 1
Flam. Liq. 2	Flammable liquid and vapour. - Category 2
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Dark Brown Dirty Down Ageing Spray

Press. Gas	Gases under pressure
STOT SE 3	STOT-single exposure - Category 3 (H336)

The information provided in this Safety Data Sheet (SDS) is current on the date the SDS was prepared or revised. Implementation of measures that are provided on SDS is under downstream user companies' responsibility. Downstream users may change the measures in the SDS according to the conditions in their own business.

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Dark Brown Dirty Down Ageing Spray

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 - Product identifier

Trade name/designation Dark Brown Dirty Down Ageing Spray
Chemical name
Product-type Mixture
UFI: 4800-U0RP-T00A-1103

1.2 - Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses - Dye

1.3 - Details of the supplier of the safety data sheet

Screen products Ltd,
Lytchett House, 13 Freeland Park,
BH16 6FA Lytchett Matravers, Dorset United Kingdom
Telephone : 0044 7376 722 827
Website www.dirtydown.co.uk
Screen products Ltd: info@screenproducts.co.uk

1.4 - Emergency telephone number

SECTION 2: Hazards identification

2.1 - Classification of the substance or mixture

Aerosol 1	Aerosol - Category 1
Eye Irrit. 2	Eye irritation - Category 2

2.2 - Label elements

Signal word : Danger
Hazard pictograms



Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.

Precautionary statements

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing spray/vapours.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection/face protection/protective clothing/protective gloves.

P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of container/contents to an appropriate recycling or disposal facility in accordance with local regulation.

EUH-phrases : None

2.3 - Other hazards

SECTION 3: Composition / information on ingredients

3.1 - Substances

Not applicable

3.2 - Mixtures

Chemical name	No	%	Class(es)	Specific concentration limit
ethanol, ethyl alcohol INCI: ALCOHOL	CAS No. : 64-17-5 Index No. : 603-002-00-5 EC No. : 200-578-6 REACH No. : 01-2119457610-43-XXXX	30 - 60	Flam. Liq. 2 - H225	Not applicable
propane INCI: PROPANE	CAS No. : 74-98-6 Index No. : 601-003-00-5 EC No. : 200-827-9	10 - 30	Flam. Gas 1 - H220 Press. Gas	Not applicable
Butane INCI: BUTANE	CAS No. : 106-97-8 Index No. : 601-004-00-0 EC No. : 203-448-7	10 - 30	Flam. Gas 1 - H220 Press. Gas	Not applicable
acetone; propan-2-one; propanone INCI: ACETONE	CAS No. : 67-64-1 Index No. : 606-001-00-8 EC No. : 200-662-2 REACH No. : 01-2119471330-49-XXXX	5 - 15	Eye Irrit. 2 - H319 Flam. Liq. 2 - H225 STOT SE 3 - H336 EUH066	Not applicable
ethyl acetate INCI: ETHYL ACETATE	CAS No. : 141-78-6 Index No. : 607-022-00-5 EC No. : 205-500-4	< 1	Eye Irrit. 2 - H319 Flam. Liq. 2 - H225 STOT SE 3 - H336 EUH066	Not applicable

SECTION 4: First aid measures

4.1 - Description of first aid measures

Following inhalation
- Provide fresh air.
- When in doubt or if symptoms are observed, get medical advice.

Following skin contact
- After contact with skin, wash immediately with plenty of water and soap.

After eye contact
- In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion
- When in doubt or if symptoms are observed, get medical advice.
- Do NOT induce vomiting.

4.2 - Most important symptoms and effects, both acute and delayed

Symptoms and effects - Following inhalation
- EffectsAllergic reactions

Symptoms and effects - Following skin contact
- Causes skin irritation.
- Dryness.

Symptoms and effects - After eye contact	- Causes eye irritation. - Redness. - Itching.
Symptoms and effects - After ingestion	- No information available.

4.3 - Indication of any immediate medical attention and special treatment needed

- Treat symptomatically.

SECTION 5: Firefighting measures

5.1 - Extinguishing media

Suitable extinguishing media	- Carbon dioxide (CO2) - Extinguishing powder - Water spray jet
Unsuitable extinguishing media	- Full water jet

5.2 - Special hazards arising from the substance or mixture

Special hazards arising from the substance or mixture	- Hazardous combustion products
Hazardous decomposition products	- No information available.

5.3 - Advice for firefighters

- Wear a self-contained breathing apparatus and chemical protective clothing.

SECTION 6: Accidental release measures

6.1 - Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	- Goggles. - Remove all sources of ignition. - Wear protective gloves. - Use appropriate respiratory protection.
For emergency responders	- Remove persons to safety. - Use personal protection equipment. - Remove all sources of ignition. - Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.2 - Environmental precautions

- Do not allow to enter into surface water or drains.
- Ensure waste is collected and contained.

6.3 - Methods and material for containment and cleaning up

Methods and material for containment	- Build a dam around the spill to prevent it from spreading to the surrounding area.

Dark Brown Dirty Down Ageing Spray

	- Soak up inert absorbent and dispose as waste requiring special attention.
Methods and material for cleaning up	- Ventilate affected area. - Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Inappropriate techniques	- No information available.

6.4 - Reference to other sections

- Disposal: See section 13
- Personal protection equipment: see section 8
- Safe handling: See section 7

SECTION 7: Handling and storage

7.1 - Precautions for safe handling

Recommendation	- Do not spray on naked flames or any incandescent material. - Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. - Use only in well-ventilated areas. - Vapours can form explosive mixtures with air.
Advices on general occupational hygiene	- Avoid contact with skin, eyes and clothes. - Wash hands before breaks and after work. - When using do not smoke. - Work in well-ventilated zones or use proper respiratory protection.

7.2 - Conditions for safe storage, including any incompatibilities

- Ensure adequate ventilation of the storage area.
- Storage class : Flammable liquids
- Protect against:Heat

7.3 - Specific end use(s)

- Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1 - Control parameters

ethanol, ethyl alcohol (64-17-5)	
TWA EH40 ppm (UK)	1000 ppm
TWA EH40 mg/m³ (UK)	1920 mg/m³
STEL EH40 ppm (UK)	3000 ppm
STEL EH40 mg/m³ (UK)	5760 mg/m³
acetone; propan-2-one; propanone (67-64-1)	
TWA EH40 ppm (UK)	500 ppm
TWA EH40 mg/m³ (UK)	1210 mg/m³
STEL EH40 ppm (UK)	1500 ppm
STEL EH40 mg/m³ (UK)	3620 mg/m³
ethyl acetate (141-78-6)	
TWA EH40 ppm (UK)	200 ppm

TWA EH40 mg/m³ (UK)	734 mg/m³
STEL EH40 ppm (UK)	400 ppm
STEL EH40 mg/m³ (UK)	1468 mg/m³

Butane (106-97-8)	
TWA EH40 ppm (UK)	1000 ppm
TWA EH40 mg/m³ (UK)	1750 mg/m³
STEL EH40 ppm (UK)	1250 ppm
STEL EH40 mg/m³ (UK)	2180 mg/m³

- No data available.

DNEL / PNEC

ethanol, ethyl alcohol (64-17-5)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	87 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	950 mg/m³	Workers	Systemic
DNEL long-term inhalative	114 mg/m³	Consumers	Systemic
DNEL long-term dermal	343 mg/kg bw/day	Workers	Systemic

acetone; propan-2-one; propanone (67-64-1)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	62 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	200 mg/m³	Consumers	Systemic
DNEL long-term inhalative	2420 mg/m³	Workers	Systemic
DNEL long-term dermal	186 mg/kg bw/day	Workers	Systemic
PNEC aquatic, freshwater	10,6 mg/l		
PNEC aquatic, marine water	1,06 mg/l		
PNEC aquatic, intermittent release	21 mg/l		
PNEC sediment, freshwater	30,4 mg/l		
PNEC sediment, marine water	3,04 mg/l		
PNEC soil	29,5 mg/l		
PNEC sewage treatment plant (STP)	100 mg/l		

ethyl acetate (141-78-6)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	4,5 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	367 mg/m³	Consumers	Systemic
DNEL long-term inhalative	734 mg/m³	Workers	Systemic
DNEL long-term dermal	63 mg/kg bw/day	Workers	Systemic
PNEC aquatic, freshwater	0,24 mg/l		
PNEC aquatic, marine water	0,024 mg/l		
PNEC aquatic, intermittent release	1,65 mg/l		
PNEC sediment, freshwater	1,15 mg/l		
PNEC sediment, marine water	0,115 mg/l		
PNEC soil	0,148 mg/l		
PNEC sewage treatment plant (STP)	650 mg/l		

Butane (106-97-8)			
Type	**Value**	**User**	**Effect**
DNEL long-term dermal	23,4 mg/kg bw/day	Workers	Systemic

8.2 - Exposure controls

Appropriate engineering controls - No information available.

Individual protection measures, such as personal protective equipment	- Protective gloves - Spectacles with side protection.
Environmental exposure controls	- No data available.



SECTION 9: Physical and chemical properties

9.1 - Information on basic physical and chemical properties

Physical state	Liquid	Appearance	Aerosol
Colour	cloudy	Odour	characteristic

Odour threshold	No data available
pH	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	-41 °C <= V <= 82 °C
Flash point	-40 °C
Evaporation rate	No data available
flammability	No data available
Lower explosion limit	1,8 % Vol.
Upper explosion limit	15 % Vol.
Vapour pressure	No data available
Vapour density	No data available
Relative density	0,685
Density	No data available
Solubility (Water)	No data available
Solubility (Ethanol)	No data available
Solubility (Acetone)	No data available
Solubility (Organic solvents)	No data available
Log KOC	No data available
Auto-ignition temperature	399 °C
Decomposition temperature	No data available
Kinematic viscosity	No data available
Dynamic viscosity	No data available

9.2 - Other information

VOC content	No data available
Minimum ignition energy	No data available
Conductivity	No data available
Refractive index	No data available
Solids content	No data available
Surface tension	No data available
Saturation concentration	No data available

- No data available.

Dark Brown Dirty Down Ageing Spray

SECTION 10: Stability and reactivity

10.1 - Reactivity

- This material is considered to be non-reactive under normal use conditions.

10.2 - Chemical stability

- The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 - Possibility of hazardous reactions

- No hazardous reaction when handled and stored according to provisions.

10.4 - Conditions to avoid

- Avoid high temperatures or direct sunlight.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Electrostatic discharge

10.5 - Incompatible materials

- No data available.

10.6 - Hazardous decomposition products

- No data available.

SECTION 11: Toxicological information

11.1 - Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity - Not classified

Toxicity : Mixture

LD50 oral (rat)	No data available
LD50 dermal (rat)	No data available
LD50 dermal (rabbit)	No data available
LC50 inhalation (rat)	No data available
LC50 inhalation dusts and mists (rat)	No data available
LC50 inhalation vapours (rat)	No data available

- No data available.

Toxicity : Substances

ethanol, ethyl alcohol (64-17-5)	
LD50 oral (rat)	7060 mg/kg
LC50 inhalation vapours (rat)	116,9 mg/l

acetone; propan-2-one; propanone (67-64-1)	
LD50 oral (rat)	5800 mg/kg
LD50 dermal (rabbit)	> 15700 mg/kg

ethyl acetate (141-78-6)	
LD50 oral (rat)	5320 mg/kg
LD50 dermal (rabbit)	> 18000 mg/kg
LC50 inhalation (rat)	4000 ppmV

Dark Brown Dirty Down Ageing Spray

Skin corrosion/irritation	- Not classified
	- May cause skin irritation.
Serious eye damage/eye irritation	- Eye irritation - Category 2 - Causes serious eye irritation.
	- May cause eye irritation.
Respiratory or skin sensitisation	- Not classified
	- May cause drowsiness or dizziness. - May cause respiratory irritation.
Germ cell mutagenicity	- Not classified
	- No data available.
Carcinogenicity	- Not classified
	- No data available.
Reproductive toxicity	- Not classified
	- No data available.
STOT-single exposure	- Not classified
	- No data available.
STOT-repeated exposure	- Not classified
	- No data available.
Aspiration hazard	- Not classified
	- Not applicable

SECTION 12: Ecological information

12.1 - Toxicity

Toxicity : Mixture

EC50 48 hr crustacea	No data available
LC50 96 hr fish	No data available
ErC50 algae	No data available
ErC50 other aquatic plants	No data available
NOEC chronic fish	No data available
NOEC chronic crustacea	No data available
NOEC chronic algae	No data available
NOEC chronic other aquatic plants	No data available

- No data available.

Toxicity : Substances

ethanol, ethyl alcohol (64-17-5)	
EC50 48 hr crustacea	9268 mg/l <= V <= 14221 mg/l

LC50 96 hr fish	12 mg/l <= V <= 16 mg/l
acetone; propan-2-one; propanone (67-64-1)	
EC50 48 hr crustacea	10294 mg/l <= V <= 17704 mg/l
LC50 96 hr fish	4,74 mg/l <= V <= 6,33 mg/l
ethyl acetate (141-78-6)	
EC50 48 hr crustacea	560 mg/l
LC50 96 hr fish	220 mg/l <= V <= 250 mg/l

12.2 - Persistence and degradability

Biochemical oxygen demand (BOD)	No data available
Chemical oxygen demand (COD)	No data available
% of biodegradation in 28 days	No data available

- No data available.

12.3 - Bioaccumulative potential

Bioconcentration factor (BCF)	No data available
Log KOC	No data available

- No data available.

12.4 - Mobility in soil

- No data available.

12.5 - Results of PBT and vPvB assessment

12.6 - Other adverse effects

- No data available.

SECTION 13: Disposal considerations

13.1 - Waste treatment methods

Waste treatment methods	- Avoid release to the environment. - Dispose of waste according to applicable legislation. - Handle contaminated packages in the same way as the substance itself.
Sewage disposal	- No information available.
Special precautions for waste treatment	- No information available.
Community or national or regional provisions	- Dispose of waste according to applicable legislation.

SECTION 14: Transport information

14.1 - UN number or ID number

Dark Brown Dirty Down Ageing Spray

UN number (ADR)	:	UN1950
UN number (RID)	:	UN1950
UN number (IMDG)	:	UN1950
UN number (IATA)	:	UN1950

14.2 - UN proper shipping name

UN proper shipping name (ADR)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (RID)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (IMDG)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (IATA)	:	AEROSOLS, FLAMMABLE (acetone; propan-2-one; propanone)

14.3 - Transport hazard class(es)

ADR Transport hazard class(es) : 2.1

ADR Classification code: : 5F

Pictograms



Transport hazard class(es) (RID) : 2.1

Pictograms



Transport hazard class(es) (IMDG) : 2.1

Pictograms



Transport hazard class(es) (IATA) : 2.1

Pictograms



14.4 - Packing group

Packing group	:	N/A
Packing group (RID)	:	N/A
Packing group (IMDG)	:	N/A
Packing group (IATA)	:	N/A

Dark Brown Dirty Down Ageing Spray

14.5 - Environmental hazards

Environmental hazards	:	No
Marine pollutant	:	No

14.6 - Special precautions for user

ADR

ADR Classification code:	:	5F
ADR Special provisions	:	190+327+344+625
ADR Limited quantity (LQ)	:	1L
ADR Excepted quantities	:	E0
ADR Packing instructions	:	P207 LP200
ADR Special packing provisions	:	PP87 RR6 L2
ADR Mixed packing provisions	:	MP9
Instructions for portable tanks and bulk containers	:	
Special provisions for portable tanks and bulk containers	:	
ADR tank code	:	
ADR tanks special provisions	:	
Vehicle for tank carriage	:	
ADR Transport category	:	2
ADR Tunnel restriction code	:	D
ADR Special provisions loading, unloading and handling	:	CV9 CV12
Special provisions - Packages	:	V14
Special provisions - Bulk	:	
Special provisions - Operation	:	S2
ADR Hazard identification number (Kemler No.)	:	

RID

Special provisions	:	190+327+344+625
Limited quantity (LQ)	:	1L
Excepted quantities	:	

IMDG

Special provisions	:	63 190 277 327 344 381 959
Limited quantity (LQ)	:	
Excepted quantities	:	E0
Packing instructions	:	P207 LP200
Special packing provisions	:	PP87 L2
IBC instruction(s)	:	
IBC provisions	:	
Instructions for portable tanks and bulk containers	:	
Special provisions for portable tanks and bulk containers	:	
EmS codes	:	F-D, S-U
Stowage and handling	:	Category None SW1 SW22
Segregation	:	SG69
Properties and observations	:	

Dark Brown Dirty Down Ageing Spray

IATA

PCA - Excepted quantities	:	E0
PCA - Limited Quantity - Packing Instructions	:	Y203
PCA - Limited Quantity - Maximum Net Quantity per Package	:	30kg
PCA - Packing Instructions	:	203
PCA - Maximum Net Quantity per Package	:	75kg
CAO - Packing Instructions	:	203
CAO - Maximum Net Quantity per Package	:	150kg
Special Provisions	:	A145 A167 A802
ERG Code	:	10L

14.7 - Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

15.1 - Safety, health and environmental regulations/legislation specific for the substance or mixture

Substances REACH candidates	None
Substances Annex XIV	None
Substances Annex XVII	isopentane; 2-methylbutane (Index No.: 601-085-00-2 - EC No.: 201-142-8 - CAS No.: 78-78-4)
VOC content	No data available

15.2 - Chemical Safety Assessment

Chemical safety assessment carried out for the product - No information available.

SECTION 16: Other information

SDS versions

Version	Issue date	Author	Description of the amendments
1,2	25/11/2024		
1,1	13/11/2024		
1	12/11/2024		

Texts of the regulatory sentences

Aerosol 1	Aerosol - Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Aquatic Chronic 2
Eye Irrit. 2	Eye irritation - Category 2
Flam. Gas 1	Flammable gas. - Category 1
Flam. Liq. 2	Flammable liquid and vapour. - Category 2
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Dark Brown Dirty Down Ageing Spray

Press. Gas	Gases under pressure
STOT SE 3	STOT-single exposure - Category 3 (H336)

The information provided in this Safety Data Sheet (SDS) is current on the date the SDS was prepared or revised. Implementation of measures that are provided on SDS is under downstream user companies' responsibility. Downstream users may change the measures in the SDS according to the conditions in their own business.

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Dark Brown Dirty Down Ageing Spray

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 - Product identifier

Trade name/designation Dark Brown Dirty Down Ageing Spray
Chemical name
Product-type Mixture
UFI: 4800-U0RP-T00A-1103

1.2 - Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses - Dye

1.3 - Details of the supplier of the safety data sheet

Screen products Ltd,
Lytchett House, 13 Freeland Park,
BH16 6FA Lytchett Matravers, Dorset United Kingdom
Telephone : 0044 7376 722 827
Website www.dirtydown.co.uk
Screen products Ltd: info@screenproducts.co.uk

1.4 - Emergency telephone number

SECTION 2: Hazards identification

2.1 - Classification of the substance or mixture

Aerosol 1	Aerosol - Category 1
Eye Irrit. 2	Eye irritation - Category 2

2.2 - Label elements

Signal word : Danger
Hazard pictograms



Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.

Precautionary statements

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing spray/vapours.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection/face protection/protective clothing/protective gloves.

P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of container/contents to an appropriate recycling or disposal facility in accordance with local regulation.

EUH-phrases : None

2.3 - Other hazards

SECTION 3: Composition / information on ingredients

3.1 - Substances

Not applicable

3.2 - Mixtures

Chemical name	No	%	Class(es)	Specific concentration limit
ethanol, ethyl alcohol INCI: ALCOHOL	CAS No. : 64-17-5 Index No. : 603-002-00-5 EC No. : 200-578-6 REACH No. : 01-2119457610-43-XXXX	30 - 60	Flam. Liq. 2 - H225	Not applicable
propane INCI: PROPANE	CAS No. : 74-98-6 Index No. : 601-003-00-5 EC No. : 200-827-9	10 - 30	Flam. Gas 1 - H220 Press. Gas	Not applicable
Butane INCI: BUTANE	CAS No. : 106-97-8 Index No. : 601-004-00-0 EC No. : 203-448-7	10 - 30	Flam. Gas 1 - H220 Press. Gas	Not applicable
acetone; propan-2-one; propanone INCI: ACETONE	CAS No. : 67-64-1 Index No. : 606-001-00-8 EC No. : 200-662-2 REACH No. : 01-2119471330-49-XXXX	5 - 15	Eye Irrit. 2 - H319 Flam. Liq. 2 - H225 STOT SE 3 - H336 EUH066	Not applicable
ethyl acetate INCI: ETHYL ACETATE	CAS No. : 141-78-6 Index No. : 607-022-00-5 EC No. : 205-500-4	< 1	Eye Irrit. 2 - H319 Flam. Liq. 2 - H225 STOT SE 3 - H336 EUH066	Not applicable

SECTION 4: First aid measures

4.1 - Description of first aid measures

Following inhalation
- Provide fresh air.
- When in doubt or if symptoms are observed, get medical advice.

Following skin contact
- After contact with skin, wash immediately with plenty of water and soap.

After eye contact
- In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion
- When in doubt or if symptoms are observed, get medical advice.
- Do NOT induce vomiting.

4.2 - Most important symptoms and effects, both acute and delayed

Symptoms and effects - Following inhalation
- EffectsAllergic reactions

Symptoms and effects - Following skin contact
- Causes skin irritation.
- Dryness.

Symptoms and effects - After eye contact	- Causes eye irritation. - Redness. - Itching.
Symptoms and effects - After ingestion	- No information available.

4.3 - Indication of any immediate medical attention and special treatment needed

- Treat symptomatically.

SECTION 5: Firefighting measures

5.1 - Extinguishing media

Suitable extinguishing media	- Carbon dioxide (CO2) - Extinguishing powder - Water spray jet
Unsuitable extinguishing media	- Full water jet

5.2 - Special hazards arising from the substance or mixture

Special hazards arising from the substance or mixture	- Hazardous combustion products
Hazardous decomposition products	- No information available.

5.3 - Advice for firefighters

- Wear a self-contained breathing apparatus and chemical protective clothing.

SECTION 6: Accidental release measures

6.1 - Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	- Goggles. - Remove all sources of ignition. - Wear protective gloves. - Use appropriate respiratory protection.
For emergency responders	- Remove persons to safety. - Use personal protection equipment. - Remove all sources of ignition. - Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.2 - Environmental precautions

- Do not allow to enter into surface water or drains.
- Ensure waste is collected and contained.

6.3 - Methods and material for containment and cleaning up

Methods and material for containment	- Build a dam around the spill to prevent it from spreading to the surrounding area.

Dark Brown Dirty Down Ageing Spray

	- Soak up inert absorbent and dispose as waste requiring special attention.
Methods and material for cleaning up	- Ventilate affected area. - Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Inappropriate techniques	- No information available.

6.4 - Reference to other sections

- Disposal: See section 13
- Personal protection equipment: see section 8
- Safe handling: See section 7

SECTION 7: Handling and storage

7.1 - Precautions for safe handling

Recommendation	- Do not spray on naked flames or any incandescent material. - Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. - Use only in well-ventilated areas. - Vapours can form explosive mixtures with air.
Advices on general occupational hygiene	- Avoid contact with skin, eyes and clothes. - Wash hands before breaks and after work. - When using do not smoke. - Work in well-ventilated zones or use proper respiratory protection.

7.2 - Conditions for safe storage, including any incompatibilities

- Ensure adequate ventilation of the storage area.
- Storage class : Flammable liquids
- Protect against:Heat

7.3 - Specific end use(s)

- Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1 - Control parameters

ethanol, ethyl alcohol (64-17-5)	
TWA EH40 ppm (UK)	1000 ppm
TWA EH40 mg/m³ (UK)	1920 mg/m³
STEL EH40 ppm (UK)	3000 ppm
STEL EH40 mg/m³ (UK)	5760 mg/m³
acetone; propan-2-one; propanone (67-64-1)	
TWA EH40 ppm (UK)	500 ppm
TWA EH40 mg/m³ (UK)	1210 mg/m³
STEL EH40 ppm (UK)	1500 ppm
STEL EH40 mg/m³ (UK)	3620 mg/m³
ethyl acetate (141-78-6)	
TWA EH40 ppm (UK)	200 ppm

TWA EH40 mg/m³ (UK)	734 mg/m³
STEL EH40 ppm (UK)	400 ppm
STEL EH40 mg/m³ (UK)	1468 mg/m³

Butane (106-97-8)	
TWA EH40 ppm (UK)	1000 ppm
TWA EH40 mg/m³ (UK)	1750 mg/m³
STEL EH40 ppm (UK)	1250 ppm
STEL EH40 mg/m³ (UK)	2180 mg/m³

- No data available.

DNEL / PNEC

ethanol, ethyl alcohol (64-17-5)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	87 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	950 mg/m³	Workers	Systemic
DNEL long-term inhalative	114 mg/m³	Consumers	Systemic
DNEL long-term dermal	343 mg/kg bw/day	Workers	Systemic

acetone; propan-2-one; propanone (67-64-1)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	62 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	200 mg/m³	Consumers	Systemic
DNEL long-term inhalative	2420 mg/m³	Workers	Systemic
DNEL long-term dermal	186 mg/kg bw/day	Workers	Systemic
PNEC aquatic, freshwater	10,6 mg/l		
PNEC aquatic, marine water	1,06 mg/l		
PNEC aquatic, intermittent release	21 mg/l		
PNEC sediment, freshwater	30,4 mg/l		
PNEC sediment, marine water	3,04 mg/l		
PNEC soil	29,5 mg/l		
PNEC sewage treatment plant (STP)	100 mg/l		

ethyl acetate (141-78-6)			
Type	**Value**	**User**	**Effect**
DNEL long-term oral (repeated)	4,5 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	367 mg/m³	Consumers	Systemic
DNEL long-term inhalative	734 mg/m³	Workers	Systemic
DNEL long-term dermal	63 mg/kg bw/day	Workers	Systemic
PNEC aquatic, freshwater	0,24 mg/l		
PNEC aquatic, marine water	0,024 mg/l		
PNEC aquatic, intermittent release	1,65 mg/l		
PNEC sediment, freshwater	1,15 mg/l		
PNEC sediment, marine water	0,115 mg/l		
PNEC soil	0,148 mg/l		
PNEC sewage treatment plant (STP)	650 mg/l		

Butane (106-97-8)			
Type	**Value**	**User**	**Effect**
DNEL long-term dermal	23,4 mg/kg bw/day	Workers	Systemic

8.2 - Exposure controls

Appropriate engineering controls - No information available.

Individual protection measures, such as personal protective equipment	- Protective gloves - Spectacles with side protection.
Environmental exposure controls	- No data available.



SECTION 9: Physical and chemical properties

9.1 - Information on basic physical and chemical properties

Physical state	Liquid	Appearance	Aerosol
Colour	cloudy	Odour	characteristic

Odour threshold	No data available
pH	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	-41 °C <= V <= 82 °C
Flash point	-40 °C
Evaporation rate	No data available
flammability	No data available
Lower explosion limit	1,8 % Vol.
Upper explosion limit	15 % Vol.
Vapour pressure	No data available
Vapour density	No data available
Relative density	0,685
Density	No data available
Solubility (Water)	No data available
Solubility (Ethanol)	No data available
Solubility (Acetone)	No data available
Solubility (Organic solvents)	No data available
Log KOC	No data available
Auto-ignition temperature	399 °C
Decomposition temperature	No data available
Kinematic viscosity	No data available
Dynamic viscosity	No data available

9.2 - Other information

VOC content	No data available
Minimum ignition energy	No data available
Conductivity	No data available
Refractive index	No data available
Solids content	No data available
Surface tension	No data available
Saturation concentration	No data available

- No data available.

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SECTION 10: Stability and reactivity

10.1 - Reactivity

- This material is considered to be non-reactive under normal use conditions.

10.2 - Chemical stability

- The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 - Possibility of hazardous reactions

- No hazardous reaction when handled and stored according to provisions.

10.4 - Conditions to avoid

- Avoid high temperatures or direct sunlight.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Electrostatic discharge

10.5 - Incompatible materials

- No data available.

10.6 - Hazardous decomposition products

- No data available.

SECTION 11: Toxicological information

11.1 - Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity - Not classified

Toxicity : Mixture

LD50 oral (rat)	No data available
LD50 dermal (rat)	No data available
LD50 dermal (rabbit)	No data available
LC50 inhalation (rat)	No data available
LC50 inhalation dusts and mists (rat)	No data available
LC50 inhalation vapours (rat)	No data available

- No data available.

Toxicity : Substances

ethanol, ethyl alcohol (64-17-5)	
LD50 oral (rat)	7060 mg/kg
LC50 inhalation vapours (rat)	116,9 mg/l

acetone; propan-2-one; propanone (67-64-1)	
LD50 oral (rat)	5800 mg/kg
LD50 dermal (rabbit)	> 15700 mg/kg

ethyl acetate (141-78-6)	
LD50 oral (rat)	5320 mg/kg
LD50 dermal (rabbit)	> 18000 mg/kg
LC50 inhalation (rat)	4000 ppmV

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Skin corrosion/irritation	- Not classified
	- May cause skin irritation.
Serious eye damage/eye irritation	- Eye irritation - Category 2 - Causes serious eye irritation.
	- May cause eye irritation.
Respiratory or skin sensitisation	- Not classified
	- May cause drowsiness or dizziness. - May cause respiratory irritation.
Germ cell mutagenicity	- Not classified
	- No data available.
Carcinogenicity	- Not classified
	- No data available.
Reproductive toxicity	- Not classified
	- No data available.
STOT-single exposure	- Not classified
	- No data available.
STOT-repeated exposure	- Not classified
	- No data available.
Aspiration hazard	- Not classified
	- Not applicable

SECTION 12: Ecological information

12.1 - Toxicity

Toxicity : Mixture

EC50 48 hr crustacea	No data available
LC50 96 hr fish	No data available
ErC50 algae	No data available
ErC50 other aquatic plants	No data available
NOEC chronic fish	No data available
NOEC chronic crustacea	No data available
NOEC chronic algae	No data available
NOEC chronic other aquatic plants	No data available

- No data available.

Toxicity : Substances

ethanol, ethyl alcohol (64-17-5)	
EC50 48 hr crustacea	9268 mg/l <= V <= 14221 mg/l

LC50 96 hr fish	12 mg/l <= V <= 16 mg/l
acetone; propan-2-one; propanone (67-64-1)	
EC50 48 hr crustacea	10294 mg/l <= V <= 17704 mg/l
LC50 96 hr fish	4,74 mg/l <= V <= 6,33 mg/l
ethyl acetate (141-78-6)	
EC50 48 hr crustacea	560 mg/l
LC50 96 hr fish	220 mg/l <= V <= 250 mg/l

12.2 - Persistence and degradability

Biochemical oxygen demand (BOD)	No data available
Chemical oxygen demand (COD)	No data available
% of biodegradation in 28 days	No data available

- No data available.

12.3 - Bioaccumulative potential

Bioconcentration factor (BCF)	No data available
Log KOC	No data available

- No data available.

12.4 - Mobility in soil

- No data available.

12.5 - Results of PBT and vPvB assessment

12.6 - Other adverse effects

- No data available.

SECTION 13: Disposal considerations

13.1 - Waste treatment methods

Waste treatment methods	- Avoid release to the environment. - Dispose of waste according to applicable legislation. - Handle contaminated packages in the same way as the substance itself.
Sewage disposal	- No information available.
Special precautions for waste treatment	- No information available.
Community or national or regional provisions	- Dispose of waste according to applicable legislation.

SECTION 14: Transport information

14.1 - UN number or ID number

Dark Brown Dirty Down Ageing Spray

UN number (ADR)	:	UN1950
UN number (RID)	:	UN1950
UN number (IMDG)	:	UN1950
UN number (IATA)	:	UN1950

14.2 - UN proper shipping name

UN proper shipping name (ADR)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (RID)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (IMDG)	:	AEROSOLS (acetone; propan-2-one; propanone)
UN proper shipping name (IATA)	:	AEROSOLS, FLAMMABLE (acetone; propan-2-one; propanone)

14.3 - Transport hazard class(es)

ADR Transport hazard class(es) : 2.1

ADR Classification code: : 5F

Pictograms



Transport hazard class(es) (RID) : 2.1

Pictograms



Transport hazard class(es) (IMDG) : 2.1

Pictograms



Transport hazard class(es) (IATA) : 2.1

Pictograms



14.4 - Packing group

Packing group	:	N/A
Packing group (RID)	:	N/A
Packing group (IMDG)	:	N/A
Packing group (IATA)	:	N/A

Dark Brown Dirty Down Ageing Spray

14.5 - Environmental hazards

Environmental hazards	:	No
Marine pollutant	:	No

14.6 - Special precautions for user

ADR

ADR Classification code:	:	5F
ADR Special provisions	:	190+327+344+625
ADR Limited quantity (LQ)	:	1L
ADR Excepted quantities	:	E0
ADR Packing instructions	:	P207 LP200
ADR Special packing provisions	:	PP87 RR6 L2
ADR Mixed packing provisions	:	MP9
Instructions for portable tanks and bulk containers	:	
Special provisions for portable tanks and bulk containers	:	
ADR tank code	:	
ADR tanks special provisions	:	
Vehicle for tank carriage	:	
ADR Transport category	:	2
ADR Tunnel restriction code	:	D
ADR Special provisions loading, unloading and handling	:	CV9 CV12
Special provisions - Packages	:	V14
Special provisions - Bulk	:	
Special provisions - Operation	:	S2
ADR Hazard identification number (Kemler No.)	:	

RID

Special provisions	:	190+327+344+625
Limited quantity (LQ)	:	1L
Excepted quantities	:	

IMDG

Special provisions	:	63 190 277 327 344 381 959
Limited quantity (LQ)	:	
Excepted quantities	:	E0
Packing instructions	:	P207 LP200
Special packing provisions	:	PP87 L2
IBC instruction(s)	:	
IBC provisions	:	
Instructions for portable tanks and bulk containers	:	
Special provisions for portable tanks and bulk containers	:	
EmS codes	:	F-D, S-U
Stowage and handling	:	Category None SW1 SW22
Segregation	:	SG69
Properties and observations	:	

Dark Brown Dirty Down Ageing Spray

IATA

PCA - Excepted quantities	:	E0
PCA - Limited Quantity - Packing Instructions	:	Y203
PCA - Limited Quantity - Maximum Net Quantity per Package	:	30kg
PCA - Packing Instructions	:	203
PCA - Maximum Net Quantity per Package	:	75kg
CAO - Packing Instructions	:	203
CAO - Maximum Net Quantity per Package	:	150kg
Special Provisions	:	A145 A167 A802
ERG Code	:	10L

14.7 - Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

15.1 - Safety, health and environmental regulations/legislation specific for the substance or mixture

Substances REACH candidates	None
Substances Annex XIV	None
Substances Annex XVII	isopentane; 2-methylbutane (Index No.: 601-085-00-2 - EC No.: 201-142-8 - CAS No.: 78-78-4)
VOC content	No data available

15.2 - Chemical Safety Assessment

Chemical safety assessment carried out for the product - No information available.

SECTION 16: Other information

SDS versions

Version	Issue date	Author	Description of the amendments
1,2	25/11/2024		
1,1	13/11/2024		
1	12/11/2024		

Texts of the regulatory sentences

Aerosol 1	Aerosol - Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Aquatic Chronic 2
Eye Irrit. 2	Eye irritation - Category 2
Flam. Gas 1	Flammable gas. - Category 1
Flam. Liq. 2	Flammable liquid and vapour. - Category 2
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

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Press. Gas	Gases under pressure
STOT SE 3	STOT-single exposure - Category 3 (H336)

The information provided in this Safety Data Sheet (SDS) is current on the date the SDS was prepared or revised. Implementation of measures that are provided on SDS is under downstream user companies' responsibility. Downstream users may change the measures in the SDS according to the conditions in their own business.

*** *** ***

SAFETY DATA SHEET ACCORDING TO REGULATION (EC) 1907/2006

Product name: Scholl Shoe Spray

Creation date: 21.02.2023, Revision: 21.02.2023, version: 1.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name
Scholl Shoe Spray

Product code
[D8182488 v 5.0
FF8138553 v 2.0]

https://my.chemius.net/p/zq9iPN/en/pd/en

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses
Shoe spray. Consumer use.

Uses advised against
No information.

1.3 Details of the supplier of the safety data sheet

Supplier
Scholl's Wellness Company Limited
2 Arlington Square, Downshire Way, Bracknell
RG12 1WA Berkshire, United Kingdom
0204 551 6060
uk_care@scholl.com

1.4 Emergency Telephone Number

Emergency
112

Supplier
0204 551 6060

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)
Aerosol 1; H222 Extremely flammable aerosol.
Aerosol 1; H229 Pressurised container: May burst if heated.
Eye Irrit. 2; H319 Causes serious eye irritation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]



Signal word: Danger

H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H319 Causes serious eye irritation.
EUH208 Contains 1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one. May produce an allergic reaction.
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P410 + P412 Protect from sunlight. Do no expose to temperatures exceeding 50 °C/122°F.

Special provisions

Use only as directed.

2.3 Other hazards

PBT/vPvB

No information.

Endocrine disrupting properties

No information.

Additional information

The substances in the mixture are not classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

For mixtures see 3.2.

3.2 Mixtures

Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Conc. Limits	Notes for substances
ethanol	64-17-5 200-578-6 603-002-00-5 01-2119457610-43	≥50 - ≤75	Flam. Liq. 2; H225 Eye Irrit. 2; H319	/	/
isobutane	75-28-5 200-857-2 601-004-00-0 01-2119485395-27	≥10 - ≤25	Flam. Gas 1A; H220 Press. Gas (Comp.); H280	/	C, U
butane	106-97-8 203-448-7 601-004-00-0 01-2119474691-32	≥10 - ≤25	Flam. Gas 1A; H220 Press. Gas (Comp.); H280	/	C
propane	74-98-6 200-827-9 601-003-00-5 01-2119486944-21	≤10	Flam. Gas 1A; H220 Press. Gas (Comp.); H280	/	/

1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one	54464-57-2 259-174-3 -	<0,25	Skin Irrit. 2; H315 Skin Sens. 1B; H317 Aquatic Chronic 1; H410; M = 1	/	/

Notes for substances

C	Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
U	When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned: Press. Gas (Comp.) Press. Gas (Liq.) Press. Gas (Ref. Liq.) Press. Gas (Diss.) Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

Product description

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General notes

When in doubt or if feeling unwell seek medical assistance. Show the safety data sheet and label to the physician. Never give anything by mouth to an unconscious person. Place patient in recovery position and ensure airway patency. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Following inhalation

Remove patient to fresh air - move out of dangerous area. Keep at rest in a position comfortable for breathing. If symptoms develop and persist, seek medical attention. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. In case of unconsciousness bring patient into stable side position and seek medical attention. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt.

Following skin contact

Take off all contaminated clothing. Wash affected skin areas immediately with plenty of water and soap. If symptoms develop and persist, seek medical attention. Wash contaminated clothes and shoes before reuse.

Following eye contact

Immediately flush eyes with running water, keeping eyelids apart. Remove contact lenses, if present and easy to do. If irritation persists, seek professional medical attention.

Following ingestion

Not likely. Accidental ingestion: Rinse mouth thoroughly with water. Remove dental prosthesis if present. Move exposed person to fresh air and keep at rest in a position comfortable for breathing. If the person is conscious, let him/her drink a small amount of water. The affected person should stop drinking water if he/she feels sick, because of risk of vomiting. Induce vomiting only if indicated by the doctor. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Loosen tight clothing such as a collar, tie, belt or waistband. Maintain an open airway. Immediately consult a doctor. Show the physician the safety data sheet or label.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation

Excessive exposure to spray mist, fog, or vapours may cause respiratory irritation. Coughing, sneezing, nasal discharge, labored breathing.

Following skin contact

Contact with skin may cause irritation (redness, itching). May cause sensitisation by skin contact (symptoms: itching, redness, rashes).

Following eye contact

Contact with eyes can cause irritation (redness, tearing, pain).

Following ingestion

Accidental ingestion: May cause nausea/vomiting and diarrhea. May cause abdominal discomfort. May cause irritation of the digestive tract.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Contact a poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

Not available.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

In case of a fire toxic gases can be generated; do not inhale gases/smoke. In the event of fire the following can be generated: carbon monoxide (CO), carbon dioxide (CO_2).

5.3 Advice for firefighters

Protective actions

In case of fire or heating do not breathe fumes/vapours. No action shall be taken involving any personal risk or without suitable training. Extremely flammable. Container is under pressure. Vapours can accumulate in closed spaces, travel very far to the source of ignition and then cause fire. The flame travels back to the origin. Leakage into sewers causes fire or explosion. In case of fire evacuate the area. In case of fire aerosols can explode and be propelled to considerable distances in different directions. Prolonged heating can cause an explosion. Cool the endangered containers with water spray. Move undamaged containers from immediate hazard area if it can be done safely.

Special protective equipment for fire-fighters

Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (EN 137).

Additional information

No information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment

Use personal protective equipment (Section 8).

Precautionary measures

Ensure adequate ventilation. Keep away from sources of ignition and/or heat; No smoking!

Emergency procedures

No action shall be taken involving any personal risk or without suitable training. Evacuate personnel and ventilate the premises. Prevent access to unauthorised personnel. Prevent access to unprotected personnel. Do not touch or walk through spilt material. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurised contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not breathe vapour or mist.

For emergency responders

Use personal protective equipment. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

The product is an aerosol, which is why leakage of large amounts of product is not expected. Do not allow product to reach water/drains/sewage systems or permeable soil. In case of release into the environment, inform the relevant authorities.

6.3 Methods and material for containment and cleaning up

For containment

Stem the spill if this does not pose risks.

For cleaning up

Use only explosion-proof instruments and equipment. Use spark-proof tools. Ventilate the premises. Collect the spray cans and hand them over to an authorized waste disposal contractor. Move containers from spill area. Small spill: Dilute with plenty of water. Wipe with inert material (clout). Release of liquid because of damaged aerosol can (release of large quantities): Approach the spill from upwind. Wash spillages into an effluent treatment plant or proceed as follows: Absorb product (with inert material), collect it in special container and dispose it to a licensed hazardous-waste disposal contractor. Prevent release into the sewer, water, basements or confined areas. Contaminated absorbent material may pose the same hazard as the spilt product.

OTHER INFORMATION

See Section 1 for contact information in case of emergency.

6.4 Reference to other sections

See also sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures

Measures to prevent fire

Ensure adequate ventilation. Keep away from sources of ignition - no smoking. Pressurized container; protect from sunlight and do not expose to tempratures exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or incandescent material. Use spark-proof tools. Use explosively safe equipment (ventilators, lighting, working instruments and devices,...); Empty containers can also be dangerous, because of residues of the product.

Measures to prevent aerosol and dust generation

Ensure good ventilation and extraction.

Measures to protect the environment

No information.

Other measures

No information.

Advice on general occupational hygiene

Wear suitable protective equipment; see Section 8. Use only in well-ventilated areas. In case of insufficient ventilation, wear suitable respiratory protection equipment. Use good personal hygiene practices – wash hands at breaks and when done working with material. Avoid contact with skin, eyes and clothes. Do not eat, drink or smoke while working. Remove

contaminated clothes and wash them before reuse. Before entering areas where food is eaten, remove contaminated clothing and protective equipment. Do not ingest the product.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Follow safe storage practices for packed compressed gas as described by the Compressed Gas Association or the relevant agency in the country where the product is used. Keep in a cool, dry and well ventilated place. Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Protect from direct sunlight. Keep away from sources of ignition - no smoking.

Packaging materials

The original container of producer.

Requirements for storage rooms and vessels

Keep the packaging tightly closed and sealed until use. Close opened containers after use. Put the containers upright to prevent from leaking. Use appropriate container to avoid environmental contamination. Do not store in unlabelled containers.

Storage class

No information.

Further information on storage conditions

No information.

7.3 Specific end use(s)

Recommendations

No information.

Industrial sector specific solutions

No information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values

Name	mg/m³	ml/m³	Short-term value mg/m³	Short-term value ml/m³	Remark	Biological Tolerance Values
Butane (106-97-8)	1450	600	1810	750	Carc, (only applies if Butane contains more than 0.1% of buta-1,3-diene)	/
Ethanol (64-17-5)	1920	1000	/	/	/	/

Information on monitoring procedures

BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values. BS EN 482:2021 Workplace exposure. Procedures for the determination of the concentration of chemical agents. Basic performance requirements.

DNEL/DMEL values

For product

No information.

For components

Name	Type	Exposure route	exp. frequency	Remark	value
ethanol	Worker	dermal	long term systemic effects	/	343 mg/kg bw/day
ethanol	Worker	inhalation	long term systemic effects	/	950 mg/m³

ethanol	Consumer	inhalation	long term systemic effects	/	114 mg/m³
ethanol	Consumer	dermal	long term systemic effects	/	206 mg/kg bw/day
ethanol	Consumer	oral	long term systemic effects	/	87 mg/kg bw/day

PNEC values

For product

No information.

For components

Name	Exposure route	Remark	value
ethanol	marine water	/	0.79 mg/L
ethanol	fresh water	/	0.96 mg/L
ethanol	fresh water sediment	dry weight	3.6 mg/kg
ethanol	marine water sediment	dry weight	2.9 mg/kg
ethanol	soil	dry weight	0.63 mg/kg
ethanol	water, intermittent release	fresh water	2.75 mg/L
ethanol	water treatment plant	/	580 mg/L
ethanol	food chain	oral	0.38 mg/kg feed

8.2 Exposure controls

Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Handle in accordance with good industrial hygiene and safety practice. Use good personal hygiene practices – wash hands at breaks and when done working with material. Use only in adequate ventilated premises. Wash hands, forearms and face thoroughly after use, before eating, drinking, smoking or using the toilet. Avoid contact with skin, eyes and clothes. Keep away from foodstuffs, beverages and feed. Do not eat, drink or smoke while working. The personal protective equipment is required only for professional use or for large packs (not for domestic packages). For consumer use, please follow the recommendations appearing on the product label. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

Structural measures to prevent exposure

No information.

Organisational measures to prevent exposure

Refer to and observe the following standards including national regulations: EN 689, EN 14042, EN 482. Appropriate techniques should be used to remove potentially contaminated clothing. Remove all contaminated clothes immediately and wash them before reuse. Ensure that eyewash stations and safety showers are close to the workstation location.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in areas with increased concentration. Ensure adequate built-in automatic control devices which ensure that the concentrations of gas, vapor or dust are below any lower explosive limits. Ventilation equipment must be explosion-proof. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protective equipment

Eye and face protection

No requirements under normal use conditions. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Safety glasses with side protection (EN 166).

Hand protection

If needed wear safety gloves. Protective gloves (EN 374). Considering the parameters specified by the glove manufacturer, checks during use should be carried out to ensure the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. The product is a preparation of several substances, the resistance of glove materials cannot be predicted and must therefore be checked before use.

Appropriate materials

Skin protection

Personal protective equipment for the body and suitable footwear should be chosen according to the task to be performed and the risks involved and it is recommended that it be validated by a specialist before handling the product. Protective antistatic clothing EN 1149 (1:2006, 2:1998 and 3:2004, 5:2008), protective antistatic shoes (EN 20345:2012).

Respiratory protection

Not needed under normal use and adequate ventilation. In case of insufficient ventilation wear suitable respiratory protection. Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. At elevated concentrations of vapours/aerosols in the air wear a mask (EN 140) with filter A2-P2 (EN 14387). 'High/elevated concentrations' means that the occupational exposure limit values have been exceeded.

Thermal hazards

No information.

Environmental exposure controls

Substance/mixture related measures to prevent exposure

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards. In order to maintain emissions at acceptable rates if necessary to equip the manufacturing material with air purifier or filter, or by technical change.

Instruction measures to prevent exposure

No information.

Organisational measures to prevent exposure

No information.

Technical measures to prevent exposure

No information.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state

liquid

Colour

No information.

Odour

No information.

Important health, safety and environmental information

Odour threshold	No information.
Melting point/Freezing point	No information.
Boiling point or initial boiling point and boiling range	< 34 °C
Flammability	No information.
Lower and upper explosion limit	No information.
Flash point	< 0 °C
Auto-ignition temperature	No information.
Decomposition temperature	No information.
pH	No information.
Viscosity	No information.
Solubility	No information.
Partition coefficient	No information.
Vapour pressure	No information.
Density and/or relative density	No information.
Relative vapour density	No information.
Particle characteristics	No information.

9.2 OTHER INFORMATION

Explosive properties	No information.

Other information

Heat of combustion: 32,88 kJ/g.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended transport or storage conditions. Extremely flammable aerosol.

10.2 Chemical stability

Product is stable under normal conditions of use, recommended handling and storage conditions.

10.3 Possibility of hazardous reactions

The product is stable under recommended storage and handling conditions. Vapours and air can form flammable or explosive mixtures.

10.4 Conditions to avoid

Protect from heat, direct sunlight, open fire, sparks. Avoid contact with incompatible materials.

10.5 Incompatible materials

Oxidants.

10.6 Hazardous decomposition products

Under normal use conditions no hazardous decomposition products are expected. In case of fire/explosion vapours/gases that pose a health hazard are released. Carbon dioxide; Carbon monoxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

(a) Acute toxicity

For components

Name	Exposure route	Type	Species	Time	value	Method	Remark
ethanol	oral	LD_{50}	rat	/	7000 mg/kg	/	/
ethanol	inhalation (vapours)	LC_{50}	rat	4 h	124.7 mg/l	/	/
isobutane	inhalation (vapours)	LC_{50}	rat	4 h	658000 mg/m^3	/	/
butane	inhalation (vapors)	LC50	rat	4 h	658 mg/l	/	/

Additional information

Based on available data, the classification criteria are not met.

(b) Skin corrosion/irritation

For components

Name	Species	Time	result	Method	Remark
ethanol	rabbit	/	Mild irritating.	/	400 mg

ethanol	rabbit	24 h	Moderately irritating.	/	20 mg

Additional information

Based on available data, the classification criteria are not met.

(c) Serious eye damage/irritation

For components

Name	Exposure route	Species	Time	result	Method	Remark
ethanol	/	rabbit	/	Moderately irritating.	/	100 mg; 0,067 min
ethanol	/	rabbit	24 h	Mild irritating.	/	500 mg
ethanol	/	rabbit	/	Moderately irritating.	/	100 µl
ethanol	/	rabbit	/	Severe irritation.	/	500 mg

Additional information

Based on available data, the classification criteria are not met.

(d) Respiratory or skin sensitisation

No information.

Additional information

It contains at least one ingredient that can cause sensitisation. Can cause allergic reaction.

(e) (Germ cell) mutagenicity

No information.

(f) Carcinogenicity

No information.

(g) Reproductive toxicity

No information.

Summary of evaluation of the CMR properties

No information.

(h) STOT-single exposure

No information.

Additional information

STOT SE - single exposure: Based on available data, the classification criteria are not met.

(i) STOT-repeated exposure

No information.

Additional information

STOT RE - repeated exposure: Based on available data, the classification criteria are not met.

(j) Aspiration hazard

No information.

Additional information

Aspiration hazard: based on available data, the classification criteria are not met.

Symptoms related to the physical, chemical and toxicological characteristics

No information.

Interactive effects

No information.

11.2 Information on other hazards

Endocrine disrupting properties

No information.

Other information

No information.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Acute (short-term) toxicity

For components

Name	Type	value	Exposure time	Species	organism	Method	Remark
ethanol	EC_{50}	17.921 mg/L	96 h	algae	*Ulva pertusa*	/	sea water
ethanol	EC_{50}	2 mg/L	48 h	crustacea	*Daphnia magna*	/	fresh water
ethanol	LC_{50}	25.5 mg/L	48 h	crustacea	*Artemia franciscana*	/	marine water, larvae
ethanol	LC_{50}	11000 mg/L	96 h	fish	*Alburnus alburnus*	/	sea water

Chronic (long-term) toxicity

For components

Name	Type	value	Exposure time	Species	organism	Method	Remark
ethanol	NOEC	4.995 mg/l	96 h	algae	*Ulva pertusa*	/	marine water
ethanol	NOEC	100 µL/L	21 days	crustaceans	*Daphnia magna*	/	fresh water, neonate

12.2 Persistence and degradability

Abiotic degradation, physical- and photo-chemical elimination

No information.

Biodegradation

No information.

12.3 Bioaccumulative potential

Partition coefficient

For components

Name	Media	value	Temperature °C	pH	Concentration	Method
ethanol	Log Pow	-0.35	/	/	/	/
isobutane	Log Pow	2.8	/	/	/	/
butane	Log Pow	2.89	/	/	/	/
propane	Log Pow	1.09	/	/	/	/

Bioconcentration factor (BCF)

For components

Name	Species	organism	value	Duration	Evaluation	Method	Remark
ethanol	/	/	/	/	Low bioaccumulation potential.	/	/
isobutane	bioaccumulation	/	/	/	Low bioaccumulation potential.	/	/
butane	bioaccumulation	/	/	/	Low bioaccumulation potential.	/	/
propane	bioaccumulation	/	/	/	Low bioaccumulation potential.	/	/

12.4 Mobility in soil

Known or predicted distribution to environmental compartments

No information.

Surface tension

No information.

Adsorption/Desorption

No information.

12.5 Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6 Endocrine disrupting properties

No information.

12.7 Other adverse effects

No information.

12.8 Additional information

For product

Product is not classified as dangerous for environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / Packaging disposal

Waste chemical

The generation of waste should be avoided or minimised wherever possible. Dispose of in accordance with applicable waste disposal regulation. Product and container must be disposed of safely. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional or local authority requirements. Waste is classified as hazardous waste. Do not allow product to reach drains/sewage systems. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Recycle or dispose according to official regulations: to leave it to authorized collector/remover/transformer of hazardous waste.

Waste codes / waste designations according to LoW

No information.

Packaging

Dispose of in accordance with applicable waste disposal regulation. The generation of waste should be avoided or minimised wherever possible. Recycle if possible. Incineration or disposal at collection points only if recycling is not possible. Empty containers or liners may contain product residues. Pressurized container. Do not pierce or burn, even after use. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Deliver completely emptied containers to approved waste disposal authorities.

Waste codes / waste designations according to LoW

No information.

Waste treatment-relevant information

No information.

Sewage disposal-relevant information

No information.

Other disposal recommendations

No information.

SECTION 14: TRANSPORT INFORMATION

ADR/RID	IMDG	IATA	ADN
14.1 UN number or ID number			
UN 1950	UN 1950	UN 1950	UN 1950
14.2 UN proper shipping name			
AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS
14.3 Transport hazard class(es)			
2	2	2	2
			
14.4 Packing group			
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable
14.5 Environmental hazards			
NO	NO	NO	NO
14.6 Special precautions for user			
Limited quantities 1 L Special provisions 190, 327, 344, 625 Packing Instructions P207, LP200 Special packing provisions PP87, RR6, L2 Transport category 2 Tunnel restriction code (D)	Limited quantities 1 L EmS F-D, S-U Flash point 0 °C	Limited Quantity, Packing Instructions (Ltd Qty, Pkg Inst) Y203 Limited Quantity, Maximum Net Quantity/Package (Ltd Qty, Max Net Qty/Pkg) 30 kg G Packing Instructions (Pkg Inst) 203 Maximum Net Quantity/Package (Max Net Qty/Pkg) 25 kg Special provisions A145, A167, A802	Limited quantities 1 L
14.7 Maritime transport in bulk according to IMO instruments			
	Goods may not be carried in bulk in bulk containers, containers or vehicles.		

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2020/878)

- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)
not applicable

Regulation EC 648/2004 on detergents
No information.

Special instructions
Seveso III, P3a: flammable aerosols. List of substances subject to authorisation (REACH, Annex XIV): none. It does not contain substances that are subjected to the REACH Annex XVII restrictions. Ozone depleting substances

(1005/2009/EU): Not listed. Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals: none listed.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for the mixture itself.

SECTION 16: OTHER INFORMATION

Indication of changes

No information.

Key literature references and sources for data

No information.

Abbreviations and acronyms

ATE - Acute Toxicity Estimate
ADR - Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CEN - European Committee for Standardisation
C&L - Classification and Labelling
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
CAS# - Chemical Abstracts Service number
CMR - Carcinogen, Mutagen, or Reproductive Toxicant
CSA - Chemical Safety Assessment
CSR - Chemical Safety Report
DMEL - Derived Minimal Effect Level
DNEL - Derived No Effect Level
DPD - Dangerous Preparations Directive 1999/45/EC
DSD - Dangerous Substances Directive 67/548/EEC
DU - Downstream User
EC - European Community
ECHA - European Chemicals Agency
EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)
EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)
EEC - European Economic Community
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
EN - European Standard
EQS - Environmental Quality Standard
EU - European Union
Euphrac - European Phrase Catalogue
EWC - European Waste Catalogue (replaced by LoW – see below)
GES - Generic Exposure Scenario
GHS - Globally Harmonized System
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
IMSBC - International Maritime Solid Bulk Cargoes
IT - Information Technology
IUCLID - International Uniform Chemical Information Database
IUPAC - International Union for Pure Applied Chemistry
JRC - Joint Research Centre
Kow - octanol-water partition coefficient
LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
LE - Legal Entity
LoW - List of Wastes (see http://ec.europa.eu/environment/waste/framework/list.htm)
LR - Lead Registrant
M/I - Manufacturer / Importer
MS - Member States
MSDS - Material Safety Data Sheet

OC - Operational Conditions
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OJ - Official Journal
OR - Only Representative
OSHA - European Agency for Safety and Health at work
PBT - Persistent, Bioaccumulative and Toxic substance
PEC - Predicted Effect Concentration
PNEC(s) - Predicted No Effect Concentration(s)
PPE - Personal Protection Equipment
(Q)SAR - Qualitative Structure Activity Relationship
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
RIP - REACH Implementation Project
RMM - Risk Management Measure
SCBA - Self-Contained Breathing Apparatus
SDS - Safety data sheet
SIEF - Substance Information Exchange Forum
SME - Small and Medium sized Enterprises
STOT - Specific Target Organ Toxicity
(STOT) RE - Repeated Exposure
(STOT) SE - Single Exposure
SVHC - Substances of Very High Concern
UN - United Nations
vPvB - Very Persistent and Very Bioaccumulative

List of relevant H phrases

H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H410 Very toxic to aquatic life with long lasting effects.



- ☑ Provided correct labelling of the product
- ☑ Compliance with the local legislation
- ☑ Provided correct classification of the product
- ☑ Provided adequate transport data

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The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 453/2010 - United Kingdom (UK)

Bollom FIRE PROTECTION

SAFETY DATA SHEET

Flamebar N5 Double Strength

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Product name : Flamebar N5 Double Strength

Product description : Flame-retarding agent.

Product type : Liquid.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Industrial uses: Uses of substances as such or in preparations* at industrial sites Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against	Reason
Consumer use	Product is not intended for consumer use.

1.3 Details of the supplier of the safety data sheet

Bollom Fire Protection
Portobello Industrial Estate
Birtley
County Durham
United Kingdom
DH3 2RE
Telephone no.: +44 (0) 191 4106611
Fax no.: +44 (0) 191 4920125
enquiries@tor-coatings.com

e-mail address of person responsible for this SDS : rpmeurohas@ro-m.com

1.4 Emergency telephone number

Telephone number : +44 (0) 207 858 1228

Hours of operation : 24 / 7

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - United Kingdom (UK)

Flamebar N5 Double Strength

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

Classification according to Directive 1999/45/EC [DPD]

The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Not classified.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Contains Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction. Safety data sheet available on request.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	Classification 67/548/EEC	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
ammonium bromide	EC: 235-183-8 CAS: 12124-97-9	1 - <5	Not classified.	Eye Irrit. 2, H319 **See Section 16 for the full text of the H statements declared above.**	[1]

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - United Kingdom (UK)

Flamebar N5 Double Strength

SECTION 3: Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
[5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

General : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.

Ingestion : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself.
If splashed in the eyes, the liquid may cause irritation and reversible damage.
This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO_2, powders, water spray.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - United Kingdom (UK)

Flamebar N5 Double Strength

SECTION 5: Firefighting measures

5.3 Advice for firefighters

Special protective actions for fire-fighters : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Appropriate breathing apparatus may be required.

Additional information : No unusual hazard if involved in a fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and materials for containment and cleaning up : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Preferably clean with a detergent. Avoid using solvents.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling : Avoid contact with skin and eyes. Avoid inhalation of vapour, spray or mist.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Put on appropriate personal protective equipment (see Section 8).
Never use pressure to empty. Container is not a pressure vessel.
Always keep in containers made from the same material as the original one.
Comply with the health and safety at work laws.
Do not allow to enter drains or watercourses.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

7.2 Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations.
Notes on joint storage
Keep away from: oxidising agents, strong alkalis, strong acids.
Additional information on storage conditions
Store in a dry, cool and well-ventilated area. Keep container tightly closed.
No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

Recommendations : Not available.

Flamebar N5 Double Strength

SECTION 7: Handling and storage

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety glasses with side shields. (EN166)

Skin protection

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.
The breakthrough time must be greater than the end use time of the product.
The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.
Gloves should be replaced regularly and if there is any sign of damage to the glove material.
Always ensure that gloves are free from defects and that they are stored and used correctly.
The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.
Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: nitrile rubber

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - United Kingdom (UK)

Flamebar N5 Double Strength

SECTION 8: Exposure controls/personal protection

The recommendation for the type or types of glove to use when handling this product is based on information from the following source:

EN 374-3 : 2003

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Body protection : Wear overalls or long sleeved shirt. (EN 467)

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Not applicable.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls : Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Colour : Clear.

Odour : Not available.

pH : 5,5

Melting point/freezing point : Not available.

Initial boiling point and boiling range : Not available.

Flash point : Closed cup: Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Burning time : Not applicable.

Burning rate : Not applicable.

Upper/lower flammability or explosive limits : Not available.

Vapour pressure : Not available.

Vapour density : Not available.

Relative density : 1,19 to 1,2

Solubility(ies) : Easily soluble in the following materials: cold water and hot water.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Explosive properties : Not available.

Oxidising properties : Not available.

9.2 Other information

No additional information.

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - United Kingdom (UK)

Flamebar N5 Double Strength

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.

10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO2 and smoke can be generated.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

There are no data available on the mixture itself.
If splashed in the eyes, the liquid may cause irritation and reversible damage.
This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ammonium bromide	LD50 Oral	Rat	2700 mg/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Not available.

Irritation/Corrosion

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Eyes : Based on available data, the classification criteria are not met.

Respiratory : Based on available data, the classification criteria are not met.

Sensitisation

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Teratogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

SECTION 11: Toxicological information

Not available.

Aspiration hazard

Not available.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

Conclusion/Summary : Based on available data, the classification criteria are not met.

12.2 Persistence and degradability

Conclusion/Summary : Based on available data, the classification criteria are not met.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Non-volatile.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

Disposal considerations : Do not allow to enter drains or watercourses.
Dispose of according to all federal, state and local applicable regulations.
If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.
For further information, contact your local waste authority.

European waste catalogue (EWC)

The European Waste Catalogue classification of this product, when disposed of as waste, is:

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - United Kingdom (UK)

Flamebar N5 Double Strength

SECTION 13: Disposal considerations

Waste code	Waste designation
08 01 12	waste paint and varnish other than those mentioned in 08 01 11

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Disposal considerations : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers.
Empty containers must be scrapped or reconditioned.
Not emptied containers are hazardous waste.

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.
Additional information	-	-	-

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

CN code : 3809 91 00

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - United Kingdom (UK)

Flamebar N5 Double Strength

SECTION 15: Regulatory information

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

VOC for Ready-for-Use Mixture : Not applicable.

Europe inventory : All components are listed or exempted.

National regulations

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Not classified.	

Full text of abbreviated H statements : H319 Causes serious eye irritation.

Full text of classifications [CLP/GHS] : Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2

Full text of abbreviated R phrases : Not applicable.

Full text of classifications [DSD/DPD] : Not applicable.

Date of printing : 02-03-2015.

Date of issue/ Date of revision : 02-02-2015.

Date of previous issue : No previous validation.

Version : 1

Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

SDS Correct as of

flints.co.uk
FLINTS
Theatrical Chandlers

SAFETY DATA SHEET – BLAZEBLOCKA

1. IDENTIFCATION OF SUBSTANCE/PREPARATION & COMPANY

Product Name / Code: BlazeBlocka, FHSBB01, FHSBB05, FHSBB25

REACH Key Notes: -

Application of Substance: Fire / Flame Retardant Preparation.

Company: Flints Theatrical Chandlers Ltd
Unit 9 Deptford Trading Estate
Blackhorse Road
SE8 5HY

Telephone: +44 (0) 20 7703 9786

Email: sales@flints.co.uk

Telephone operated from 08:30 – 17:30 Monday to Friday, 09:00 – 14:00 Saturday.
In an emergency, seek advice from a medical professional.

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture.

Classification under CLP: Eye Irrit. 2: H319

Most important adverse effects: Causes serious eye irritation.

2.2. Label elements.

Label elements:

Hazard statements: H319: Causes serious eye irritation.

Hazard pictograms: GHS07: Exclamation mark

Signal words: Warning

Precautionary statements: P264: Wash skin thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+313: If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2. Mixtures.

Hazardous ingredients:

AMMONIUM BROMIDE

EINECS	CAS	PBT / WEL	CLP Classification	Percent
235-183-8	12124-97-9	-	Eye Irrit. 2: H319	6.816%

UREA - REACH registered number(s): 01-2119463277-33

200-315-5	57-13-6	-	Eye Irrit. 2: H319; Skin Irrit. 2: H315	2.582%

DIAMMONIUM PHOSPHATE

231-987-8	7783-20-0	-	Eye Irrit. 2: H319; Skin Irrit. 2: H315; STOT SE 3: H335	2.562%

PHOSPHATE ESTER

-	52623-95-7	-	Eye Irrit. 2: H319; Skin Irrit. 2: H315	1.583%

4. FIRST AID MEASURES

4.1. Description of first aid measures.

Skin contact: In case of contact, immediately flush skin copiously with water for at least 15 minutes while removing contaminated clothing and shoes. Wash off skin thoroughly with soap and water. If symptoms develop, seek medical advice. Wash clothing and shoes thoroughly before reuse.

Eye contact: Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Obtain medical attention if irritation persists.

Ingestion: Wash out mouth with water. Seek Medical Attention.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Seek medical attention if patient feels unwell..

4.2. Most important symptoms and effects, both acute and delayed.

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure..

4.3. Indication of any immediate medical attention and special treatment needed.

Immediate / special treatment: Eye bathing equipment should be available on the premises..

5. FIRE FIGHTING MEASURES

5.1. Extinguishing media.

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture.

Exposure hazards: Will burn in a general conflagration. Harmful vapours may be evolved.

5.3. Advice for firefighters.

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes..

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures.

Personal precautions: Wear protective equipment including rubber gloves, rubber boots. In any event, always wear eye protection. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions.

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up.

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections.

Reference to other sections: Refer to section 8 of SDS.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed.

7.3. Specific end use(s)

Specific end use(s): Fire Retardant.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

DNEL / PNEC: No data available.

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Respiratory protection, while not required under conditions of normal use, is recommended in case of major spillage or emergency.

Hand protection: Protective gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Protective clothing.

Environmental: Refer to specific Member State legislation for requirements under Community environmental legislation..

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Colourless

Odour: Pine.

Evaporation rate: Negligible

Oxidising: Non-oxidising (by EC criteria)

Solubility in water: Miscible in all proportions

Also soluble in: Miscible with lower alcohols

Viscosity: Non-viscous

Boiling point/range°C: >100

Melting point/range°C: No data available.

Flammability limits %: **lower:** Not applicable.

upper: Not applicable.

Flash point°C: Not applicable.

Part.coeff. n-octanol/water: No data available.

Autoflammability°C:	Not applicable.
Vapour pressure:	No data available.
Relative density:	1.1
pH:	6
VOC g/l:	Not applicable.

9.2. Other information

Other information:	No data available..

10. STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity:	Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability:	Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions:	Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid:	Heat.

10.5. Incompatible materials

Materials to avoid:	Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products:	None unless involved in a fire Harmful vapours may be evolved.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Hazardous ingredients:

AMMONIUM BROMIDE

ORL	RAT	LD50	2714	mg/kg

PHOSPHATE ESTER

ORL	RAT	LD50	>2000	mg/kg

Relevant hazards for product:

Hazard	Route	Basis
Serious eye damage/irritation	OPT	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure..

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity values: No data available.

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity..

13. DISPOSAL INFORMATION

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Waste code number: 20 01 99

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal..

14. TRANSPORT INFORMATION

Transport class: This product does not require a classification for transport.

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Specific regulations: For use only by suitably trained individuals. Control of Substances Hazardous to Health Regulations 2002 (COSHH).

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier..

16. OTHER INFORMATION

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

*** indicates text in the SDS which has changed since the last revision.**

This safety data sheet is prepared in accordance with Commission Regulation (EC) No 1272/2008.

This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

Phrases used in s.2 and s.3: H315: Causes skin irritation.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 15.09.2023 *Version: 5* *Revision: 15.09.2023*

*
SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name: Kryolan Fixing Spray**

· **Article number:** 02289, 02290, 02292, 02295
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture**
make-up artist supplies
Coalescing agents

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Importer/Supplier:
Kryolan Australia Pty Ltd
86 Woodlands Drive, Braeside
Victoria 3195
Tel: +61 3 9580 8122
· Fax: 03 9580 7074
· Email: sales@kryolan.com.au
· Web: www.kryolan.com.au
Kryolan GmbH
Papierstraße 10
D-13409 Berlin
Tel: 49 (0) 30499892-100
Fax: 49 (0) 304914994

· **Further information obtainable from:**
Section Product Safety
info@kryolan.com
· **1.4 Emergency telephone number:** · Emergency Contact: +61 3 9580 8122 / +61419586 189 (Australia)

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**



flame

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
For Bulk goods the product is classified and labelled according to the GB CLP regulation.
For ready-made goods, the product is classified and labelled according to REGULATION (EC) No 1223/2009
The product is classified and labelled according to the GB CLP regulation.

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Trade name: Kryolan Fixing Spray

(Contd. of page 1)

· **Hazard pictograms**



GHS02 GHS07

· **Signal word** Danger

· **Hazard-determining components of labelling:**
2-Propanol
· **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
· **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read carefully and follow all instructions.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P337+P313 If eye irritation persists: Get medical advice/attention.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Additional information:**

Extra label elements according to Aerosol Dispenser Directive 75/324/EC:
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.
Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 106-97-8 EINECS: 203-448-7 Index number: 601-004-00-0	butane, pure Flam. Gas 1A, H220 Acute Tox. 3, H331 Press. Gas (Comp.), H280	30-60%

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Trade name: Kryolan Fixing Spray

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CAS: 67-63-0 EINECS: 200-661-7 Index number: 603-117-00-0	2-Propanol Flam. Liq. 2, H225 Eye Irrit. 2, H319; STOT SE 3, H336	20-40%
CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5	propane Flam. Gas 1A, H220 Press. Gas (Comp.), H280	10-30%

· **Not dangerous substances:**

CAS: 26062-56-6	Acrylates/t-Butylacrylamide Copolymer	
CAS: 75-28-5 EINECS: 200-857-2 Index number: 601-004-00-0	isobutane Flam. Gas 1A, H220 Press. Gas (Comp.), H280	0.1-<1%
CAS: 110-27-0 EINECS: 203-751-4	isopropyl myristate	
CAS: 6938-94-9	Diisopropyl Adipate	

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:** Wash off with water and soap.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Seek medical treatment in case of complaints.
Purge mouth and drink plenty of water in small swallows. Do not force vomiting
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** CO2, sand, extinguishing powder. Do not use water.
· **For safety reasons unsuitable extinguishing agents:** Water
· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
no special conditions required.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.

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· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
· **Information about fire - and explosion protection:**
Do not spray onto a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurised containers.
· **Information about storage in one common storage facility:** Store away from foodstuffs.
· **Further information about storage conditions:** Keep container tightly sealed.
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Additional information about design of technical facilities:** No further data; see section 7.

· **Ingredients with limit values that require monitoring at the workplace:**	
106-97-8 butane, pure	
WEL	Short-term value: 1810 mg/m³, 750 ppm Long-term value: 1450 mg/m³, 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
67-63-0 2-Propanol	
WEL	Short-term value: 1250 mg/m³, 500 ppm Long-term value: 999 mg/m³, 400 ppm

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from food, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
· **Protection of hands:**



Protective gloves

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Trade name: Kryolan Fixing Spray

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**
Safety glasses



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Aerosol
Colour:	According to product specification
· **Odour:**	Characteristic
· **Odour threshold:**	Not determined.
· **pH-value at 20 °C:**	7
· **Change in condition**	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	-44.5 °C
· **Flash point:**	-97 °C
· **Flammability (solid, gas):**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **Ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
· **Explosion limits:**	
Lower:	1.5 Vol %
Upper:	12 Vol %
· **Vapour pressure at 20 °C:**	8,300 hPa
· **Density at 20 °C:**	0.34803 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with water:**	Not miscible or difficult to mix.

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Safety data sheet
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Printing date 15.09.2023 *Version: 5* *Revision: 15.09.2023*

Trade name: Kryolan Fixing Spray

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· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	92.5 %
VOC (EC)	93.41 %
Solids content:	5.7 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
106-97-8 butane, pure		
Inhalative	LC50/4 h	658 mg/l (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation**
Causes serious eye irritation.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Additional toxicological information:**
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure**
May cause drowsiness or dizziness.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.

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Safety data sheet
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Trade name: Kryolan Fixing Spray

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· ***12.4 Mobility in soil*** *No further relevant information available.*
· ***Additional ecological information:***
· ***General notes:***
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· ***12.5 Results of PBT and vPvB assessment***
· ***PBT:*** *Not applicable.*
· ***vPvB:*** *Not applicable.*
· ***12.6 Other adverse effects*** *No further relevant information available.*

SECTION 13: Disposal considerations

· ***13.1 Waste treatment methods***
· ***Recommendation***
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· ***Uncleaned packaging:***
· ***Recommendation:*** *Disposal must be made according to official regulations.*

SECTION 14: Transport information

· ***14.1 UN-Number***	
· ***ADR, IMDG, IATA***	*UN1950*
· ***14.2 UN proper shipping name***	
· ***ADR***	*1950 AEROSOLS*
· ***IMDG***	*AEROSOLS*
· ***IATA***	*AEROSOLS, flammable*
· ***14.3 Transport hazard class(es)***	
· ***ADR***	



· ***Class***	*2 5F Gases.*
· ***Label***	*2.1*
· ***IMDG, IATA***	



· ***Class***	*2.1 Gases.*
· ***Label***	*2.1*
· ***14.4 Packing group***	
· ***ADR, IMDG, IATA***	*Void*
· ***14.5 Environmental hazards:***	*Not applicable.*
· ***14.6 Special precautions for user***	*Warning: Gases.*
· ***Hazard identification number (Kemler code):***	*-*

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Trade name: Kryolan Fixing Spray

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· **EMS Number:**	F-D,S-U
· **Stowage Code**	SW1 Protected from sources of heat. SW2 Clear of living quarters.
· **Segregation Code**	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E0 Not permitted as Excepted Quantity
· **Transport category**	2
· **Tunnel restriction code**	D
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E0 Not permitted as Excepted Quantity
· **UN "Model Regulation":**	UN 1950 AEROSOLS, 2.1

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category** P3a FLAMMABLE AEROSOLS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H336 May cause drowsiness or dizziness.

· **Department issuing SDS:** Section Product Safety

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Trade name: Kryolan Fixing Spray

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· ***Contact:***

-

Lars Köppling
Email: l.koeppling@kryolan.com

· ***Abbreviations and acronyms:***

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Gas 1A: Flammable gases – Category 1A
Aerosol 1: Aerosols – Category 1
Press. Gas (Comp.): Gases under pressure – Compressed gas
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **** Data compared to the previous version altered.***

Safety data sheet
according to UK REACH

Printing date 05.12.2024 Version: 2 Revision: 05.12.2024

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name: KRYOLAN Ur-Mastix**

· **Article number:** 02062
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Avoid contact with mucous membranes and eyes
· **Application of the substance / the mixture** make-up artist supplies

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Kryolan GmbH
Papierstraße 10
D-13409 Berlin
Tel: 49 (0) 30499892-100
Fax: 49 (0) 304914994

· **Further information obtainable from:**
Section Product Safety
info@kryolan.com
· **1.4 Emergency telephone number:**
on working days between 7am-5pm (CET)
Tel: 49 (0) 30499892-0

*
SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**


flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Eye Irrit. 2 H319 Causes serious eye irritation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms**


GHS02 GHS07

· **Signal word** Danger
· **Hazard statements**
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
· **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.

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Trade name: KRYOLAN Ur-Mastix

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P103	Read carefully and follow all instructions.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P243	Take action to prevent static discharges.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use CO2, powder or water spray to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5	ethanol	Flam. Liq. 2, H225 Eye Irrit. 2, H319	30-60%

· **Not dangerous substances:**

CAS: 61789-92-2	Mastic oil	30-60%
CAS: 7631-86-9 EINECS: 231-545-4	silicon dioxide, chemically prepared	1-5%
CAS: 84-66-2 EINECS: 201-550-6	diethyl phthalate	0.1-<1%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately rinse with water.
Wash off with water and soap.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Seek medical treatment in case of complaints.
Purge mouth and drink plenty of water in small swallows. Do not force vomiting

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Trade name: KRYOLAN Ur-Mastix

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· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** CO2, sand, extinguishing powder. Do not use water.
· **For safety reasons unsuitable extinguishing agents:** Water
· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
no special conditions required.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **Information about storage in one common storage facility:** Store away from foodstuffs.
· **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **7.3 Specific end use(s)** No further relevant information available.

*
SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Additional information about design of technical facilities:** No further data; see section 7.

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Trade name: KRYOLAN Ur-Mastix

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· **Ingredients with limit values that require monitoring at the workplace:**

64-17-5 ethanol

WEL	Long-term value: 1920 mg/m³, 1000 ppm

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from food, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
A filter of type AX must be used.
Use suitable respiratory protective device in case of insufficient ventilation.
· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
· **Material of gloves**
Butyl rubber, BR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:**



Tightly sealed goggles

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	According to product specification
· **Odour:**	Characteristic
· **Odour threshold:**	Not determined.
· **pH-value at 20 °C:**	7
· **Change in condition**	
Melting point/freezing point:	Undetermined.

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Trade name: KRYOLAN Ur-Mastix

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Initial boiling point and boiling range:	36 °C
· **Flash point:**	13 °C
· **Flammability**	Highly flammable.
· **Auto-ignition temperature:**	425 °C
· **Decomposition temperature:**	Not determined.
· **Ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
· **Explosion limits:**	
Lower:	3.5 Vol %
Upper:	15 Vol %
· **Vapour pressure at 20 °C:**	59 hPa
· **Vapour pressure at 50 °C:**	280 hPa
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with water:**	Fully miscible.
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	43.1 %
VOC (EC)	43.08 %
Solids content:	56.7 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.
· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

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· **Serious eye damage/irritation**
Causes serious eye irritation.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Additional toxicological information:**
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· **14.1 UN-Number**	
· **ADR, IMDG, IATA**	UN1170
· **14.2 UN proper shipping name**	
· **ADR**	1170 ETHANOL (ETHYL ALCOHOL) mixture
· **IMDG**	ETHANOL (ETHYL ALCOHOL) mixture
· **IATA**	ETHANOL mixture

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Trade name: KRYOLAN Ur-Mastix

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· **14.3 Transport hazard class(es)**

· **ADR, IMDG, IATA**



· **Class**	3 Flammable liquids.
· **Label**	3
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	II
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Warning: Flammable liquids.
· **Hazard identification number (Kemler code):**	33
· **EMS Number:**	F-E,S-D
· **Stowage Category**	A
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Transport category**	2
· **Tunnel restriction code**	D/E
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 1170 ETHANOL (ETHYL ALCOHOL) MIXTURE, 3, II

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Poisons Act**

· **Regulated explosives precursors**
None of the ingredients is listed.

· **Regulated poisons**
None of the ingredients is listed.

· **Reportable explosives precursors**
None of the ingredients is listed.

· **Reportable poisons**
None of the ingredients is listed.

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Trade name: KRYOLAN Ur-Mastix

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· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category** P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.

· **Department issuing SDS:** Section Product Safety
· **Contact:**
-
Lars Köppling
Email: l.koeppling@kryolan.com
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
· *** Data compared to the previous version altered.**

Safety data sheet
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Printing date 11.05.2022 Version: 2 Revision: 28.02.2022

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

· 1.1 Product identifier

· Trade name: MME Spirit Gum Remover extra mild

· Article number: 02038, 02040
· 1.2 Relevant identified uses of the substance or mixture and uses advised against
Avoid contact with mucous membranes and eyes
· Application of the substance / the mixture cleaner/remover of special adhesives

· 1.3 Details of the supplier of the safety data sheet
· Manufacturer/Supplier:
Kryolan Australia
86 Woodlands Drive
Braeside VIC 3195
Australia
Ph: +61 3 9580 8122

· Further information obtainable from:
Section Product Safety
info@kryolan.de
· 1.4 Emergency telephone number:

Ph: +61 3 9580 8122

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture
· Classification according to Regulation (EC) No 1272/2008



flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

· 2.2 Label elements
· Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
· Hazard pictograms



GHS02 GHS07

· Signal word Danger

· Hazard-determining components of labelling:
2-Propanol
· Hazard statements
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

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Trade name: MME Spirit Gum Remover extra mild

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· Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P243	Take action to prevent static discharges.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use CO2, powder or water spray to extinguish.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· 2.3 Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 67-63-0 EINECS: 200-661-7 Index number: 603-117-00-0	2-Propanol Flam. Liq. 2, H225 Eye Irrit. 2, H319; STOT SE 3, H336	20-40%
CAS: 61788-85-0 NLP: 500-147-5	Castor oil, hydrogenated, ethoxylated Acute Tox. 4, H332	1-5%

· Not dangerous substances:

CAS: 110-27-0 EINECS: 203-751-4	isopropyl myristate
CAS: 7732-18-5 EINECS: 231-791-2	water, distilled, conductivity or of similar purity

· Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures
· General information: Immediately remove any clothing soiled by the product.
· After inhalation: Supply fresh air; consult doctor in case of complaints.
· After skin contact:
Immediately rinse with water.
Wash off with water and soap.

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· After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· After swallowing:
Rinse out mouth and then drink plenty of water.
Seek medical treatment in case of complaints.
Purge mouth and drink plenty of water in small swallows. Do not force vomiting
· 4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.
· 4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media
· Suitable extinguishing agents:
CO_2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· For safety reasons unsuitable extinguishing agents: Water with full jet
· 5.2 Special hazards arising from the substance or mixture No further relevant information available.
· 5.3 Advice for firefighters
· Protective equipment:
Wear self-contained respiratory protective device.
no special conditions required.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
· 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
· 6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· 6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· Information about fire - and explosion protection:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· 7.2 Conditions for safe storage, including any incompatibilities
· Storage:
· Requirements to be met by storerooms and receptacles: Store in a cool location.
· Information about storage in one common storage facility: Store away from foodstuffs.
· Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

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· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters
· Additional information about design of technical facilities: No further data; see item 7.

· Ingredients with limit values that require monitoring at the workplace:	
67-63-0 2-Propanol	
WEL	Short-term value: 1250 mg/m³, 500 ppm Long-term value: 999 mg/m³, 400 ppm

· Additional information: The lists that were valid during the compilation were used as basis.

· 8.2 Exposure controls
· Personal protective equipment:
· General protective and hygienic measures:
Keep away from food, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
· Respiratory protection:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
· Protection of hands:
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
· Material of gloves
Nitrile rubber, NBR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· Eye protection:



Tightly sealed goggles

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Fluid
Colour:	Light blue
· Odour:	Alcohol-like
· Odour threshold:	Not determined.
· pH-value at 20 °C:	7
· Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	82 °C
· Flash point:	13 °C
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	425 °C
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
· Explosion limits:	
Lower:	2 Vol %
Upper:	12 Vol %
· Vapour pressure at 20 °C:	43 hPa
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	35.9 %
Water:	1.5 %
VOC (EC)	35.91 %
Solids content:	2.3 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

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· 10.2 Chemical stability
· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
· 10.3 Possibility of hazardous reactions No dangerous reactions known.
· 10.4 Conditions to avoid No further relevant information available.
· 10.5 Incompatible materials: No further relevant information available.
· 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects
· Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:
ATE (Acute Toxicity Estimates)
Inhalative LC50/4 h 91.1 mg/l (rat)

· Primary irritant effect:
· Skin corrosion/irritation Based on available data, the classification criteria are not met.
· Serious eye damage/irritation
Causes serious eye irritation.
· Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
· Additional toxicological information:
· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
· Germ cell mutagenicity Based on available data, the classification criteria are not met.
· Carcinogenicity Based on available data, the classification criteria are not met.
· Reproductive toxicity Based on available data, the classification criteria are not met.
· STOT-single exposure
May cause drowsiness or dizziness.
· STOT-repeated exposure Based on available data, the classification criteria are not met.
· Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· 12.1 Toxicity
· Aquatic toxicity: No further relevant information available.
· 12.2 Persistence and degradability No further relevant information available.
· 12.3 Bioaccumulative potential No further relevant information available.
· 12.4 Mobility in soil No further relevant information available.
· Additional ecological information:
· General notes:
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· 12.5 Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.
· 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods
· Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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· Uncleaned packaging:
· Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN1219
· 14.2 UN proper shipping name · ADR · IMDG, IATA	 1219 ISOPROPANOL (ISOPROPYL ALCOHOL) mixture ISOPROPANOL (ISOPROPYL ALCOHOL) mixture
· 14.3 Transport hazard class(es) · ADR, IMDG, IATA  · Class · Label	 3 Flammable liquids. 3
· 14.4 Packing group · ADR, IMDG, IATA	 II
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category	Warning: Flammable liquids. 33 F-E,S-D B
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category · Tunnel restriction code	 1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml 2 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	 1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1219 ISOPROPANOL (ISOPROPYL ALCOHOL) MIXTURE, 3, II

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Trade name: MME Spirit Gum Remover extra mild

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SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

· Directive 2012/18/EU
· Named dangerous substances - ANNEX I None of the ingredients is listed.
· Seveso category P5c FLAMMABLE LIQUIDS
· Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
· Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.

· Department issuing SDS: Section Product Safety
· Contact:
-
Lars Köppling
Email: l.koeppling@kryolan.com
· Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
· * Data compared to the previous version altered.

SAFETY DATA SHEET

Version: 1.0 Date: 30.09.2015

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name	MSL Firecheck
CAS No.	Mixture
EINECS No.	Mixture
REACH Registration No.	None assigned.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s)	Flame retardant or fire preventing agent
Uses Advised Against	None known.

1.3 Details of the supplier of the safety data sheet

Company Identification	Mainstage Ltd Butler Works, Wyresdale Road, Lancaster, United Kingdom, LA1 3JJ
Telephone	+44 (0) 1524 844 099
Fax	+44 (0) 1524 841 808
E-Mail (competent person)	m.sweetland@mainstageltd.com

1.4 Emergency telephone number

	+44 (0)1524 844 099 Available during UK office hours (0900 – 1630 GMT)
Languages spoken	English

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Regulation (EC) No. 1272/2008 (CLP) Not classified as hazardous for supply/use.

2.2 Label elements According to Regulation (EC) No. 1272/2008 (CLP)

Product Name	MSL Firecheck
Hazard Pictogram(s)	None assigned
Signal Word(s)	None assigned
Hazard Statement(s)	None assigned
Precautionary Statement(s)	None assigned

2.3 Other hazards High concentrations of mist may be irritant to the respiratory tract.
When wet: Slight irritant to the eye.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Not applicable

3.2 Mixtures Substances in preparations / mixtures

EC Classification Regulation (EC) No. 1272/2008 (CLP)

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard classification
Ammonium Bromide	1.00 – 5.00	12124-97-9	235-183-8	Not yet assigned in the supply chain	Eye Irrit. 2: H319: Causes serious eye irritation.

SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Inhalation	Remove from exposure. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If unconscious, place in recovery position and get medical attention immediately. Apply artificial respiration if necessary. Keep warm and at rest. Get medical advice/attention if you feel unwell.
Skin Contact	Wash affected skin with soap and water. Remove contaminated clothing and wash clothing before reuse. If irritation (redness, rash, blistering) develops, get medical attention.
Eye Contact	Flush eyes with water for at least 15 minutes while holding eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
Ingestion	Provided the patient is conscious, wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Get medical advice/attention if you feel unwell. Do not induce vomiting unless instructed to do so by medical personnel.

4.2 Most important symptoms and effects, both acute and delayed

High concentrations of mist may be irritant to the respiratory tract. Diarrhoea. When wet: Slight irritant to the eye.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. If symptoms occur obtain medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media	Non-flammable. As appropriate for surrounding fire. Water spray, foam, dry powder or CO2
Unsuitable extinguishing Media	Do not use water jet. Direct water jet may spread the fire.

5.2 Special hazards arising from the substance or mixture

None known. This product is a fire protection product and will not induce, accelerate or maintain fire.

5.3 Advice for fire-fighters

Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Avoid all contact. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Ensure suitable personal protection during removal of spillages. Wear respiratory protection. Wear protective eyewear (goggles, face shield, or safety glasses). Wear rubber gloves, boots and apron.

6.2 Environmental precautions

Avoid release to the environment. Do not flush spilt material into any public water system.

6.3 Methods and material for containment and cleaning up

Absorb spillage in inert material and shovel up. Transfer to a lidded container for disposal or recovery. Ventilate the area and wash spill site after material pick-up is complete. Avoid release to the environment. Disposal should be in accordance with local, state or national legislation.

6.4 Reference to other sections

See Section: 8, 10, 13

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Avoid generation of mist. Keep good industrial hygiene. Contaminated clothing should be thoroughly cleaned.

7.2	**Conditions for safe storage, including any incompatibilities**	Keep only in the original container/package in a cool well-ventilated place. Keep container tightly closed and dry. Keep away from food, drinks and animal food.
	Storage temperature	Stable at ambient temperatures. Recommended: 1-30℃
	Storage life	Shelf life practically unlimited under recommended storage conditions. Keep in a cool, dry, well ventilated place.
	Incompatible materials	Acids, Alkalis, Strong oxidising agents
	Appropriate packaging	Plastic-lined / plastic containers
7.3	**Specific end use(s)**	See Section: 1.2

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits — None assigned.

8.1.2 Biological limit value — Not established.

8.1.3 PNECs and DNELs — Not established.

8.2 Exposure controls

8.2.1 Appropriate engineering controls — Ensure adequate ventilation. Good hygiene practices and housekeeping measures

8.2.2 Individual protection measures, such as personal protective equipment (PPE) — Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Avoid generation of mist. Keep good industrial hygiene. Contaminated clothing should be thoroughly cleaned.

Eye/face protection



Wear protective eyewear (goggles, face shield, or safety glasses). Recommended: Wear eye protection with side protection (EN166).

Skin protection



Hand protection: Prolonged, direct contact: Wear impervious gloves (EN374).

Body protection: Wear rubber gloves, boots and apron.

Respiratory protection



In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protective equipment should conform to the appropriate EN standard.

Thermal hazards — None anticipated.

8.2.3 Environmental Exposure Controls — Avoid release to the environment. Do not release large quantities into the surface water or into drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Aqueous solution
Odour	Very slight detergent-like odour
Odour Threshold	Not established.
pH	5.5 – 6.5
Melting Point/Freezing Point	Not established.
Initial boiling point and boiling range	Not established.
Flash Point	Not established.
Evaporation Rate	Not established.
Flammability (solid, gas)	Not established.

Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not established.
Vapour density	Not established.
Relative density	Not established.
Solubility(ies)	Soluble in water.
Partition coefficient: n-octanol/water	Not established.
Auto-ignition temperature	Not established.
Decomposition Temperature	Not established.
Viscosity	Not established.
Explosive properties	Not explosive
Oxidising properties	Not oxidising.

9.2 Other information None known.

SECTION 10: STABILITY AND REACTIVITY

10.1	**Reactivity**	Stable under normal conditions.
10.2	**Chemical stability**	Stable under normal conditions.
10.3	**Possibility of hazardous reactions**	None known. Hazardous polymerisation will not occur.
10.4	**Conditions to avoid**	Keep away from incompatible materials.
10.5	**Incompatible materials**	Acids, Alkalis, Strong oxidising agents
10.6	**Hazardous decomposition product(s)**	None known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects (Substances in preparations / mixtures)

Acute toxicity

Ingestion	Based on available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: LD50 >2000 mg/kg bw/day
Inhalation	Based on available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: LD50 >5 mg/l
Skin Contact	Based on available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: LD50 >2000 mg/kg bw/day
Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitization	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT - single exposure	Based on available data, the classification criteria are not met.
STOT - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.

11.2 Other information None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1	**Toxicity**	Based on available data, the classification criteria are not met. Estimated LC50 (96 hour) Fish > 100 mg/l
12.2	**Persistence and degradability**	Not established.
12.3	**Bioaccumulative potential**	Not established
12.4	**Mobility in soil**	The product is predicted to have high mobility in soil.
12.5	**Results of PBT and VPVB assessment**	Not classified as PBT or vPvB. None of the substances in this product fulfil the criteria for being regarded as a PBT or vPvB substance.
12.6	**Other adverse effects**	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1	**Waste treatment methods**	Dispose of contents in accordance with local, state or national legislation. Do not dispose of with household waste. Do not allow to enter drains.
13.2	**Additional Information**	Containers must be decontaminated in accordance with all applicable regulations.

SECTION 14: TRANSPORT INFORMATION

Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'.

		ADR/RID	IMDG	IATA/ICAO
14.1	**UN number**	None assigned.	None assigned.	None assigned.
14.2	**UN proper shipping name**	None assigned.	None assigned.	None assigned.
14.3	**Transport hazard class(es)**	None assigned.	None assigned.	None assigned.
14.4	**Packing group**	None assigned.	None assigned.	None assigned.
14.5	**Environmental hazards**	Not classified.	Not classified.	Not classified.
14.6	**Special precautions for user**	See Section: 2		
14.7	**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.	Not applicable.	Not applicable.
14.8	**Additional Information**	None.		

SECTION 15: REGULATORY INFORMATION

15.1	**Safety, health and environmental regulations/legislation specific for the substance or mixture**	
15.1.1	**EU regulations**	
	Authorisations and/or Restrictions On Use	None.
15.1.2	**National regulations**	
	Wassergefährdungsklasse (Germany)	Not classified
15.2	**Chemical Safety Assessment**	None.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.

References: Safety Data Sheets for ingoing ingredients. Existing ECHA registration(s) for: Ammonium Bromide (CAS No.: 12124-97-9). This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830.

LEGEND

LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
PBT	PBT: Persistent, Bioaccumulative and Toxic
vPvB	vPvT: very Persistent and very Toxic

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

Disclaimers

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. Mainstage Ltd gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. Mainstage Ltd accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.

No Nonsense Brush Cleaner

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by UK REACH Regulations SI 2019/758
Issue date: 14/02/2024 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : No Nonsense Brush Cleaner
UFI : PM10-G0S9-500Y-Y4KC
Product group : End product

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Paint brush cleaner

1.2.2. Uses advised against

Restrictions on use : Cosmetics, personal care products

1.3. Details of the supplier of the safety data sheet

GB Supplier
Bartoline Limited
Barmston Close
HU17 0LW Beverley
United Kingdom
T 01482 678710 - F 01482 872606
info@bartoline.co.uk - www.bartoline.co.uk

1.4. Emergency telephone number

Emergency number : +44(0)1482 678710
8.30am - 4.45pm Monday to Friday
NHS 111 - General Public (24 Hour service)

Also, in the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 3	H226
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336
Aspiration hazard, Category 1	H304
Hazardous to the aquatic environment – Chronic Hazard, Category 3	H412

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02 GHS07 GHS08

Signal word (CLP) : Danger

Contains	:	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics (EC No.: 919-857-5), Hydrocarbons, C9, aromatics (EC No.: 918-668-5).
Hazard statements (CLP)	:	H226 - Flammable liquid and vapour. H304 - May be fatal if swallowed and enters airways. H336 - May cause drowsiness or dizziness. H412 - Harmful to aquatic life with long lasting effects
Precautionary statements (CLP)	:	P102 - Keep out of reach of children. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P280 – Wear protective clothing, eye protection, face protection, protective gloves. P301+P310+P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do not induce vomiting. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
EUH-statements	:	EUH066 - Repeated exposure may cause skin dryness or cracking.
Extra Labelling Phrases	:	Contains 30% and more aliphatic hydrocarbons, 5 % or over but less than 15 % aromatic hydrocarbons, less than 5% anionic surfactants.

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII
The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.
This product is a poor conductor of electricity and can become electrostatically charged.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	EC-No.: 919-857-5 EU REACH Registration No.:01-2119463258-33-XXXX	≥ 80	Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304 EUH066
Hydrocarbons, C9, aromatics	CAS-No.: 128601-23-0 EC-No.: 918-668-5 EU REACH Registration-No.:01-2119455851-35-XXXX	< 10	Flam. Liq. 3, H226 STOT SE 3, H336 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., compds. with 2-propanamine	CAS-No.: 84961-74-0 EC-No.: 284-664-9 EU REACH Registration-No: 01-2119985163-33-XXXX	1 – < 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 3, H412
(2-methoxymethylethoxy)propanol substance with a UK & EU Community workplace exposure limit	CAS-No.: 34590-94-8 EC-No.: 252-104-2 EU REACH Registration-No: 01-2119450011-60-XXXX	≤ 1	Not classified

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Remove victim to uncontaminated area. Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after skin contact : Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.

First-aid measures after eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

First-aid measures after ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures of first aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Symptoms/effects after inhalation : Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness.

Symptoms/effects after skin contact : Adverse symptoms may include the following: irritation dryness cracking

Symptoms/effects after eye contact : Adverse symptoms may include the following: Eye irritation. Redness.

Symptoms/effects after ingestion : Ingestion may cause nausea and vomiting. Abdominal pain, nausea. Swallowing a small quantity of this material will result in serious health hazard. Liquid with low viscosity, may result in aspiration into the lungs. Product entering lungs lead to the rapid development of very serious inhalation pulmonary lesions (medical survey during 48 hours).

4.3. Indication of any immediate medical attention and special treatment needed

If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious pulmonary lesions (medical survey during 48 hours). Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2), sand.

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Explosion hazard	:	In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
Hazardous decomposition products in case of fire	:	Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases. Hydrocarbons. Aldehydes. Soot. Gas may accumulate in confined areas. *i.e.* toxic gases can be released.

5.3. Advice for firefighters

Precautionary measures fire	:	Avoid breathing vapours from fire. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Firefighting instructions	:	Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool..
Protection during firefighting	:	Wear fire/flame resistant/retardant clothing. In confined space use self-contained breathing apparatus with a full face piece respirator operated in positive pressure mode. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incident.
Other information	:	Keep run-off water out of sewers and water sources. Containers close to fire should be removed or cooled with water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area.

6.1.1. For non-emergency personnel

Protective equipment	:	Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection.
Emergency procedures	:	Keep unnecessary and unprotected personnel away from the spillage.Land spill. Eliminate all ignition sources. Stop leak if safe to do so. Do not touch or walk on the spilled product. Wash thoroughly after dealing with a spillage. Eliminate all ignition sources. Stop leak if safe to do so.No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation.

6.1.2. For emergency responders

Protective equipment	:	Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection.

6.2. Environmental precautions

Avoid release to the environment. Material insoluble in water. may spread in water systems. Do not discharge into drains or the environment. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

For containment	:	Eliminate sources of ignition. No open flames. No smoking.
Methods for cleaning up	:	Small Spill : Stop leak if safe to do so. Absorb excess liquid spillage on inorganic adsorbent material such as fine sand, brick dust etc. Place spent adsorbent in sealed packages and contact specialist waste disposal contractor. Cover the spilled liquid product with foam to slow down evaporation. Use type. Alcohol resistant foam. Large Spill :

		Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
Other information	:	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information on personal protection refer to section 8: "Exposure controls/personal protection". For further information on Disposal Considerations refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapour or mist. Do not swallow. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. Avoid handling alongside strong oxidants and Strong Acids. Avoid product spilling and keep away from drains
Hygiene measures	:	Do not eat, drink or smoke when using this product. After contact with skin, wash immediately and thoroughly with water and soap. Take off immediately all contaminated clothing and wash it before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Remove contaminated clothing and protective equipment before entering eating areas. Do not dry hands with rags that have been contaminated with product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Ground/bond container and receiving equipment.
Storage conditions	:	Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up. Keep locked up and out of reach of children. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers
Incompatible products	:	Oxidizing agent, Strong Acids
Heat and ignition sources	:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Storage area	:	Keep away from food, drink and animal feedingstuffs.
Packaging materials	:	Carbon steel. Glass. Mild steel. Stainless steel. high density polyethylene (HDPE). Polyethylene terephthalate (PET).

7.3. Specific end use(s)

Used as Paint brush cleaner (See Section 1.2). When performing aformentioned specific use, keep containers closed when not in use, keep containers upright., use only in well ventilated areas, ideally outdoors, open containers slowly in order to release any pressure build up that may occur, keep out of reach of children, apply "common sense" measures when using this product, when using transfer required amount to a suitable container such as glass, metal or HDPE and avoid all contact with skin and eyes.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

(2-methoxymethylethoxy)propanol (34590-94-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	308 mg/m³, 50 ppm (Commission Directive 2000/39/EC) likely absorption through the skin
Republic of Ireland - Occupational Exposure Limit (OEL)	
OEL TWA	308 mg/m³, 50 ppm (Chemical Agents and Carcinogens Code of Practice 2021)
United Kingdom - Occupational Exposure Limit (OEL)	
OEL TWA	308 mg/m³, 50 ppm (EH40/2005 – 4th Edition 2020) likely absorption through the skin

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics (919-857-5)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, inhalation	871 mg/m³
Long-term - systemic effects, dermal	77 mg/kg bodyweight/day
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	46 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	185 mg/m³
Long-term - systemic effects, dermal	46 mg/kg bodyweight/day
PNEC (additional information)	
Additional information	PNEC is not meaningful for petroleum substances

Hydrocarbons, C9, aromatics (128601-23-0)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	150 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	11 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	32 mg/m³
Long-term - systemic effects, dermal	11 mg/kg bodyweight/day

(2-methoxymethylethoxy)propanol (34590-94-8)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	283 mg/kg bodyweight/day

(2-methoxymethylethoxy)propanol (34590-94-8)	
Long-term - systemic effects, inhalation	308 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	36 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	37.2 mg/m³
Long-term - systemic effects, dermal	121 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	19 mg/l
PNEC aqua (marine water)	1.9 mg/l
PNEC aqua (intermittent, freshwater)	190 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	70.2 mg/kg dwt
PNEC sediment (marine water)	7.02 mg/kg dwt
PNEC (Soil)	
PNEC soil	2.74 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	4168 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

8.2.2. Personal protection equipment

Personal protective equipment:
Do not attempt to take action without suitable protective equipment. Appropriate engineering controls.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses

Eye protection			
Type	**Field of application**	**Characteristics**	**Standard**
Use splash goggles when eye contact due to splashing is possible	Droplet	With side shields	EN 166

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Wear gloves according to EN374 resistant to the solvent(s) in use.
Protective gloves. Nitrile-rubber protective gloves (Glove thickness > 0.55 mm, Brealk through time > 30 min). Polyvinyl Alcohol (PVA) (any thickness; Break through time > 480 min)

Other skin protection

Materials for protective clothing:
Use appropriate personal protection equipment (PPE). According to the conditions of use, protective gloves, apron, boots, head and face protection must be worn. *E.g.* When there is a risk of ignition from static electricity, wear anti-static protective clothing; clothing should include anti-static overalls, boots and gloves

8.2.2.3. Respiratory protection

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment. Wear respiratory protection.

Respiratory protection			
Device	**Filter type**	**Condition**	**Standard**
Wear respiratory protection	Type A - High-boiling (>65 °C) organic compounds, Type P2	Vapour protection	EN 405

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels..

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Blue.
Appearance	:	Blue Liquid.
Odour	:	Characteristic.
Odour threshold	:	Not available
Melting point/Freezing Point	:	Not applicable
Initial boiling point and range	:	Not available
Flammability	:	Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge. Non-flammable in the presence of the following materials or conditions: heat
Upper/lower flammability or explosive limits	:	Not available
Flash point	:	Closed cup: >40°C
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	Not applicable.
Viscosity	:	Kinematic (40°C): <20.5 mm^2/s
Solubility(ies)	:	Insoluble in water
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50 °C	:	Not available
Density	:	Not available
Relative density	:	Not available

Vapour density	:	Not available
Particle characteristis	:	Not applicable
Explosive properties	:	Not considered explosive based on chemical structure and oxygen balance considerations.
Oxidising properties	:	Not considered oxidising based on chemical structure considerations.
Evaporation Rate	:	Not available

9.2. Other information

VOC content	:	≤ 900 g/l
Volatility	:	Volatile

SECTION 10: Stability and reactivity

10.1. Reactivity

No specific test data related to reactivity available for this product or its ingredient (Nb. Is flammable liquid and vapour.)

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition. Never pressurise packagings as they will not resist.

10.5. Incompatible materials

Strong Acids. Strong Oxidizing agent.

10.6. Hazardous decomposition products

Does not decompose when used for intended uses. Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	:	Based on available data, the classification criteria are not met
Acute toxicity (dermal)	:	Based on available data, the classification criteria are not met
Acute toxicity (inhalation)	:	Based on available data, the classification criteria are not met

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics (919-857-5)	
LD50 oral (Read Across from Hydrocarbons, C10-C12, isoalkanes, <2% aromatics)	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LC50 Inhalation (gases) (Read Across from Hydrocarbons, C9-C11, isoalkanes, <2% aromatics)	> 5000 mg/m^3 air Animal: rat, Exposure: 8h, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
LD50 dermal (Read Across from Hydrocarbons, C11-C14, isoalkanes, cyclics, < 2% aromatics)	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Hydrocarbons, C9, aromatics (128601-23-0)	
LD50 oral	> 3492 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal	> 3160 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Hydrocarbons, C9, aromatics (128601-23-0)	
LC50 Inhalation (vapour)	> 6193 mg/m^3 air Animal: rat, Exposure: 4h, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity),

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., compds. with 2-propanamine (84961-74-0)	
LD50 oral	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: EU Method B.1 bis (Acute Oral Toxicity - Fixed Dose Procedure), OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method)
LD50 dermal (Read Across from Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts (CAS No.: 68411-30-3)	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

(2-methoxymethylethoxy)propanol (34590-94-8)	
LD50 oral	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal	9510 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 inhalation (vapour)	> 275 ppm Animal: rat, Exposure: 7h, Guideline: OECD Guideline 402 (Acute Inhalation Toxicity)

Skin corrosion/irritation : Based on available data, the classification criteria are not met
pH: Not applicable.

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., compds. with 2-propanamine (84961-74-0)
Causes skin irritation.
Positive result, relative mean tissue viability = 6.8% (which is < 50%) , *in vitro* method, Guideline: OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis Test Method)) and EU Method B.46 (In Vitro Skin Irritation: Reconstructed Human Epidermis Model Test)

Serious eye damage/irritation : Based on available data, the classification criteria are not met
pH: Not applicable

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., compds. with 2-propanamine (84961-74-0)
Causes serious eye irritation.
Positive result, relative mean tissue viability = 16.6% (which is < 50%) , *in vitro* method, Guideline: No specific guideline - The test is based on the hypothesis that irritant chemicals are able to penetrate the corneal epithelial tissue and are sufficiently cytotoxic to cause cell death. Cytotoxicity is measured with the MTT reduction assay, Description of Test: In an *in vitro* eye irritation study, 30 µL of substance (97% purity) was applied in the SkinEthic reconstructed Human Corneal Epithelium model) for a treatment period of 10 minutes

Respiratory or skin sensitisation : Based on available data, the classification criteria are not met

Germ cell mutagenicity : Based on available data, the classification criteria are not met

Carcinogenicity : Based on available data, the classification criteria are not met

Reproductive toxicity : Based on available data, the classification criteria are not met

STOT-single exposure : May cause drowsiness or dizziness.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics (919-857-5)
Based on Read Across, Acute CNS effects seen in: ➔ NOAEC for in mice (Hydrocarbons C10-C11, isoalkanes, <2% aromatics): 1000 ppm (5800 mg/m^3). ➔ In a 13 week subchronic inhalation study, the neurotoxicity of light alkylate naphtha distillate (LAND-2; carbon range C5-C8) was examined in male and female rats and acute CNS effects were observed.

Hydrocarbons, C9, aromatics (128601-23-0)	
STOT-single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.

STOT-repeated exposure : Based on available data, the classification criteria are not met.

Aspiration hazard : May be fatal if swallowed and enters airways.

No Nonsense Brush Cleaner	
Viscosity, kinematic	≤ 20.5 mm²/s @ 40°C

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics (919-857-5)	
Viscosity, kinematic	≤ 20.5 mm²/s @ 40°C [ISO 3104]

Hydrocarbons, C9, aromatics (128601-23-0)	
Viscosity, kinematic	≤ 20.5 mm²/s @ 40°C [ISO 3104]

11.2. Information on other hazards

11.2.1 Endocrine Disrupting Properties

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

11.2.2 Other Information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Based on available data, the classification criteria are not met.

Hazardous to the aquatic environment, long–term (chronic) : Based on available data, the classification criteria are not met.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics (919-857-5)	
LL50 96h - Fish	> 1000 mg/l Test organisms (species): Oncorhynchus mykiss, Guideline: OECD Guideline 203 (Fish, Acute Toxicity Test)
EL50 48h – Crustacea	> 1000 mg/l Test organisms (species): Daphnia magna, Guideline: OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
EC50 72h – Algae	> 1000 mg/l Test organisms (species): Raphidocelis subcapitata, Guideline: OECD Guideline 201 (Alga, Growth Inhibition Test)
NOELR 96 h – Algae	3 mg/l Test organisms (species): Raphidocelis subcapitata, Guideline: OECD Guideline 201 (Alga, Growth Inhibition Test)

Hydrocarbons, C9, aromatics (128601-23-0)	
LC50 96h - Fish	9.2 mg/l Test organisms (species): Oncorhynchus mykiss, Guideline: OECD Guideline 203 (Fish, Acute Toxicity Test)
EC50 48h - Crustacea	3.2 mg/l Test organisms (species): Daphnia magna, Guideline: OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
EC50 72h - Algae	2.9 mg/l Test organisms (species): Pseudokirchneriella subcapitata, Guideline: OECD Guideline 201 (Alga, Growth Inhibition Test)
NOELR 28d – Fish	1.23 mg/l Test organisms (species): Oncorhynchus mykiss, Guideline: QSAR
NOELR 21d – Crustacea	2.14 mg/l Test organisms (species): Daphnia magna, Guideline: QSAR

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., compds. with 2-propanamine (84961-74-0)	
LC50 96h – Fish (Read Across from Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts (CAS No.: 68411-30-3))	1.67 mg/L Test organisms (species): Lepomis macrochirus, Guideline: USEPA OPPTS 850.1075 (1996)
NOEC 90d – Fish (Read Across from Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts (CAS No.: 68411-30-3))	0.63 mg/L Test organisms (species): Tilapia mossambica, Guideline: USEPA OPPTS 850.1075 (1996), Reference: van de Plassche, E.J., de Bruijn, J.H.M., Stephenson, R.R., Marshall, S.J., Feijtel, T.C.J. and Belanger, S.E. (1999), Predicted no-effect concentrations and risk characterization of four surfactants: Linear alkyl benzene sulfonate, alcohol ethoxylates, alcohol ethoxylated sulfates, and soap. Environmental Toxicology and Chemistry, 18: 2653-2663. https://doi.org/10.1002/etc.5620181135
EC50 48h – Crustacea	7.1 mg/l Test organisms (species): Oncorhynchus mykiss, Guideline: OECD Guideline 202
NOEC 21 d – Crustacea (Read Across from Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts (CAS No.: 68411-30-3))	1.18 mg/l Test organisms (species): Daphnia magna, Guideline: OECD Guideline 211 (Daphnia magna Reproduction Test), Reference: van de Plassche, E.J., de Bruijn, J.H.M., Stephenson, R.R., Marshall, S.J., Feijtel, T.C.J. and Belanger, S.E. (1999), Predicted no-effect concentrations and risk characterization of four surfactants: Linear alkyl benzene sulfonate, alcohol ethoxylates, alcohol ethoxylated sulfates, and soap. Environmental Toxicology and Chemistry, 18: 2653-2663. https://doi.org/10.1002/etc.5620181135
EyC50 72 h	32 mg/l Test organisms (species): Raphidocelis subcapitata, Guideline: OECD Guideline 201
NOEC 72h – Algae	7.5 mg/l Test organisms (species): Raphidocelis subcapitata, Guideline: OECD Guideline 201

(2-methoxymethylethoxy)propanol (34590-94-8)	
LC50 96h - Fish	> 1000 mg/l Test organisms (species): Poecilia reticulata, Guideline: OECD Guideline 203
EC50 48h – Crustacea	1919 mg/l Test organisms (species): Daphnia magna, Guideline: OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
EC50 72h – Algae	> 969 mg/L Test organisms (species): Raphidocelis subcapitata, Guideline: OECD Guideline 201 (Alga, Growth Inhibition Test)
NOEC 72 h – Algae	969 mg/L Test organisms (species): Raphidocelis subcapitata, Guideline: OECD Guideline 201 (Alga, Growth Inhibition Test)

12.2. Persistence and degradability

Product is readily biodegradable

No Nonsense Brush Cleaner	
Persistence and degradability	The surfactant(s) contained in this product complies(comply) with the biodegradability criteria as laid down in Detergent Regulation ((EC) No 648/2004 as amended by UK Regulations S.I 2019/672, S.I 2019/671 and S.I 2020/1617. More specifically Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., compds. with 2-propanamine (84961-74-0) : 81.21% degradation (CO2 evolution) at 10 d, 87.35% degradation (CO2 evolution) at 28 d, OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test), hence surfactant is readily biodegradable (& rapidly degradable)

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics (919-857-5)
80% biodegraded (O_2 Consumption) at 28 d, Guideline: OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

Hydrocarbons, C9, aromatics (128601-23-0)	
OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)	62.1% degradation (O_2 consumption) at 10d 78.1% degradation (O_2 consumption) at 28d Supports that substance is readily biodegradable and rapidly degradable
OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)	54 – 56% degradation (CO_2 Evolution) at 28 d Supports that substance is not readily biodegradable and not rapidly degradable
OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)	21% degradation (O_2 consumption) at 28 d Supports that substance is not readily biodegradable and not rapidly degradable

(2-methoxymethylethoxy)propanol (34590-94-8)	
OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)	75% degradation (O_2 consumption) at 10d Supports that substance is readily biodegradable and rapidly degradable

12.3. Bioaccumulative potential

No additional information available on mixture

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics (919-857-5)
Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance

Hydrocarbons, C9, aromatics (128601-23-0)
Partition Coefficient ≤ 4.5

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., compds. with 2-propanamine (84961-74-0)	
Read Across from Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts (CAS: 68411-30-3)	BCF = 2 – 1000 L/kg Guideline: OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test). Results show that the bioconcentration potential of LAS is low

(2-methoxymethylethoxy)propanol (34590-94-8)
Has a low Partition Coefficient (Partition Coefficient <1) and is readily biodegradable, which suggests that this substance is not expected to accumulate in biological tissues or bioaccumulate in foodwebs

12.4. Mobility in soil

Given its physical and chemical characteristics, the product generally shows low soil mobility The product evaporates readily. The product is insoluble and floats on water

12.5. Results of PBT and vPvB assessment

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

12.6. Endocrine disrupting properties

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

12.7. Other adverse effects

No other adverse effects are known as of yet for this mixture or any substances contained in this mixture.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

This product ***is*** classified as Hazardous Waste as it is supplied.

Waste generation should be avoided or minimised where possible. When handling waste, the safety precautions applying to handling of the product should be considered. Label the containers containing waste and remove from the area as soon as possible. Label the containers containing waste contaminated material and remove from the area as soon as possible.
Product disposal to sewer should be avoided, if possible, and only be carried out after treatment, and under relevant rules, e.g. Consent to Discharge. Where wastes undergo disposal, external recovery or treatment, it must comply with the requirements of environmental protection, waste disposal legislation and any local authority requirements. If wastes undergo incineration, they must be suitable for it at an approved facility.
Used packaging waste should be reused or recycled, if uncontaminated. Contaminated packaging should be cleaned on site, if appropriate facilities exist, including any relevant rules or permits, or offsite by a specialist provider. Contaminated packaging which cannot be safely cleaned must be treated in the same way as the product, and should only be disposed of as a last resort.

List of waste code is 20 01 29* - detergents containing hazardous substances . These codes have been assigned based on the actual composition of the product as supplied. Seek advice from a hazardous waste specialist for waste classification.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1263	UN 1263	UN 1263	UN 1263	UN 1263
14.2. UN proper shipping name				
PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	Paint related material	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL
Transport document description				
UN 1263 PAINT RELATED MATERIAL, 3, III, (E),	UN 1263 PAINT RELATED MATERIAL, 3, III,	UN 1263 Paint related material, 3, III,	UN 1263 PAINT RELATED MATERIAL, 3, III,	UN 1263 PAINT RELATED MATERIAL, 3, III,
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	:	F1
Special provisions (ADR)	:	163, 367, 650
Limited quantities (ADR)	:	5l
Excepted quantities (ADR)	:	E1
Packing instructions (ADR)	:	P001, R001

Special packing provisions (ADR)	:	PP1
Mixed packing provisions (ADR)	:	MP19
Transport category (ADR)	:	3
Special provisions for carriage - Operation (ADR)	:	S2
Tunnel restriction code (ADR)	:	E

Transport by sea

Special provisions (IMDG)	:	163, 223, 367, 955
Limited quantities (IMDG)	:	5 L
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	P001, LP01
Special packing provisions (IMDG)	:	PP1
IBC packing instructions (IMDG)	:	IBC03
Tank instructions (IMDG)	:	T2
Tank special provisions (IMDG)	:	TP1, TP29
EmS-No. (Fire)	:	F-E
EmS-No. (Spillage)	:	S-E
Stowage category (IMDG)	:	A
Properties and observations (IMDG)	:	Miscibility with water depends upon the composition.

Air transport

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y344
PCA limited quantity max net quantity (IATA)	:	10L
PCA packing instructions (IATA)	:	355
PCA max net quantity (IATA)	:	60L
CAO packing instructions (IATA)	:	366
CAO max net quantity (IATA)	:	220L
Special provisions (IATA)	:	A3, A72, A192
ERG code (IATA)	:	3L

Inland waterway transport

Classification code (ADN)	:	F1
Special provisions (ADN)	:	163, 367, 650
Limited quantities (ADN)	:	5 L
Excepted quantities (ADN)	:	E1
Equipment required (ADN)	:	PP, EX, A
Ventilation (ADN)	:	VE01
Number of blue cones/lights (ADN)	:	0

Rail transport

Classification code (RID)	:	F1
Special provisions (RID)	:	163, 367, 650
Limited quantities (RID)	:	5L
Excepted quantities (RID)	:	E1
Packing instructions (RID)	:	P001, IBC03, LP01, R001
Special packing provisions (RID)	:	PP1
Mixed packing provisions (RID)	:	MP19
Portable tank and bulk container instructions (RID)	:	T2
Portable tank and bulk container special provisions (RID)	:	TP1, TP29
Tank codes for RID tanks (RID)	:	LGBF
Transport category (RID)	:	3
Special provisions for carriage – Packages (RID)	:	W12
Colis express (express parcels) (RID)	:	CE4
Hazard identification number (RID)	:	30

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. UK-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the GB PIC list ((EU) No 649/2012 as amended by the Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc) (EU Exit) Regulations 2019 and 2020 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (The Persistent Organic Pollutants Regulations 2007 As Amended by UK Regulations S.I 2018/1405, S.I 2019/1099, S.I 2019/1340, S.I 2020/1358 and S.I 2022/1293)

Ozone Depleting Substances Regulation

Contains no substance(s) listed on the Ozone Depletion list (The Ozone-Depleting Substances Regulations 2015 As Amended by UK Regulations S.I 2019/281, S.I 2019/583, S.I 2020/304, S.I. 2020/1616, S.I 2021/1397 and S.I 2023/336 on substances that deplete the ozone layer)

The Volatile Organic Compounds in Paints, Varnishes and Vehicle Refinishing Products Regulations 2012 (S.I 2012/1715)

VOC content : ≤ 900 g/l

Poisons and Explosive Precursors Regulations

Contains no substance(s) listed on the Poisons and Explosive Precursors Precursors list (The Poisons Act 1972 as amended by S.I 2015/968. The Control of Poisons and Explosives Precursors Regulations 2015 (S.I 2015/966) and The Control of Explosives Precursors and Poisons Regulations 2023 (S.I 2023/63) on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004 & 111/2005)

Contains no substance(s) listed on the Drug Precursors list ((EC) No 273/2004 and (EC) No 111/2005 as amended by the UK Regulations S.I 2019/742 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances).

Detergent Regulation ((EC) No 648/2004 as amended by UK Regulations S.I 2019/672, S.I 2019/671 and S.I 2020/1617.

Product is under the scope of this regulation

15.2. Chemical safety assessment

A chemical safety assessment was performed for the substances (Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics & Hydrocarbons, C9, aromatics) in the product within the framework of the REACH registration. It was verified that control of the main constituents (Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics & Hydrocarbons, C9, aromatics) ensures appropriate control of all other constituents of the mixture. Therefore, relevant information on the operational conditions and risk management measures from the received exposure scenarios for these substances (Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics & Hydrocarbons, C9, aromatics) have been integrated into various sections of the SDS appropriately.
No Chemical safety assessment was performed for the other substances of this mixture nor the mixture as a whole.

SECTION 16: Other information

Indication of changes:
Due to change of classification database the revision numbering has been reset. You should therefore look at the revision date rather than the revision number to ensure you have the most up to date version.

Full text of H- and EUH-statements:	
Asp. Tox. 1	Aspiration hazard, Category 1
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of H- and EUH-statements:	
Flam. Liq. 3	Flammable liquids, Category 3
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, respiratory tract irritation
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development

Abbreviations and acronyms:	
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.:	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Key literature references and sources for data

- ECHA (European Chemicals Agency). http://echa.europa.eu/, - REACH disseminated dossiers of substance included in Section 3
- van de Plassche, E.J., de Bruijn, J.H.M., Stephenson, R.R., Marshall, S.J., Feijtel, T.C.J. and Belanger, S.E. (1999), Predicted no-effect concentrations and risk characterization of four surfactants: Linear alkyl benzene sulfonate, alcohol ethoxylates, alcohol ethoxylated sulfates, and soap. Environmental Toxicology and Chemistry, 18: 2653-2663. https://doi.org/10.1002/etc.5620181135
- Supplier's Safety documents

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Flam. Liq. 3, H226	On Basis Of Test Data
STOT SE 3, H336	Calculation method
Asp. Tox. 1, H304	Calculation method & on basis of test data
Aquatic Chronic 3, H412	Calculation method

Safety Data Sheet (SDS), GB

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

MATERIAL SAFETY DATA SHEET

TENSOSPRAY MSDS No. 188

SECTION 1 – IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product

Product Name	TENSOSPRAY
Other Names	-
Manufacturer's Product Code	Various
Use	Adhesive spray.

Supplier

Company	Smith & Nephew Pty. Limited
Address	315 Ferntree Gully Road, Mount Waverley, Victoria 3149
Telephone No.	Customer Service: (03) 8540 6777 (Toll Free 13 13 60)
Emergency Tel. Nos.	(03) 8540 6777 (business hours)

SECTION 2 – HAZARDS IDENTIFICATION

Hazard Classification NON-HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

Hazards Overview The product is classified as EXTREMELY FLAMMABLE.
Vapours may cause drowsiness and dizziness.

Consumer Safety Warning:
PRESSURISED DISPENSER; PROTECT FROM SUNLIGHT AND DO NOT EXPOSE TO TEMPERATURES EXCEEDING 50°C.
DO NOT PIERCE OR BURN, EVEN AFTER USE.

Flammable Warning:
EXTREMELY FLAMMABLE.
DO NOT SPRAY ON A NAKED FLAME OR ANY INCANDESCENT MATERIAL.
KEEP AWAY FROM SOURCES OF IGNITION – NO SMOKING.
KEEP OUT OF THE REACH OF CHILDREN.

Risk Phrases

R12	Extremely flammable
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

Safety Phrases

S16	Keep away from sources of ignition – no smoking.
S2	Keep out of the reach of children
S23	Do not breathe vapour.
S46	If swallowed, seek medical advice immediately and show this container or label.

MATERIAL SAFETY DATA SHEET

TENSOSPRAY MSDS No. 188

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Percentage
Butane	106-97-8	25-50%
Isobutane	72-28-5	10-25%
Methylal	109-87-5	10-25%
Ethanol	64-17-5	10-25%
Propane	74-98-6	2.5-10%
Glyceryl rosinate		2.5-10%
Paraffin – light liquid		< 1%

SECTION 4 – FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor. NEVER induce swallowing in an unconscious person.

Swallowed In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor. If swallowed accidentally, call a doctor to assess the need for monitoring and subsequent treatment in hospital. Show the label to the doctor.

Eye Wash thoroughly with soft, clean water for 15 minutes holding the eyelids open. Refer the patient to an ophthalmologist, in particular if there is any redness, pain or visual impairment.

Skin Remove contaminated clothing and wash the skin thoroughly with soap and water. DO NOT use solvents or thinners.

Inhaled If a large quantity is inhaled, move the patient into the fresh air and keep him/her warm and still.

First-Aid Facilities Normal washroom facilities nearby.

Advice to Doctor Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

Hazards From Combustion Products When exposed to high temperatures the preparation may release dangerous decomposition products such as carbon monoxide, carbon dioxide, smoke and oxides of nitrogen.

Suitable Extinguishing Media Carbon dioxide, chemical powders, foams and other extinguishing gases. In the event of a fire, use specifically suitable extinguishing agents. Never use water.

Fire-fighting Procedures Keep packages near the fire cool, to prevent pressurised containers from bursting. Prevent the effluent from fire-fighting measures from entering drains or waterways. Do not use compressed air during filling, emptying or handling.

	Fire-fighting personnel are to be equipped with self-contained breathing apparatus.
Hazchem Code	2YE

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill / Leak Procedures

Eliminate any possible source of ignition and ventilate the premises. Avoid inhaling the vapours. Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatom earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

Use drums to dispose of water recovered, in accordance with local waste regulations.

Clean with a detergent, do not use solvents.

SECTION 7 – HANDLING AND STORAGE

Handling Advice

Handle in well-ventilated areas.
The vapours are heavier than air and can spread along the ground and form explosive mixtures with air.
Prevent the formation of flammable or explosive concentrations in air and avoid vapour concentrations higher than the occupational exposure limits.
Do not spray on a naked flame or any incandescent material.

Storage Advice

Keep the container closed in a dry, well-ventilated place.

Keep away from all sources of ignition. Do not smoke.

Pressurised container: protect from sunlight and do not expose to temperatures greater than 50°C.

Keep out of reach of children.

The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards

ACGIH TLV limits:
Butane (CAS 106-97-8) TWA 800ppm
Isobutane (CAS 72-28-5): TWA 900ppm
Methylal (CAS 109-87-5): TWA 1000ppm
Ethanol (CAS 64-17-5): TWA 1000ppm
Propane (CAS 74-98-6): TWA 2500ppm

Engineering Controls

Where workers encounter concentrations higher than the exposure limits, they must wear suitable, approved masks.

Personal Protection

Protective creams may be used for exposed skin, but they should not be applied after contact with the product.
Due to the solvents present, it is recommended that neoprene rubber or nitrile gloves be worn.
Use eye protectors designed to protect against liquid splashes.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odour	Pressurised aerosol canister containing a colourless adhesive spray.
Melting Point / Boiling Point	Not determined.
Vapour Pressure	Not available.
Vapour Density (Air=1)	Not available.
Specific Gravity	<1
Flashpoint	< 0°C
Flammability Limits (FL) (%)	Not available.
Autoignition Temperature	Not available.
Solubility in Water (g/L)	Insoluble.
Percent volatile by volume	Not available.

SECTION 10 – STABILITY AND REACTIVITY

Stability	When exposed to high temperatures, the preparation may release dangerous decomposition products such as carbon monoxide and dioxide, smoke and oxides of nitrogen.
Conditions to Avoid	Any apparatus likely to produce a flame or to have a metallic surface at high temperatures (burners, electric arcs, furnaces etc.) must not be allowed on the premises.
Incompatible Materials	Refer *Conditions to Avoid*.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.
Hazardous Polymerisation	No data available.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Effects

Swallowed	Harmful. May cause lung damage if swallowed.
Eye	Splashes in the eye may cause irritation and reversible damage.
Skin	Prolonged or repeated contact with the preparation may strip the skin of it natural oil and thus cause non-allergic dermatitis on contact and absorption through the epidermis.
Inhaled	Exposure to vapours from solvents contained in the preparation beyond the exposure limits stated may produce effects harmful to health, such as irritation of mucous membranes and respiratory system, kidneys, liver and central nervous system.

Chronic Effects No data available.

SECTION 12 – ECOLOGICAL INFORMATION

Environmental Issues	Harmful to aquatic organisms. Outer cardboard packaging material may be separated for recycling.
Persistence & Degradability	May cause long-term adverse effects in the aquatic environment.
Mobility	Not available.

SECTION 13 – DISPOSAL CONSIDERATIONS

Method of Disposal	In accordance with local waste regulations. Do not release into drains or waterways.

SECTION 14 – TRANSPORT INFORMATION

Classification	Classified as a Dangerous Good according to the Australian Code for Transport of Dangerous Goods by Road and Rail.
UN No.	1950.
Class	2.1
Subsidiary Risk(s)	Not applicable.
Packing Group	-
Hazchem Code	2YE
Shipping Name	AEROSOLS
Other	Not applicable.

MATERIAL SAFETY DATA SHEET

TENSOSPRAY MSDS No. 188

SECTION 15 – REGULATORY INFORMATION

Poison Schedule Not a Scheduled Poison.

SECTION 16 – OTHER INFORMATION

CONTACT POINT :	CUSTOMER SERVICE	Telephone: (03) 8540 6777
Date of Issue:	07/03/2011	
This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.		

END OF DOCUMENT

SAFETY DATA SHEET

COSMETIC PRODUCTS CONTAINING ETHANOL

Date of Issue: 1st January 2023 (version 3)
Supersedes: Version 2

1. Identification of Material and Supplier

Product Identifier:

Wella Professional Hair Products (Shampoos, Conditioners and Styling products)
System Professional Hair Products (Shampoos, Conditioners and Styling products)
Sebastian Hair Products (Shampoos, Conditioners and Styling products)
Nioxin Hair Products (Shampoos, Conditioners and Styling products)
Clairol Professional Hair Products (Shampoos, Conditioners and Styling products)

Other Means of Identification:

UN1170 Ethanol Class III Packaging Group II (Ethyl Alcohol ≥55%) and Packaging Group III (Ethyl Alcohol 24 to ≤55%).

Recommended Use/Product Type:
Cosmetic Products Containing Ethanol

AUSTRALIA

Suppliers Details: Wella Australia Pty Ltd.
Address: Level 9, 1 Market Street
Sydney NSW 2000 Australia.
Telephone Number: (02) 9267 5500 (9am–5pm Mon to Fri)
Fax Number: (02) 9267 5452
Emergency Telephone Number (Must be a 24-Hour Number):
((02) 9267 5500 (9am–5pm Mon to Fri) OR
Australian Poisons Information Centre: 131 126.
Email Address of the Person Responsible for this MSDS:
Janine_gribble@wella.com

NEW ZEALAND

Suppliers Details: HFC Prestige International New Zealand Ltd
Address: 19 De Val Drive, Titrangi,
Auckland 0604 New Zealand.
Telephone Number: +64 2194 8467 (9am–5pm Mon to Fri)
Emergency Telephone Number (Must be a 24Hour Number):
+64 2194 8467 (9am–5pm Mon to Fri) OR
New Zealand Poisons Information Centre: 0800 764766.
Email Address of the Person Responsible for this MSDS:
Seumus_cooney@wella.com

SAFETY DATA SHEET

COSMETIC PRODUCTS CONTAINING ETHANOL

2. Hazard Identification

Classification of the substance or mixture:

Flammable Liquids - Category 3.
Serious Eye Damage/Eye Irritation- Category 2A



GHS Signal word: **DANGER** (Ethyl Alcohol >55%) or
WARNING (Ethyl Alcohol 24 to ≤55%).

GHS Hazard statements:

H225: Highly Flammable Liquid (Ethyl Alcohol >55%) or
H226: Flammable liquid and vapour (Ethyl Alcohol 24% to ≤55%).
H319: Causes serious eye irritation.

Precautionary statement(s):

General

P101: If medical advice is needed, have product container or label on hand.
P102: Keep out of reach of children.
P103: Read label before use.
P104: Read Safety Data Sheet before use.

Prevention

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ ventilating/ lighting/equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P264: Wash hands and face thoroughly after use.
P280: Wear protective gloves/ protective clothing/eye protection/ face protection.

Response

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313: If eye irritation persists: Get medical advice.
P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage

P403 + P235: Store in a well-ventilated place. Keep cool.

Disposal

P501: Dispose of contents/ container to an approved waste disposal plant in accordance with Local/ regional/ national/ international regulations

Other Hazards Not Specified.

3. Composition/Information on Ingredients

Component/Substance	CAS Number	% by Weight	Hazardous Substance Classification
Ethyl alcohol	64-17-5	>55 24 to ≤55	H225, H319 Type I due to Exposure Standard H226, H319 Type I due to Exposure Standard
Other ingredients determined not to be hazardous		To 100	Not classified

Note: These products contain significant amounts of fragrance and the components of these fragrance may to be flammable

4. First Aid Measures

General Advice: If poisoning occurs contact a doctor or Poisons Information Centre. Phone 131126 from anywhere in Australia.

Eye: Rinse abundantly under flowing water for at least 15 minutes. If irritation develops seek medical attention. Splashes in the eye may cause immediate stinging and tears. Transient redness of the eye may also occur.

Skin: In case of skin contact, if irritation develops immediately wash off with plenty of water for at least 15 minutes. If irritation persists seek medical attention immediately.

Inhalation: If symptoms are experienced, remove source of contamination and move victim to fresh air immediately. If symptoms persist, seek medical attention. At relatively high vapour concentrations ethyl alcohol is an irritant to the nose and throat and may cause central nervous system depression.

Ingestion: Rinse mouth with water. If swallowed do not induce vomiting. Give one or two glasses of water or milk to drink. Seek medical attention immediately. May cause irritation of the gastrointestinal tract. Depression of the central nervous system may result in headache or dizziness.

Advice to Doctor: Treat symptomatically. If in eyes recheck after one week.

5. Fire Fighting Measures

Suitable Extinguishing Media:

Highly Flammable. In case of fire, all extinguishing media are suitable. For safety reasons do not use strong water jets.

Hazards from Combustion Products:

May produce toxic fumes of carbon oxides.

Precautions for Fire Fighters and Special Protective Equipment:

If in the event of fire wear self-contained breathing apparatus. Use personal protective equipment. Keep containers cool with water spray. Closed containers may rupture when exposed to temperatures greater than 50°C. Vapour is heavier than air, distant ignition sources possible.

Hazchem Code: •2[Y]E (Packaging Group II or Ethyl Alcohol >55%) or
•2[Y] (Packaging Group III or Ethyl Alcohol 24% to ≤55%)

6. Accidental Release Measures

Emergency Procedures: UN 1170. Wear appropriate protective equipment. Spills will be slippery and highly flammable.

Methods and Materials for Containment and Clean Up Procedures:

Remove possible leaking containers. Remove all sources and ventilate area. Dilute small spills with water. For larger spills, wear protective equipment, dilute with water and absorb in inert material (sand or vermiculate). Shovel material into a suitable container and seal it. Wash the spill area with mild detergent to remove residue. Dispose of material in compliance with federal state and local regulations. Do not allow the material to enter drains or waterways.

7. Handling and Storage

Precautions for Safe Handling:

This product is a Class 3 Flammable Liquid and should be transported and stored according to Dangerous Goods Regulations, Codes and Standards. Gloves (vinyl, rubber, plastic) may be worn when handling this material. Keep

away from heat, flames or ignition source. Do not eat, drink or smoke in handling areas. Remove contaminated clothing and wash hands before eating.

Conditions for Safe Storage:

Store product upright in a cool place and out of direct sunlight. Store away from alkalis, corrosive and oxidising products. Use good personal hygiene practices. Store in accordance with Dangerous Goods Regulations and transport in accordance with ADG Code for Dangerous Goods Class 3.

8. Exposure Controls/Personal Protection

National Exposure Standards[1]:

ES-TWA (NOHSC Australian Exposure Standards) [1]
Workplace Exposure Standards (NZ OS&HS Dept of Labour) [2]

Chemical Name	*CAS No.*	*TWA (ppm)*	*TWA (mg/m^3)*	*STEL (ppm)*	*STEL (mg/m^3)*
Ethyl Alcohol[1,2]	64-17-5	1000	1800	-	-

TWA = Time-weighted average exposure standard.
STEL = Short term exposure limit standard.

1 National Occupational Health and Safety Commission. Exposure Standards for Atmospheric Contaminants in the Occupational Environment. National Exposure Standards [NOHSC: 1003 (1995)]. May 1995.

2 Workplace Exposure Standards (NZ OS&HS Dept of Labour).

Biological Limit Values: No Biological limit allocated.

Engineering Controls: Use in a well-ventilated area. Maintain air concentrations below exposure standards.
Flammable symbol or warning.



Personal Protective Equipment:

If ventilation is insufficient, a suitable respirator should be worn. When handling bulk quantities gloves (vinyl, plastic or rubber) shoud be worn when handling this product. It is recommended that protective clothing is worn e.g. aprons (vinyl, plastic or rubber) and safety shoes. Eye protection in the form of tightly fitting safety goggles and/or face shield should be worn.



SAFETY DATA SHEET

COSMETIC PRODUCTS CONTAINING ETHANOL

9. Physical and Chemical Properties

Appearance:	Coloured liquid.
Odour:	Characteristic fragrant alcohol odour.
pH:	Not determined.
Boiling Point (ºC):	78 °C (Ethyl alcohol).
Vapour Pressure:	Not determined.
Specific Gravity:	Not determined.
Flashpoint (ºC):	12°C (ethyl alcohol).
Flammability Limits:	Highly flammable.
Solubility in Water:	Miscible.

10. Stability and Reactivity

Chemical Stability:	Stable under normal conditions of handling, use and transportation.
Conditions to Avoid:	Avoid heat and sources of ignition.
Incompatible Materials:	Keep away from alkalis and corrosive substances.
Hazardous Decomposition Products:	Decomposition not known to occur.
Hazardous Reactions:	None known.

11. Toxicological Information

Acute Oral Toxicity:	Not Available. May cause dizziness, nausea, vomiting and/or CNS depression and loss of consciousness.
Acute Dermal Toxicity:	Not Available.
Skin Irritation:	Not Available. May cause skin irritation with prolonged exposure
Skin Sensitisation:	Not Available.
Eye Irritation:	Not Available. However splashes in the eye may cause stinging sensation and irritation and should be washed out with abundantly flowing water.
Inhalation:	Not Available. Breathing of vapours at high concentration may cause dizziness, nausea, vomiting and/or CNS depression and loss of consciousness.
Other Information:	Chronic Health Effects have not been determined. There is no specific toxicological data on this product.

SAFETY DATA SHEET

COSMETIC PRODUCTS CONTAINING ETHANOL

12. Ecological Information

Eco Toxicity: Not Available. It would be prudent to avoid any direct release to sewer or receiving waters.
Persistence and Degradability: Not Available.
Mobility: Not Available.

13. Disposal Considerations

Disposal Methods: Recover if possible and dispose of in accordance with local, State and Federal government regulations.
Special Requirements for Landfill or Incineration:
Empty containers should be disposed of to landfill in domestic garbage collection. The local waste authority should be consulted prior to disposal of bulk quantities.

14. Transport Information

In Australia, this material is a Class 3 - Flammable Liquid according to The Australian Code for the Transport of Dangerous Goods by Road and Rail, Edition 7.8 edition. In New Zealand, this material is classified as a Class 3.1B and 3.1C - Flammable Liquid according to NZS5433:2012 Transport of Dangerous Goods on Land.

UN Number: UN1170.
UN Proper Shipping Name: ETHANOL.
Class & Subsidiary Risk: Class 3 (Australia), 3.1B or 3.1C (New Zealand).
Packaging Group: II or III
Hazard Label:



Special Precautions: 144, 223 (Australia)
Special Precautions: 144, 223, 904, 955 (New Zealand)
Hazchem Code: 2[Y]E or •2[Y]

Transport by Air (IATA/ICAO): UN1170
Proper shipping name: ETHANOL
Hazard class: 3
Packing group: II or III

Transport by Sea (IMDG): UN1170
Proper shipping name: ETHANOL
Hazard class: 3
Packing group: II or III

SAFETY DATA SHEET

COSMETIC PRODUCTS CONTAINING ETHANOL

15. Regulatory Information

AUSTRALIA

SUSMP: Not Scheduled.

Competition and Consumer Act:
Cosmetic ingredients must be labelled.

Australian Industrial Chemicals Introduction Scheme (AICIS):
Ingredients are in the Australian Inventory of Chemical Substances or are covered by certificates, permits or exemptions in compliance with the *Industrial Chemicals Act 2019* and the *Industrial Chemicals (General) Rules 2019*

NEW ZEALAND

HSNO Regulations: The HSNO Approval Number for this Group Standard is HSR002552 (Cosmetic Products Group Standard).

16. Other Information

Date of Issue: 1st January 20236
Supersedes: 2
Version Number: 3
Disclaimer: The information contained in this SDS was compiled using the latest and most reliable information available. The information is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Similarly, no warranty, expressed or implied, shall be created by or inferred from any statement or omission from this SDS nor will Wella Australia Pty Ltd assume any liability for any loss or damage arising out of the use of this information. It is solely the responsibility of the user to determine safe conditions for use of this product.

END OF SDS

HEALTH & SAFETY PRODUCT DATA SHEET

1 – IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY

Identification of the preparations : BEAM Z - SMOKE FLUID

Relevant identified uses of the substance Liquid formulation used to produce an artificial smoke or fog or haze used in the entertainment events, shows, clubs, theaters, training occupational safety drills.

Product Code : SMOKE FLUID STANDARD (160 643 - 160 582)
SMOKE FLUID HIGH DENSITY (160 644 - 160 583)
SMOKE FLUID SUPER DENSITY (160 586)

Packaging : Can of 1L , 5L

Identification of the Company

TRONIOS BV
Bedrijvenpark Twente 415
7602KM - ALMELO - THE NETHERLANDS
Tel : + 31 6 227 98095
Web site : www.tronios.com

Telephone Emergency : **INRS / ORFILA : +33 (0)1.45.42.59.59 - Europeans emergency (112)**

2 – HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture accordance directives 67/548/CEE, 1999/45/CE and adaptations.
This mixture doesn't present a physical danger. Refer to the recommendations regarding the other products present on the site.
This mixture does not present a health hazard.
This mixture does not present a danger to the environment. No damage to the environment are not known or expected under normal use.

2.2. Labels elements

The mixture is a product for professional use.
The mixture is used as "smoke."
Accordance with Directives 67/548/EEC, 1999/45/EC, adaptations.

Safety phrases :

S 2	Keep out of reach of children.
S13	Keep away from food, drink and animal feeding stuffs.
S20/21	Do not eat, do not drink and not smoke while using
S 46	If swallowed, seek medical advice immediately and show this container or label.
S49	Keep only in original container.
S 51	Use only in well ventilated areas.

Do not use for any purpose other than that for which it is intended.

2.3. Other Hazards

Nothing

3 – COMPOSITION/INFORMATIONS ON INGREDIENTS

Chemical nature of the product: This product is a mixture
Liquid formulations of osmozed water and glycol derivatives. food coloring
No. CEE / main component: 2039532 (EINECS)

Hazardous substances present:
This preparation contains no hazardous substance in this category.

Other substances representing a hazard:
No known substance in this category present.

Substances present at a concentration below the minimum danger threshold:
Wording of R-and H in the table below: see section 16
No known substance in this category present.

Other substances with occupational exposure limits:
No known substance in this category present.

4 – FIRST AIDS IN CASE OF

Inhalation

Not applicable in liquid form, can be irritating to the respiratory form of smoke in large quantities and confined. Under this presentation, remove the subject from the contaminated area to breathe fresh air. Keep warm and at rest. Consult doctor in case of respiratory symptoms.

Contact with skin :

Not applicable

Contact with Eye :

Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical advice if irritation persists.

Ingestion :

Do not induce vomiting. If the person is conscious, rinse mouth and drink water. Call emergency relief nursing, EMS (15) and FIRE (18) Europeans emergency (112). Show them the label and safety data sheet. Apply the rules of first aid.

Important symptoms and effects, both acute and delayed:

No data are available

Indication of immediate medical attention and special treatment needed:

Symptomatic treatment: /

5 - FIGHTING MEASURES FIRE

Extinguishing Media:

Carbon dioxide, foam, powder, water spray.

Extinguishing media not be used for safety reasons:

Direct water jet.

Special Hazards

Toxic gases by pyrolysis (CO, CO2). Prevent seepage into sewage system, storm water, natural environment. See section (6).

Special protective equipment for personnel responsible for the fight against fire

Breathing apparatus, protective equipment of the skin, eyes and mucous membranes.

6 – MEASURES IN CASE OF ACCIDENTAL RELEASE

Personal precautions:

Can make the ground slip (use : non-slip boots)

Precautions for environmental protection:

Prevent from spreading in sewers, storm drains or natural environment. Contain spill with earth or other noncombustible absorbent material as an absorbent mineral. Keep product away from drains, surface water, soils, ponds, storm water runoff.

Methods for Cleaning

Absorb and sweep up and store the waste in polyethylene drums with lids sealed identified before they are treated by an approved company. Finish by cleaning the floor with an aqueous detergent. Recover the wash water into a suitable container.

7 – HANDLING & STORAGE

Handling :

Safety precautions, see subsection (8). Do not mix with other products. Avoid contact with eyes, clothing. Do not breathe the fumes produced continuously by the product. Do not eat, drink and smoking during use. Carefully follow the instructions of the product for the formation of smoke.

Prevention: Use in well ventilated environment to avoid excessive concentration of fumes.

Storage :

Store in a ventilated area, away from light, in original packaging at temperatures above 0 °C and belo w 50 °C.

Specific uses: liquid used to produce an artificial smoke or fog used in the entertainment events, professional training, safety drills.

8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits: Not relevant

Collective protection: Engineering measures: Use only in well ventilated

Personal protective equipment (PPE):

- Respiratory protection Not required under normal conditions of use.
- Hand Protection : Gloves suitable for the product: nitrile in prolonged exposure to the product.
- Eye Protection : Not required under normal conditions of use.
- Skin Protection : Not required under normal conditions of use.

Hygiene Measures :

Do not eat, drink or smoke during use. Wash the body parts that may be in contact with the product, and hands.

Exposure control of the environment:

Prevent leakage of the product in drains or natural environment. Thoroughly clean all traces of product or waste to be treated as specified in paragraph (13).

9 – PHYSICAL AND CHEMICAL PROPERTIES

General informations :

Colorless, yellow, pink, blue without odor

Important informations regarding : health, safety and the environment:

pH :	7- 8
Point / boiling range:	from 100 to 290 °C
Fash point :	> to 175 °C
Auto - ignition temperature	370°
Decomposition temperature	No data
Oxidizing properties:	Not applicable.
Density at 20°C :	1018 kg / m3 at 20 °C
Solubility in organic solvents:	Partially soluble by the presence of glycolic derivative.
Water solubility :	soluble
N-octanol/water partition coefficient:	No data
Evaporation rate :	No data

10 – STABILITY AND RÉACTIVITY

Reactivity
No data are available.

Chemical stability
This mixture is stable according to the conditions of storage and handling recommendations in Section 7.

Possibility of hazardous reactions
Reacts violently with: oxidising agent. Reactions with strong acids.

Conditions to avoid
Avoid freezing , excessive heat

Incompatible materiels
Keep away from / to: - strong oxidizing agents, strong acids

Hazardous Decomposition Products
Thermal decomposition may release / form: carbon monoxide (CO), carbon dioxide (CO2)

11 – TOXICOLOGICAL INFORMATIONS

General Informations :

Acute toxicity

Inhalation : Not applicable for the liquid product, in terms of employment, the fumes in high concentration in containment and may be irritating to the respiratory tract.

Skin contact : Primary irritation: not irritating to the skin. Repeated or prolonged contact with skin may cause dermatitis and dryness.

Eye contact : eye irritation: not irritating to the product. In terms of employment, the fumes in high concentration in containment and may be irritating to eyes.

Ingestion :

DL50/rat oral (male)	> 2000 mg/kg

Ingestion may cause nausea, vomiting and diarrhea.

Sensitization: No sensitizing

Long Term Effects: No data

CMR effects (carcinogenic, mutagenic, toxic for reproduction): /

12 – ECOLOGICAL INFORMATIONS

No data on the complete preparation is available.

Ecotoxicity: For the pure glycol derivative			
Fish toxicity			
CL50	69800		mg/l
Species		Pimephales promelas	
Exposure time	96 h		
Source		CSR	
Daphnia toxicity			
CE50	>	10000	mg/l
Species		Daphnia magna	
Exposure time	48 h		
Source		CSR	
Toxicity to algae			
EC5	>	10000	mg/l
Species		Scenedesmus quadricauda	
Exposure time	8 days		
Source		CSR	
Bacteria toxicity			
EC10	>	1995	mg/l
Species		Activated sluge	
Exposure time	30 min		
Source		CS	

Mobility:

The product is water soluble and therefore highly mobile.

Persistence and degradability :

Biodegradable

Potential for bioaccumulation:

Low

Other adverse effects : /

13 – DISPOSAL CONSIDERATIONS

Waste, products unused :

Comply with national and local regulations. May be disposed of with household waste.
Store the waste identified, the unused products, and make them retrieve and process by an approved body

Contaminated packaging:

Completely empty the container. May be disposed of with household waste.

National and local provisions:

See the Environmental Code.

14 – TRANSPORT INFORMATIONS

Transport product in compliance with the provisions of the ADR for road, RID for rail, IMDG for sea and ICAO / IATA for air transport:

Product not classified as dangerous goods transport

15 – REGULATORY INFORMATIONS

Regulations / legislation specific to the substance or mixture of safety, health and environment
This safety data sheet conforms to the requirements of EC Regulation 1907/2006 as amended by Regulation 453/2010/CE.

Table of occupational illnesses, the Social Security Code: 84
Ranking section ICPE (France) = Not applicable

Evaluation of chemical safety: /

16 – OTHER INFORMATIONS

The working conditions of the user we are not known, the information contained in this safety data sheet are based on the state of our knowledge and on national and community regulations.
The mixture should not be used for other purposes than those specified under heading 1 without first obtaining written handling instructions.

It is always the responsibility of the user to take all necessary measures to meet the requirements of local laws and regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to this mixture and not as a guarantee of the properties of it.

Full text of risk phrases R, H, uh cited in section 3 for raw materials in its purest form: /

Date of issue : January 2012
Version : 01

STANLEY

MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS Standards and European Union Standards

PART I *What is the material and what do I need to know in an emergency?*

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): **STANLEY CHALKS**
SYNONYMS: Stanley Black Chalk; Stanley Blue Chalk
Stanley Red Chalk; Stanley White Chalk
CHEMICAL NAME/CLASS: Calcium Carbonate/Pigment/Silica Mixtures
PRODUCT USE: Chalks
MANUFACTURER'S NAME: **STANLEY WORKS**
ADDRESS: 480 Myrtle Street
New Britain, CT 06053
BUSINESS PHONE: 1-800-262-2161
SUPPLIER/IMPORTER'S NAME (Europe):
ADDRESS:

EMERGENCY PHONE:
BUSINESS PHONE:
EMERGENCY PHONE: 800-424-9300 (CHEMTREC) U.S., Canada, Puerto Rico. U.S. Virgin Islands
01-703-527-3887 (outside areas above, call collect)
DATE OF PREPARATION: December 11, 2007
DATE OF REVISION: July 29, 2010

NOTE: This product has been classified in accordance with the hazard criteria of the CPR. All WHMIS (Controlled Products Regulations), European Union [Regulation (EC) 1907/2006 Annex II] required information is included. It is located in appropriate sections based on the ANSI Z400.1-2004 format.

2. HAZARD IDENTIFICATION

EU LABELING/CLASSIFICATION: These products do not meet the definition of any hazard class, as defined by European Union Council Directives.
EU CLASSIFICATION: Not applicable.
EU RISK PHRASES: Not applicable.

See Section 16 for full text of Ingredient Risk and Safety Phrases

EMERGENCY OVERVIEW: Product Description: These products are colored, finely powdered, odorless chalks. **Health Hazards:** Inhalation of dusts from this product may irritate the respiratory system. Skin and eye contact may cause mechanical abrasion. These chalks contain Crystalline Silica, a known human carcinogen by inhalation. **Flammability Hazards:** These chalks are not flammable. Finely divided dusts from these products can form explosive mixtures in air. If involved in a fire, these products may decompose to form iron oxides, aluminum oxides, silicon dioxide, sulfur dioxide, magnesium oxides, carbon oxides and calcium oxides. **Reactivity Hazards:** These chalks are not reactive. **Environmental Hazards:** These products are not expected to pose significant harm to the environment, however all release to the environment should be avoided. **Emergency Recommendations:** Emergency responders must wear the personal protective equipment suitable for the situation to which they are responding.

3. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	EINECS #	% w/w	EU CLASSIFICATION FOR COMPONENTS
Limestone/Calcium Carbonate ($CaCO_3$)	1317-65-3	215-279-6	70-100%	Hazard Classification: Not Applicable Risk Phrases: Not Applicable / Safety Phrases: Not Applicable
Crystalline Silica	14808-60-7	238-878-4	0.1-1.5%	SELF CLASSIFICATION: Hazard Classification: Harmful Risk Phrases: R: 68/20 / Safety Phrases: S: 22, S: 38
The following are pigments in each of the chalks:				
Blue Chalk: Sodium Alumino Sulphosilicate/C.I. Pigment Blue 29	57455-37-5	Unlisted	20-30%	Hazard Classification: Not Applicable Risk Phrases: Not Applicable / Safety Phrases: Not Applicable
Black Chalk: Carbon Black	1333-86-4	215-609-9	17-23%	Hazard Classification: Not Applicable Risk Phrases: Not Applicable / Safety Phrases: Not Applicable
Red Chalk: Hematite/Iron Oxide (Fe_2O_3)	1317-60-8	215-275-4	20-30%^	Hazard Classification: Not Applicable Risk Phrases: Not Applicable / Safety Phrases: Not Applicable
White Chalk: Magnesium Carbonate ($MgCo_3$)	546-93-0	208-915-6	0-2%	Hazard Classification: Not Applicable Risk Phrases: Not Applicable / Safety Phrases: Not Applicable

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

Contaminated individuals must be taken for medical attention if any adverse effects occur. Rescuers should be taken for medical attention if necessary. Take a copy of label and MSDS to health professional with the contaminated individual.

4. FIRST-AID MEASURES (Continued)

SKIN EXPOSURE: If the product contaminates the skin, immediately begin decontamination with copious amounts of running water. Minimum flushing is for 20 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual must seek immediate medical attention if any adverse health effect continues after flushing.

EYE EXPOSURE: If the product enters the eyes, open the contaminated individual's eyes while under gently running water. Use sufficient force to open eyelids. Have the contaminated individual "roll" eyes. Minimum flushing is for 20 minutes. Contact medial personnel if adverse effect persists after flushing.

INHALATION: If dusts or particulates are inhaled, remove the contaminated individual to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers. The contaminated individual should seek immediate medical attention if any adverse effects occur.

INGESTION: If product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Have victim rinse mouth with water or drink several cupfuls of water, if conscious. Never induce vomiting or give a diluent (e.g., water) to someone who is unconscious, having convulsions, or unable to swallow. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Preexisting respiratory problems, dermatitis, and other skin disorders may be aggravated by exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure.

5. FIRE-FIGHTING MEASURES

FLASH POINT: Not applicable.

AUTOIGNITION TEMPERATURE: Not applicable.

FLAMMABLE LIMITS (in air by volume, %): Not applicable.

FIRE EXTINGUISHING MATERIALS:

Water Spray: YES Carbon Dioxide: YES Foam: YES
Dry Chemical: YES Halon: YES Other: Any "ABC" Class.

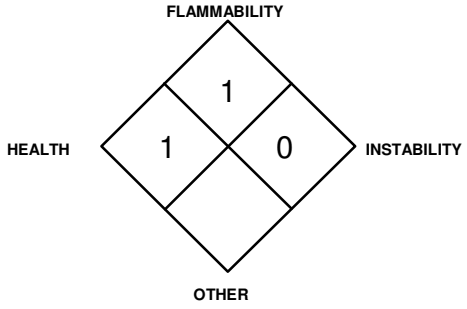
FIRE EXTINGUISHING MATERIALS NOT TO BE USED: None known.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Finely divided dusts from these products can form explosive mixtures in air. If involved in a fire, these products may decompose to form iron oxides, aluminum oxides, silicon dioxide, sulfur dioxide, magnesium oxides, carbon oxides and calcium oxides.

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Finely divided dusts from this material pose a hazard of an air/dust explosion in presence of an ignition source.

NFPA RATING



Hazard Scale: **0** = Minimal **1** = Slight **2** = Moderate **3** = Serious **4** = Severe

SPECIAL FIRE-FIGHTING PROCEDURES: Structural fire-fighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. Water fog or spray can also be used to cool fire-exposed containers. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. Rinse contaminated equipment thoroughly before returning such equipment to service.

6. ACCIDENTAL RELEASE MEASURES

RELEASE RESPONSE: Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area and protect people. Eliminate all sources of ignition before clean-up begins. Use non-sparking tools. The atmosphere must have levels of the components of this product lower than those listed in Section 8, (Exposure Limits and Personal Protection) and at least 19.5 percent oxygen before personnel can be allowed into the area without Self-Contained Breathing Apparatus (SCBA).

Small Spills: Wipe up spilled solid with damp sponge or sweep up spilled material or vacuum with explosion-proof vacuum, avoiding generation of dusts, wearing gloves, goggles and apron. Place spilled material in appropriate container for disposal, sealing tightly. Clean spill area with soap and water.

Large Spills: Trained personnel using pre-planned procedures should respond to uncontrolled releases. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel. Minimum Personal Protective Equipment should be the following**: triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard hat, and Self-Contained Breathing Apparatus.** Monitor the surrounding area for oxygen levels. The atmosphere must have at least 19.5 % oxygen before personnel can be allowed in the area without Self-Contained Breathing Apparatus. Access to the spill area should be restricted. Spread should be limited by gently covering the spill with damp cloths or towels. Sweep up or vacuum spilled solid (an explosion-proof vacuum should be used), avoiding the generation of airborne dusts. The dispersal of particles into surrounding air must be avoided. Decontaminate the area thoroughly. All contaminated absorbents and other materials should be placed in an appropriate container and sealed.

Place all spill residue in a double plastic bag or other containment and seal. Decontaminate the area thoroughly. Do not mix with wastes from other materials. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations). For spills on water, contain, minimize dispersion and collect. Dispose of recovered material and report spill per regulatory requirements.

PART III *How can I prevent hazardous situations from occurring?*

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing airborne dusts generated by this product. Use in a well-ventilated location. Ensure this substance is used with adequate ventilation and personal protective equipment (see Section 8, Exposure Controls and Personal Protection). Avoid airborne dusts generated by this product. Clean work areas routinely to prevent accumulation of dust. Clean up spills promptly.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Open containers slowly on a stable surface. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Store away from incompatible materials (see Section 10, Stability and Reactivity). Have appropriate extinguishing equipment in the storage area (e.g., sprinkler system, portable fire extinguishers). Keep container tightly closed when not in use. Refer to NFPA 654, *Prevention of Fire and Dust Explosions from the Manufacturing, Processing and Handling of Combustible Particulate Solids* for additional information on storage.

SPECIFIC USE(S): These products are used in chalk line devices in construction. Follow all industry standards for use of this product.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Decontaminate equipment thoroughly, before maintenance begins. Collect all rinsates and dispose of according to applicable U.S. Federal, State, or local procedures, or applicable federal, state, provincial and local standards.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided in this Section if applicable. Ensure eyewash/safety shower stations are available near areas where this product is used.

EXPOSURE LIMITS/GUIDELINES:

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR							
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELs		NIOSH	OTHER
		TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	IDLH mg/m^3	mg/m^3
Calcium Carbonate	1317-65-3	NE	NE	15 (total dust); 5 (resp. fract.)	NE	10 (total dust); 5 (resp. fract.)	NE	NE	NE
Carbon Black	1333-86-4	3.5 NIC = 3 (inhal. fraction)	NE	3.5	NE	3.5 (0.1 in presence of PAHs, as PAHs; 10-hr TWA)	NE	1750	DFG MAK: as Inhalable Dust Carcinogen: IARC-2B, MAK-3B, NIOSH-Ca, TLV-A4; NIC = TLV-A3
C.I. Pigment Blue 29	57455-37-5	NE	NE	NE	NE	NE	NE	NE	NE
Crystalline Silica	14808-60-7	0.025 (resp. fraction)	NE	30 mg/m^3 (total dust) % SO_2 + 2 250 mppcf (resp. dust) % SiO2 + 5 or 10 mg/m^3 (resp. dust) % SO_2 + 2		0.05 (resp. dust)	NE	0.05	Carcinogen: IARC-1, MAK-1 (respirable), NIOSH-Ca, NTP-K (respirable), TLV-A2
Iron Oxide/Hematite	1317-60-8	NE	NE	NE	NE	NE	NE	NE	Carcinogen: IARC-3
Magnesium Carbonate (talc, containing no asbestos fibers)	14807-96-6	2 (resp. fraction)	NE	20 mppcf (containing < 1% quartz)	NE	2 (respirable dust)	NE	NE	Carcinogen: IARC-3, MAK-3B, TLV-A4 (respirable)

NE = Not Established. NIC = Notice of Intended Change See Section 16 for Definitions of Terms Used.

INTERNATIONAL OCCUPATIONAL EXPOSURE LIMITS: Currently, the following international exposure limits are established for some components of this product.

CALCIUM CARBONATE:
Belgium: TWA = 10 mg/m^3, MAR 2002
Hungary: TWA = 10 mg/m^3, SEP 2000
Japan: OEL = 1 mg/m^3 (respirable), 4 mg/m^3 (total), APR 2007
Korea: TWA = 10 mg/m^3, 2006
Mexico: TWA = 10 mg/m^3; STEL 20 mg/m^3 (inhalable), 2004
The Netherlands: MAC-TGG = 10 mg/m^3, 2003
New Zealand: TWA = 10 mg/m^3 (inspirable dust), JAN 2002
Poland: MAC(TWA) dust = 10 mg/m^3, JAN 1999
Russia: STEL = 6 mg/m^3, JUN 2003
Switzerland: MAK-W = 3 mg/m^3, DEC 2006
United Kingdom: TWA = 10 mg/m^3 (inhalable), 2005
United Kingdom: TWA = 4 mg/m^3 (respirable), 2005
In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV

CARBON BLACK:
Australia: TWA = 3 mg/m^3, JUL 2008
Belgium: TWA = 3.6 mg/m^3, MAR 2002
Denmark: TWA = 3.5 mg/m^3, OCT 2002
Finland: TWA = 3.5 mg/m^3, STEL = 7 mg/m^3, SEP 2009
France: VME = 3.5 mg/m^3, FEB 2006
Japan: OEL = 1 mg/m^3 (respirable), 4 mg/m^3 (total), APR 2007
Korea: TWA = 3.5 mg/m^3, 2006
Mexico: TWA = 3.5 mg/m^3; STEL = 7 mg/m^3, 2004
The Netherlands: MAC-TGG = 3.5 mg/m^3, 2003
New Zealand: TWA = 3 mg/m^3, JAN 2002
Norway: TWA = 3.5 mg/m3, JAN 1999
The Philippines: TWA = 3.5 mg/m^3, JAN 1993
Russia: STEL = 4 mg/m^3, JUN 2003
Sweden: TWA = 3 mg/m^3, JUN 2005
United Kingdom: TWA = 3.5 mg/m^3; STEL = 7 mg/m^3, 2005

CARBON BLACK (continued):
In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV

CRYSTALLINE SILICA:
Australia: TWA = 0.1 mg/m^3, JUL 2008
Belgium: TWA = 0.1 mg/m^3 (resp. dust), MAR 2002
Denmark: TWA = 0.1 mg/m^3 (respirable), OCT 2002
Denmark: TWA = 0.3 mg/m^3 (total), OCT 2002
Finland: TWA = 0.05 mg/m^3, resp. dust, SEP 2009
France: VME = 0.1 mg/m^3, (resp), FEB 2006
Japan: OEL-C = 0.03 mg/m^3 (respirable), APR 2007
Korea: TWA = 0.1 mg/m^3, 2006
Mexico: TWA = 0.1 mg/m^3 (respirable), 2004
The Netherlands: MAC-TGG = 0.075 mg/m^3, 2003
New Zealand: TWA = 0.2 mg/m^3 (respirable dust), JAN 2002
Norway: TWA = 0.1 mg/m^3 (resp. dust), JAN 1999

8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

INTERNATIONAL OCCUPATIONAL EXPOSURE LIMITS (continued):

CRYSTALLINE SILICA (continued):
Norway: TWA = 0.3 mg/m^3 (total dust), JAN 1999
Russia: TWA = 1 mg/m^3, STEL = 3 mg/m^3, JUN 2003
Sweden: TWA = 0.1 mg/m^3 (resp. dust), JUN 2005
Switzerland: MAK-W = 0.15 mg/m^3, DEC 2006
Thailand: TWA = 10 mg/m^3 (resp. dust), JAN 1993
Thailand: TWA = 30 mg/m^3 (total dust), JAN 1993
United Kingdom: TWA = 0.3 mg/m^3 (respirable), 2005
In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV

IRON OXIDE:
Russia: STEL = 4 mg/m^3, JUN 2003

MAGNESIUM CARBONATE (TALC):
Australia: TWA = 2.5 mg/m^3, JUL 2008
Belgium: TWA = 2 mg/m^3, MAR 2002
Finland: TWA = 0.5 f/cc, fibrous, SEP 2009
Finland: TWA = 5 mg/m^3, granulated, SEP 2009
Japan: OEL = 0.5 mg/m^3 (respirable), 2 mg/m^3 (total), APR 2007
Korea: TWA = 2 mg/m^3, 2006

MAGNESIUM CARBONATE (TALC):
Mexico: TWA = 2 mg/m^3 (respirable), 2004
The Netherlands: MAC-TGG = 1 mg/m^3, 2003
New Zealand: TWA = 2 mg/m^3 (respirable dust), JAN 2002
Sweden: TWA = 2 mg/cm^3 (total dust); TWA = 1 mg/cm^3 (resp. dust), JUN 2005
Switzerland: MAK-W = 2 mg/m^3, DEC 2006
United Kingdom: TWA = 1 mg/m^3 (respirable), 2005
In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132), equivalent standards of Canada (including CSA Standard Z94.4-02 and CSA Standard Z94.3-02), standards of EU member states (including EN 529:2005 for respiratory PPE, CEN/TR 15419:2006 for hand protection, and CR 13464:1999 for face/eye protection). Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: None needed under normal conditions of use and handling. Maintain airborne contaminant concentrations below exposure limits listed above if applicable. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian CSA Standard Z94.3-02, or the European Standard CR 13464:1999. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998). The following are NIOSH Respiratory Protection Equipment Guidelines for some components of these products:

CARBON BLACK

CONCENTRATION	RESPIRATORY PROTECTION
Up to 17.5 mg/m3:	Any Dust and Mist Respirator.
Up to 35 mg/m3:	Any Dust and Mist Respirator except single-use and quarter-mask respirators, or any Supplied-Air Respirator (SAR).
Up to 87.5 mg/m3:	Any SAR operated in a continuous-flow mode, or any Powered, Air-Purifying Respirator (PAPR) with a dust and mist filter.
Up to 175 mg/m3:	Any Air-Purifying, Full-Facepiece Respirator with a high-efficiency particulate filter, or any PAPR with a tight-fitting facepiece and a high-efficiency particulate filter, or any Self-Contained Breathing Apparatus (SCBA) with a full facepiece, or any SAR with a full facepiece.
Up to 1750 mg/m3:	Any SAR operated in a pressure-demand or other positive-pressure mode.
Emergency or Planned Entry into Unknown Concentrations or IDLH Conditions:	Any SCBA that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode, or any SAR that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.
Escape:	Any Air-Purifying, Full-Facepiece Respirator with a high-efficiency particulate filter, or any appropriate escape-type, SCBA.
In Presence of Polycyclicaromatic Hydrocarbons:	
Based on NIOSH REL at Concentrations Above the NIOSH REL, or Where There is No REL, at Any Detectable Concentration:	Any SCBA that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode, or any SAR that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary SCBA operated in pressure-demand or other positive-pressure mode.
Escape:	Any Air-Purifying, Full-Facepiece Respirator with a high-efficiency particulate filter, or any appropriate escape-type, SCBA.

CRYSTALLINE SILICA

CONCENTRATION	RESPIRATORY PROTECTION
Up to 0.5 mg/m^3:	Any Air-Purifying Respirator with a high-efficiency particulate filter.
Up to 1.25 mg/m^3:	Any Powered, Air-Purifying Respirator (PAPR) with a high-efficiency particulate filter, or any Supplied-Air Respirator (SAR) operated in a continuous-flow mode.
Up to 2.5 mg/m^3:	Any Air-Purifying, Full-Facepiece Respirator with a high-efficiency particulate filter, or any PAPR with a tight-fitting facepiece and a high-efficiency particulate filter.
Up to 25 mg/m^3:	Any SAR operated in a pressure-demand or other positive-pressure mode.
Emergency or Planned Entry into Unknown Concentrations or IDLH Conditions:	Any SCBA that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode, or any SAR that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary SCBA operated in pressure-demand or other positive-pressure mode.
Escape:	Any Air-Purifying, Full-Facepiece Respirator with a high-efficiency particulate filter, or any appropriate escape-type, SCBA.

EYE PROTECTION: None needed under normal use and handling. Wear safety goggles if dusts or other particulates are present. If necessary refer to U.S. OSHA 29 CFR 1910.133, Canadian CSA Standard Z94.3-02, or the European Standard CR 13464:1999.

HAND PROTECTION: None needed under normal conditions of use and handling. Wear appropriate glove for work being done. Resistance of specific materials can vary from product to product. Evaluate resistance under conditions of use and maintain gloves carefully. Use triple gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this MSDS. If necessary, refer to U.S. OSHA 29 CFR 1910.138, appropriate Standards of Canada and the European Standard CEN/TR 15419:2006.

BODY PROTECTION: Use body protection appropriate for task. Full-body chemical protective clothing is recommended for emergency response procedures. If necessary, refer to the OSHA Technical Manual (Section VII: Personal Protective Equipment) appropriate Standards of Canada, or the European Standard CEN/TR 15419:2006. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136 and the Canadian CSA Standard Z195-02, *Protective Footwear*.

9. PHYSICAL and CHEMICAL PROPERTIES

SOLUBILITY IN ORGANIC SOLVENTS: Not known.
SOLUBILITY IN WATER: Black and Blue Chalks: Insoluble. Red Chalk: 0.1%; White Chalk: Insoluble.
RELATIVE VAPOR DENSITY (air = 1): Not established. EVAPORATION RATE (n-BuAc = 1): Not established.
MELTING/FREEZING POINT: Not established. BOILING POINT: Not established.
VAPOR PRESSURE: Not established. pH: Not available.
ODOR THRESHOLD: Not applicable. DECOMPOSITION TEMPERATURE: 120°C (248°F)
SPECIFIC GRAVITY (water = 1): Black Chalk: 2.49-2.52; Blue Chalk: 2.60-2.62; Red Chalk: 3.1-3.3; White Chalk: 2.71
APPEARANCE, ODOR AND COLOR: These products are colored (black, red, white or blue), finely divided, odorless powdered solids.
HOW TO DETECT THIS SUBSTANCE IN EVENT OF ACCIDENTAL SPILL (warning properties): The color of these products may be a method to identify them in event of an accidental spill.

10. STABILITY and REACTIVITY

STABILITY: Normally stable.
DECOMPOSITION PRODUCTS: Thermal: Thermal decomposition of this product can produce iron oxides, aluminum oxides, silicon dioxide, sulfur dioxide, magnesium oxides, carbon oxides and calcium oxides. The Blue Chalk may release hydrogen sulfide in contact with acids. Hydrolysis: None known.
MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Calcium carbonate ignites on contact with fluorine. It is incompatible with acids, aluminum, and ammonium salts and mercury/hydrogen mixtures. Due to other components, these products may also be incompatible with formaldehyde, strong oxidizing agents, hydrofluoric acid, manganese trifluoride, sodium, and xenon hexafluoride.
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Avoid exposure to or contact with light, extreme temperatures, and incompatible chemicals.

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of industrial exposure to this product are by skin or eye contact and inhalation.
INHALATION: If dusts or particulates from these products are inhaled, irritation of the nose, throat, and lungs can occur. Symptoms may include sneezing, coughing, nasal congestion, and difficulty breathing. Symptoms are generally alleviated upon exposure to fresh air. If heated, chronic exposure to concentrations of silicon dioxide fume may cause chronic obstructive lung disease. Inhalation of iron oxide fume or dust is cause of pulmonary roentgenographic appearance called siderosis, or an accumulation of iron that leads to reduced lung capacity. These products contain Crystalline Silica, which is a known human carcinogen. Chronic inhalation exposure to this material may cause silicosis, pulmonary fibrosis, bronchitis or present a hazard of cancer, due to the presence of Crystalline Silica.
CONTACT WITH SKIN or EYES: Skin contact may cause abrasion, redness, and discomfort. Prolonged or repeated skin overexposure may cause dermatitis (dry, red skin). Direct eye contact with these products may cause stinging, tearing, and redness. Dust can cause mechanical irritation to the eye. Repeated contact of iron dusts with the eyes can cause conjunctivitis, or can cause discoloration of the eyes.
SKIN ABSORPTION: This product does not pose a hazard of skin absorption.
INGESTION: Ingestion is an unlikely route of occupational exposure to this product. In the unlikely event that dusts from the product are ingested nausea, vomiting, and diarrhea may result.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH HAZARD	(BLUE)	1
FLAMMABILITY HAZARD	(RED)	1
PHYSICAL HAZARD	(ORANGE)	0

PROTECTIVE EQUIPMENT

EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8

For Routine Industrial Use and Handling Applications

Hazard Scale: **0** = Minimal **1** = Slight **2** = Moderate
3 = Serious **4** = Severe * = Chronic hazard

Repeated ingestion of iron compounds can cause vomiting, diarrhea, pink urine, black stool, and liver or kidney damage. Repeated ingestion of iron compounds can also cause siderosis, which is an accumulation of iron in tissues.
INJECTION: These products do not pose a hazard of injection.
HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in **Lay Terms**. In the event of overexposure, the following symptoms may be observed:
ACUTE: Acute exposure to the skin and eyes can cause mechanical irritation. Inhalation of dusts can cause pulmonary irritation.
CHRONIC: Repeated inhalation exposure may cause adverse effects to the respiratory system. Chronic inhalation may result in pulmonary fibrosis. This product contains crystalline silica, which is a known human carcinogen.

11. TOXICOLOGICAL INFORMATION (Continued)

HEALTH EFFECTS OR RISKS FROM EXPOSURE (continued):

TARGET ORGANS: ACUTE: Skin, eyes, respiratory system. CHRONIC: Skin, respiratory system.

TOXICITY DATA: Currently, toxicity data are available for the following components of these products:

LIMESTONE/CALCIUM CARBONATE:

TCLo (Inhalation-Rat) 84 mg/m^3/4 hohrs/40 weeks-intermittent: Lungs, Thorax, or Respiration: fibrosis (interstitial); Liver: other changes Kidney/Ureter/Bladder: other changes

TCLo (Inhalation-Rat) 250 mg/m^3/2 hours/24 weeks-intermittent: Lungs, Thorax, or Respiration: fibrosis, focal (pneumoconiosis)

CARBON BLACK:

LD_{50} (Oral-Rat) > 15,400 mg/kg: Behavioral: somnolence (general depressed activity)

LD_{50} (Skin-Rabbit) > 3 gm/kg

TDLo (Intravenous-Rat) 10 mg/kg/2 minutes: Liver: changes in liver weight; Blood: changes in spleen

TDLo (Intravenous-Rat) 10 mg/kg/2 minutes: Biochemical; Enzyme inhibition, induction, or change in blood or tissue levels: hepatic microsomal mixed oxidase (dealkylation, hydroxylation, etc.)

TDLo (Skin-Rat) 11 gm/kg/4 weeks-intermittent: Blood: pigmented or nucleated red blood cells; Liver: changes in liver weight; Nutritional and Gross Metabolic: weight loss or decreased weight gain

TDLo (Intratracheal-Rat) 16 mg/kg: Lungs, Thorax, or Respiration: other changes; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TDLo (Intratracheal-Rat) 15 mg/kg: Lungs, Thorax, or Respiration: other changes; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: cytochrome oxidases (including oxidative phosphorylation)

TDLo (Intratracheal-Rat) 10 mg/kg: Lungs, Thorax, or Respiration: sputum; Biochemical: Metabolism (Intermediary): other proteins, effect on inflammation or mediation of inflammation

TDLo (Intratracheal-Mouse) 20 mg/kg: Lungs, Thorax, or Respiration: other changes; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TDLo (Intratracheal-Mouse) 20 mg/kg/4 days-intermittent: Lungs, Thorax, or Respiration: sputum; Immunological Including Allergic: increase in cellular immune response; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TDLo (Parenteral-Mouse) 36 µg/kg/3 days-intermittent: Immunological Including Allergic: increase in humoral immune response

TCLo (Inhalation-Rat) 7 mg/m^3: Lungs, Thorax, or Respiration: other changes; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TCLo (Inhalation-Rat) 1.66 mg/m^3/7 hours: Lungs, Thorax, or Respiration: sputum; Blood: changes in leukocyte (WBC) count; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TCLo (Inhalation-Rat) 50 mg/m^3: Sense Organs and Special Senses (Olfaction): effect, not otherwise specified; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TCLo (Inhalation-Rat) 50 mg/m^3/6 hours/90 days-intermittent: Lungs, Thorax, or Respiration: other changes

TCLo (Inhalation-Rat) 1 mg/m^3/13 weeks-intermittent: Lungs, Thorax, or Respiration: other changes; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TCLo (Inhalation-Rat) 1 mg/m^3/13 weeks-intermittent: Lungs, Thorax, or Respiration: other changes, changes in lung weight; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

CARBON BLACK (continued):

TCLo (Inhalation-Rat) 50 mg/m^3/13 weeks-intermittent: Lungs, Thorax, or Respiration: other changes; Biochemical: Metabolism (Intermediary): other

TCLo (Inhalation-Rat) 50 mg/m^3/13 weeks-intermittent: Lungs, Thorax, or Respiration: other changes; Biochemical: Metabolism (Intermediary): other, effect on inflammation or mediation of inflammation

TCLo (Inhalation-Rat) 7 mg/m3/6 hours/13 weeks-intermittent: Sense Organs and Special Senses (Olfaction): effect, not otherwise specified; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TCLo (Inhalation-Mouse) 50 mg/m^3/6 hours: Sense Organs and Special Senses (Olfaction): effect, not otherwise specified

TCLo (Inhalation-Mouse) 1 mg/m^3/13 weeks-intermittent: Lungs, Thorax, or Respiration: other changes; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TCLo (Inhalation-Mouse) 1 mg/m^3/13 weeks-intermittent: Lungs, Thorax, or Respiration: other changes; Lungs, Thorax, or Respiration: changes in lung weight; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TCLo (Inhalation-Mouse) 7 mg/m^3/6 hours/13 weeks-intermittent: Sense Organs and Special Senses (Olfaction): effect, not otherwise specified; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TCLo (Inhalation-Hamster) 7 mg/m^3/13 weeks-intermittent: Lungs, Thorax, or Respiration: other changes; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TCLo (Inhalation-Hamster) 50 mg/m^3/6 hours/13 weeks-intermittent: Sense Organs and Special Senses (Olfaction): effect, not otherwise specified

CRYSTALLINE SILICA, CRYSTALLINE-QUARTZ:

LCLo (Inhalation-Human) 300 mg/m^3/10 years-intermittent: Systemic effects

TCLo (Inhalation-Human) 16 mppcf/8 hours/17.9 years-intermittent: Pulmonary system effects

TCLo (Inhalation-Rat) 50 mg/m^3/6 hours/71 weeks-intermittent: Carcinogenic effects

TCLo (Inhalation-Rat) 80 mg/m^3/26 weeks-intermittent: Lungs, Thorax, or Respiration: fibrosis, focal (pneumoconiosis); Blood: changes in spleen; Immunological Including Allergic: decrease in cellular immune

TCLo (Inhalation-Rat) 108 mg/m^3/6 hours/3 days-intermittent: Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: phosphatases, Enzyme inhibition, induction, or change in blood or tissue levels: other oxidoreductases, Metabolism (Intermediary): other proteins

TCLo (Inhalation-Rat) 58 mg/m^3/13 weeks-intermittent: Lungs, Thorax, or Respiration: other changes; Endocrine: changes in thymus weight; Blood: changes in leukocyte (WBC) count

TCLo (Inhalation-Mouse) 1475 µg/m^3/8 hours/21 weeks-intermittent: Lungs, Thorax, or Respiration: other changes

TCLo (Inhalation-Mouse) 4932 µg/m^3/24 hours/39 weeks-continuous: Endocrine: changes in spleen weight; Immunological Including Allergic: decrease in humoral immune response

TCLo (Inhalation-Guinea Pig) 28 mg/m^3/3 weeks-continuous: Lungs, Thorax, or Respiration: other changes, changes in lung weight; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: other

CRYSTALLINE SILICA, CRYSTALLINE-QUARTZ (continued):

TDLo (Intraperitoneal-Rat) 45 mg/kg: Carcinogenic effects

TDLo (Intratracheal-Rat) 90 mg/kg: Equivocal tumorigenic agent

TDLo (Intratracheal-Rat) 90 mg/kg: AR

TDLo (Intratracheal-Rat) 111 mg/kg: Carcinogenic effects

TDLo (Intratracheal-Rat) 111 mg/kg: AR

TDLo (Intratracheal-Rat) 100 mg/kg/19 weeks-intermittent: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Lungs, Thorax, or Respiration: tumors

TDLo (Intrapleural-Rat) 90 mg/kg: Carcinogenic effects

TDLo (Intrapleural-Hamster) 83 mg/kg: Tumorigenic: neoplastic by RTECS criteria, tumors at site of application

TDLo (Implant-Rat) 900 mg/kg: Neoplastic effects

TDLo (Implant-Mouse) 4000 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Kidney, Ureter, Bladder: tumors

TDLo (Implant-Mouse) 4000 mg/kg: Equivocal tumorigenic agent

TDLo (Intravenous-Rat) 90 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Blood: lymphoma, including Hodgkin's disease

TD (Intraperitoneal-Rat) 90 mg/kg/4 weeks-intermittent: Equivocal tumorigenic agent

TD (Intraperitoneal-Rat) 450 mg/kg/4 weeks-intermittent: Neoplastic effects

TD (Implant-Rat) 4554 mg/kg: Equivocal tumorigenic agent

TD (Intrapleural-Rat) 200 mg/kg: Equivocal tumorigenic agent

TD (Intrapleural-Rat) 100 mg/kg: Carcinogenic effects

TD (Intrapleural-Rat) 100 mg/kg: Neoplastic effects

TD (Intrapleural-Rat) 100 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Lungs, Thorax, or Respiration: fibrosis, focal (pneumoconiosis), tumors

LDLo (Intravenous-Rat) 90 mg/kg

LDLo (Intratracheal-Rat) 200 mg/kg

LDLo (Intravenous-Mouse) 40 mg/kg

LDLo (Intravenous-Dog, adult) 20 mg/kg

Micronucleus test (Human-Lung) 40 µg/cm^2

Micronucleus test (Hamster-Lung) 160 µg/cm^2

HEMATITE/IRON OXIDE:

TDLo (Intratracheal-Rat) 12 mg/kg: Lungs, Thorax, or Respiration: other changes; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: multiple enzyme effects

TCLo (Inhalation-Rat) 3900 mg/m^3/6 hours/68 weeks-intermittent: Lungs, Thorax, or Respiration: fibrosis (interstitial)

TCLo (Inhalation-Dog) 3900 mg/m^3/6 hours/68 weeks-intermittent: Lungs, Thorax, or Respiration: fibrosis (interstitial)

MAGNESIUM CARBONATE/TALC:

LD_{50} (Oral-Rat) 7000 mg/kg

LD_{50} (Oral-Mouse) 8000 mg/kg

LD_{50} (Intraperitoneal-Mouse) 1033 mg/kg

TCLo (Inhalation-Rat) 76 mg/m^3/4 hours: Cardiac: pulse rate increase, without fall in BP; Liver: liver function tests impaired; Kidney/Ureter/Bladder: other changes in urine composition

TCLo (Inhalation-Rat) 76 mg/m^3/4 hours: Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol); Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: phosphatases

TDLo (Unreported-Mammal-Species Unspecified) 18,000 mg/kg/7 days-intermittent: Gastrointestinal: other changes; Related to Chronic Data: death

CARCINOGENIC POTENTIAL OF COMPONENTS: The components of these products are listed by agencies tracking the carcinogenic potential of chemical compounds, as follows:

CARBON BLACK: ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen); Notice of Intended Change: ACGIH TLV-A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); IARC-2B (Possibly Carcinogenic to Humans), MAK-3B (Substances for Which *in vitro* Tests or Animal Studies Have Yielded Evidence of Carcinogenic Effects that is Not Sufficient for Classification of the Substance in One of the Other Categories), NIOSH-Ca (Potential Occupational Carcinogen, with No Further Categorization)

CRYSTALLINE SILICA: ACGIH TLV-A2 (Suspected Human Carcinogen); IARC-1 (Carcinogenic to Humans); MAK-1 (Substances that Cause Cancer in Man and Can Be Assumed to Make a Significant Contribution to Cancer Risk); NIOSH-Ca (Potential Occupational Carcinogen, with No Further Categorization); NTP-K (Known to Be a Human Carcinogen)

IRON OXIDE/HEMATITE: IARC-3 (Unclassifiable as to Carcinogenicity in Humans)

MAGNESIUM CARBONATE (TALC containing no asbestos fibers): ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen); IARC-3 (Unclassifiable as to Carcinogenicity in Humans); MAK-3B (Substances for Which *in vitro* Tests or Animal Studies Have Yielded Evidence of Carcinogenic Effects that is Not Sufficient for Classification of the Substance in One of the Other Categories)

The remaining components of this product are not found on the following lists: U.S. EPA, U.S. NTP, U.S. OSHA, U.S. NIOSH, GERMAN MAK, IARC, or ACGIH and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.

11. TOXICOLOGICAL INFORMATION (Continued)

IRRITANCY OF PRODUCT: These products may cause skin, eye and respiratory irritation.

SENSITIZATION TO THE PRODUCT: Components of these products are not known to cause human skin or respiratory sensitization.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this these products and their components on the human reproductive system.

Mutagenicity: The components of these products are not reported to cause mutagenic effects in humans.

Embryotoxicity: The components of these products are not reported to cause embryotoxic effects in humans.

Teratogenicity: The components of these products are not reported to cause teratogenic effects in humans.

Reproductive Toxicity: The components of these products are not reported to cause reproductive effects in humans.

A mutagen is a chemical that causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical that causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical that causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance that interferes in any way with the reproductive process.

ACGIH BIOLOGICAL EXPOSURE INDICES: Currently, there are no ACGIH Biological Exposure Indices (BEIs) determined for the components of these products.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: These products have not been tested for mobility in soil; due to form they are not expected to be mobile.

PERSISTENCE AND BIODEGRADABILITY: These products have not been tested for persistence or biodegradability.

BIO-ACCUMULATION POTENTIAL: These products have not been tested for bio-accumulation potential.

ECOTOXICITY: These products have not been tested for aquatic or animal toxicity. All release to terrestrial, atmospheric and aquatic environments should be avoided.

OTHER ADVERSE EFFECTS: The components of these products are not listed as having ozone depletion potential.

EFFECT OF CHEMICAL ON AQUATIC LIFE: These products have not been tested for aquatic toxicity. Releases of large quantities of this material may be detrimental to an aquatic environment.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations or with regulations of Canada. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

U.S. EPA WASTE NUMBER: Not applicable.

EUROPEAN EWC CODE: Wastes Not Otherwise Specified: 16 10 99

14. TRANSPORTATION INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS: These products are NOT classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: These products are NOT classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA): These products are NOT classified as Dangerous Goods, per rules of IATA.

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION: These products are NOT classified as Dangerous Goods, per rules of IMO.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): These products are NOT classified by the United Nations Economic Commission for Europe to be dangerous goods.

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of these products are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the components of these products. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.

U.S. TSCA INVENTORY STATUS: Components of these products are on the TSCA Inventory.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): Crystalline Silica is on the California Proposition 65 lists. Carbon Black, with particles of respirable size, is on the Proposition 65 Lists as well. WARNING! These products contain compounds known to the State of California to cause cancer.

15. REGULATORY INFORMATION (Continued)

ADDITIONAL U.S. REGULATIONS (continued):

LABELING (Precautionary Statements) ANSI LABELING (Z129.1): **CAUTION!** MAY CAUSE EYE AND RESPIRATORY TRACT IRRITATION. CONTAINS CRYSTALLINE SILICA, WHICH IS A KNOWN HUMAN CARCINOGEN; CONTAINS CARBON BLACK, WHICH IS A KNOWN ANIMAL CARCINOGEN. INGESTION MAY BE HARMFUL. Avoid breathing dusts. Avoid contact with skin, eyes, and clothing. Keep container closed. Use with adequate ventilation. Prevent dust accumulation. Wash thoroughly after handling. Wear gloves, goggles, dust mask, and appropriate body protection during operations that can generate dust. FIRST-AID: In case of contact, flush skin or eyes with plenty of water. If inhaled, remove to fresh air. If ingested do not induce vomiting. Get medical attention if adverse effects continue after overexposure ends. IN CASE OF FIRE: Use water fog, dry chemical, CO_2, or "alcohol" foam. IN CASE OF SPILL: Sweep up spill, avoiding the generation of airborne dusts. Place residual in appropriate container and seal. Consult Material Safety Data Sheet for additional information.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: The components of these products are on the DSL Inventory.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: The components of these products are not on the CEPA Priority Substances Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: Class D2A-Chronic Toxic Effects



EUROPEAN UNION INFORMATION:

EU LABELING/CLASSIFICATION: These products do meet the definition of any hazard class, as defined by the European Union Council Directive 67/548/EEC or subsequent Directives.

EU Classification: Not applicable. EU Risk Phrases: Not applicable. EU Safety Phrases: Not applicable.

CLASSIFICATION INFORMATION FOR COMPONENTS:

Crystalline Silica:

The following is a self-classification per requirements in Commission Directives.

Classification: These components are not classified in the European Union Annex I of Directive 67/548/EEC or subsequent Directives.

EU Classification: [Xn] Harmful

EU Risk Phrases: [R: 68/20]: Harmful: possible risk of irreversible effects through inhalation.

EU Safety Phrases: [S: 22]: Do not breathe dust. [S: 38]: In case of insufficient ventilation wear suitable respiratory equipment.

All Other Components:

Classification: Official classifications have not been published under EU Directives for these compounds.

16. OTHER INFORMATION

PREPARED BY:	CHEMICAL SAFETY ASSOCIATES, Inc. PO Box 1961, Hilo, HI 96721 •(800) 441-3365
DATE OF PRINTING:	October 13, 2010
REVISION INFORMATION:	July 2010: Review of MSDS and up-date. Format up-dated. Section 3 EU Crystalline Silica self-classification added. Section 8 Exposure limits up-dated. Section 11 Cancer ratings up-dated. Section 15 EU component classification added.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Stanley Works assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Stanley Works assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on an MSDS. Some of these, which are commonly used, include the following:

CAS #: This is the Chemical Abstract Service Number that uniquely identifies each constituent.

EXPOSURE LIMITS IN AIR:

CEILING LEVEL: The concentration that shall not be exceeded during any part of the working exposure.

DFG MAK Germ Cell Mutagen Categories: 1: Germ cell mutagens which have been shown to increase the mutant frequency in the progeny of exposed humans. **2:** Germ cell mutagens which have been shown to increase the mutant frequency in the progeny of exposed mammals. **3A:** Substances which have been shown to induce genetic damage in germ cells of human of animals, or which produce mutagenic effects in somatic cells of mammals *in vivo* and have been shown to reach the germ cells in an active form. **3B:** Substances which are suspected of being germ cell mutagens because of their genotoxic effects in mammalian somatic cell *in vivo*; in exceptional cases, substances for which there are no *in vivo* data, but which are clearly mutagenic *in vitro* and structurally related to known in vivo mutagens. **4:** Not applicable (Category 4 carcinogenic substances are those with non-genotoxic mechanisms of action. By definition, germ cell mutagens are genotoxic. Therefore, a Category 4 for germ cell mutagens cannot apply. At some time in the future, it is conceivable that a Category 4 could be established for genotoxic substances with primary targets other than DNA [e.g. purely aneugenic substances] if research results make this seem sensible.) **5:** Germ cell mutagens, the potency of which is considered to be so low that, provided the MAK value is observed, their contribution to genetic risk for humans is expected not to be significant.

DFG MAK Pregnancy Risk Group Classification: Group A: A risk of damage to the developing embryo or fetus has been unequivocally demonstrated. Exposure of pregnant women can lead to damage of the developing organism, even when MAK and BAT (Biological Tolerance Value for Working Materials) values are observed.

EXPOSURE LIMITS IN AIR (continued):

DFG MAK Pregnancy Risk Group Classification (continued): Group B: Currently available information indicates a risk of damage to the developing embryo or fetus must be considered to be probable. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are observed. **Group C:** There is no reason to fear a risk of damage to the developing embryo or fetus when MAK and BAT values are observed. **Group D:** Classification in one of the groups A-C is not yet possible because, although the data available may indicate a trend, they are not sufficient for final evaluation.

IDLH-Immediately Dangerous to Life and Health: This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury.

LOQ: Limit of Quantitation.

MAK: Federal Republic of Germany Maximum Concentration Values in the workplace.

NE: Not Established. When no exposure guidelines are established, an entry of NE is made for reference.

NIC: Notice of Intended Change.

NIOSH CEILING: The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday.

NIOSH RELs: NIOSH's Recommended Exposure Limits.

DEFINITIONS OF TERMS (Continued)

EXPOSURE LIMITS IN AIR (continued):

PEL-Permissible Exposure Limit: OSHA's Permissible Exposure Limits. This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL that was vacated by Court Order.

SKIN: Used when a there is a danger of cutaneous absorption.

STEL-Short Term Exposure Limit: Short Term Exposure Limit, usually a 15-minute time-weighted average (TWA) exposure that should not be exceeded at any time during a workday, even if the 8-hr TWA is within the TLV-TWA, PEL-TWA or REL-TWA.

TLV-Threshold Limit Value: An airborne concentration of a substance that represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour.

TWA-Time Weighted Average: Time Weighted Average exposure concentration for a conventional 8-hr (TLV, PEL) or up to a 10-hr (REL) workday and a 40-hr workweek.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS:

This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards.

HEALTH HAZARD: 0 (Minimal Hazard: No significant health risk, irritation of skin or eyes not anticipated. *Skin Irritation*: Essentially non-irritating. PII or Draize = "0". *Eye Irritation*: Essentially non-irritating, or minimal effects which clear in < 24 hours [e.g. mechanical irritation]. Draize = "0". *Oral Toxicity LD_{50} Rat*: < 5000 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: < 2000 mg/kg. *Inhalation Toxicity 4-hrs LC_{50} Rat*: < 20 mg/L.); **1** (Slight Hazard: Minor reversible Injury may occur; slightly or mildly irritating. *Skin Irritation*: Slightly or mildly irritating. *Eye Irritation*: Slightly or mildly irritating. *Oral Toxicity LD_{50} Rat*: > 500-5000 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: > 1000-2000 mg/kg. *Inhalation Toxicity LC_{50}* 4-hrs *Rat*: > 2-20 mg/L);**2** (Moderate Hazard: Temporary or transitory injury may occur. *Skin Irritation*: Moderately irritating; primary irritant; sensitizer. PII or Draize > 0, < 5. *Eye Irritation*: Moderately to severely irritating and/or corrosive; reversible corneal opacity; corneal involvement or irritation clearing in 8-21 days. Draize > 0, ≤ 25. *Oral Toxicity LD_{50} Rat*: > 50-500 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: > 200-1000 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: > 0.5-2 mg/L.); **3** (Serious Hazard: Major injury likely unless prompt action is taken and medical treatment is given; high level of toxicity; corrosive. *Skin Irritation*: Severely irritating and/or corrosive; may destroy dermal tissue, cause skin burns, dermal necrosis. PII or Draize > 5-8 with destruction of tissue. *Eye Irritation*: Corrosive, irreversible destruction of ocular tissue; corneal involvement or irritation persisting for more than 21 days. Draize > 80 with effects irreversible in 21 days. *Oral Toxicity LD_{50} Rat*: > 1-50 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: > 20-200 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: > 0.05-0.5 mg/L.); **4** (Severe Hazard: Life-threatening; major or permanent damage may result from single or repeated exposure. *Skin Irritation*: Not appropriate. Do not rate as a "4", based on skin irritation alone. *Eye Irritation*: Not appropriate. Do not rate as a "4", based on eye irritation alone. *Oral Toxicity LD_{50} Rat*: ≤ 1 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: ≤ 20 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: ≤ 0.05 mg/L).

FLAMMABILITY HAZARD: 0 (Minimal Hazard-Materials that will not burn in air when exposure to a temperature of 815.5°C [1500°F] for a period of 5 minutes.); **1** (Slight Hazard-Materials that must be pre-heated before ignition can occur. Material require considerable pre-heating, under all ambient temperature conditions before ignition and combustion can occur, Including: Materials that will burn in air when exposed to a temperature of 815.5°C (1500°F) for a period of 5 minutes or less; Liquids, solids and semisolids having a flash point at or above 93.3°C [200°F] (e.g. OSHA Class IIIB, or; Most ordinary combustible materials [e.g. wood, paper, etc.]; **2** (Moderate Hazard-Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not, under normal conditions, form hazardous atmospheres in air, but under high ambient temperatures or moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres in air, Including: Liquids having a flash-point at or above 37.8°C [100°F]; Solid materials in the form of course dusts that may burn rapidly but that generally do not form explosive atmospheres; Solid materials in a fibrous or shredded form that may burn rapidly and create flash fire hazards (e.g. cotton, sisal, hemp; Solids and semisolids that readily give off flammable vapors.); **3** (Serious Hazard- Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures, or, unaffected by ambient temperature, are readily ignited under almost all conditions, including: Liquids having a flash point below 22.8°C [73°F] and having a boiling point at or above 38°C [100°F] and below 37.8°C [100°F] [e.g. OSHA Class IB and IC]; Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air [e.g., dusts of combustible solids, mists or droplets of flammable liquids]; Materials that burn extremely rapidly, usually by reason of self-contained oxygen [e.g. dry nitrocellulose and many organic peroxides]); **4** (Severe Hazard-Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air, and which will burn readily, including: Flammable gases; Flammable cryogenic materials; Any liquid or gaseous material that is liquid while under pressure and has a flash point below 22.8°C [73°F] and a boiling point below 37.8°C [100°F] [e.g. OSHA Class IA; Material that ignite spontaneously when exposed to air at a temperature of 54.4°C [130°F] or below [e.g. pyrophoric]).

PHYSICAL HAZARD: 0 (*Water Reactivity*: Materials that do not react with water. *Organic Peroxides*: Materials that are normally stable, even under fire conditions and will not react with water. *Explosives*: Substances that are Non-Explosive. Unstable *Compressed Gases*: No Rating. *Pyrophorics*: No Rating. *Oxidizers*: No "0" rating allowed. *Unstable Reactives*: Substances that will not polymerize, decompose, condense or self-react.); **1** (*Water Reactivity*: Materials that change or decompose upon exposure to moisture. *Organic Peroxides*: Materials that are normally stable, but can become unstable at high temperatures and pressures. These materials may react with water, but will not release energy. *Explosives*: Division 1.5 & 1.6 substances that are very insensitive explosives or that do not have a mass explosion hazard. *Compressed Gases*: Pressure below OSHA definition. *Pyrophorics*: No Rating. *Oxidizers*: Packaging Group III; Solids: any material that in either concentration tested, exhibits a mean burning time less than or equal to the mean burning time of a 3:7 potassium bromate/cellulose mixture and the criteria for Packing Group I and II are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise time of a 1:1 nitric acid (65%)/cellulose mixture and the criteria for Packing Group I and II are not met.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

PHYSICAL HAZARD (continued): 1 (continued): *Unstable Reactives*: Substances that may decompose, condense or self-react, but only under conditions of high temperature and/or pressure and have little or no potential to cause significant heat generation or explosive hazard. Substances that readily undergo hazardous polymerization in the absence of inhibitors.); **2** (*Water Reactivity*: Materials that may react violently with water. *Organic Peroxides*: Materials that, in themselves, are normally unstable and will readily undergo violent chemical change, but will not detonate. These materials may also react violently with water. *Explosives*: Division 1.4 – Explosive substances where the explosive effect are largely confined to the package and no projection of fragments of appreciable size or range are expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package. *Compressed Gases*: Pressurized and meet OSHA definition but < 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics*: No Rating. *Oxidizers*: Packing Group II Solids: any material that, either in concentration tested, exhibits a mean burning time of less than or equal to the mean burning time of a 2:3 potassium bromate/cellulose mixture and the criteria for Packing Group I are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise of a 1:1 aqueous sodium chlorate solution (40%)/cellulose mixture and the criteria for Packing Group I are not met. *Unstable Reactives*: Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure, but have a low potential for significant heat generation or explosion. Substances that readily form peroxides upon exposure to air or oxygen at room temperature);**3** (*Water Reactivity*: Materials that may form explosive reactions with water. *Organic Peroxides*: Materials that are capable of detonation or explosive reaction, but require a strong initiating source, or must be heated under confinement before initiation; or materials that react explosively with water. *Explosives*: Division 1.2 – Explosive substances that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but do not have a mass explosion hazard. *Compressed Gases*: Pressure ≥ 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics*: No Rating. *Oxidizers*: Packing Group I Solids: any material that, in either concentration tested, exhibits a mean burning time less than the mean burning time of a 3.:2 potassium bromate/cellulose mixture. Liquids: Any material that spontaneously ignites when mixed with cellulose in a 1:1 ratio, or which exhibits a mean pressure rise time less than the pressure rise time of a 1:1 perchloric acid (50%)/cellulose mixture. *Unstable Reactives*: Substances that may polymerize, decompose, condense or self-react at ambient temperature and/or pressure and have a moderate potential to cause significant heat generation or explosion.); **4** (*Water Reactivity*: Materials that react explosively with water without requiring heat or confinement. *Organic Peroxides*: Materials that are readily capable of detonation or explosive decomposition at normal temperature and pressures. *Explosives*: Division 1.1 & 1.2-explosive substances that have a mass explosion hazard or have a projection hazard. A mass explosion is one that affects almost the entire load instantaneously. *Compressed Gases*: No Rating. *Pyrophorics*: Add to the definition of Flammability "4". *Oxidizers*: No "4" rating. *Unstable Reactives*: Substances that may polymerize, decompose, condense or self-react at ambient temperature and/or pressure and have a high potential to cause significant heat generation or explosion.).

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS:

HEALTH HAZARD: **0** (materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials): Gases and vapors whose LC_{50} for acute inhalation toxicity is greater than 10,000 ppm. Dusts and mists whose LC_{50} for acute inhalation toxicity is greater than 200 mg/L. Materials whose LD_{50} for acute dermal toxicity is greater than 2000 mg/kg. Materials whose LD_{50} for acute oral toxicity is greater than 2000 mg/kg. Materials that are essentially non-irritating to the respiratory tract, eyes and skin. **1** (materials that, under emergency conditions, can cause significant irritation): Gases and vapors whose LC_{50} for acute inhalation toxicity is greater than 5,000 ppm but less than or equal to 10,000 ppm. Dusts and mists whose LC_{50} for acute inhalation toxicity is greater than 10 mg/L but less than or equal to 200 mg/L. Materials whose LD_{50} for acute dermal toxicity is greater than 1000 mg/kg but less than or equal to 2000 mg/kg. Materials whose LD_{50} for acute oral toxicity is greater than 500 mg/kg but less than or equal to 2000 mg/kg. Materials that cause slight to moderate irritation to the respiratory tract, eyes and skin. **2** (materials that, under emergency conditions, can cause temporary incapacitation or residual injury): Gases and vapors whose LC_{50} for acute inhalation toxicity is greater than 3,000 ppm but less than or equal to 5,000 ppm. Dusts and mists whose LC_{50} for acute inhalation toxicity is greater than 2 mg/L but less than or equal to 10 mg/L. Materials whose LD_{50} for acute dermal toxicity is greater than 200 mg/kg but less than or equal to 1000 mg/kg. Materials whose LD_{50} for acute oral toxicity is greater than 50 mg/kg but less than or equal to 500 mg/kg. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC_{50} for acute inhalation toxicity, if its LC_{50} is less than or equal to 5000 ppm and that does not meet the criteria for either degree of hazard 3 or degree of hazard 4. Compressed liquefied gases with boiling points between -30°C (-22°F) and -55°C (-66.5°F) that cause severe tissue damage, depending on duration of exposure. Materials that are respiratory irritants. Materials that cause severe, but reversible irritation to the eyes or are lachrymators. Materials that are primary skin irritants or sensitizers. **3** (materials that, under emergency conditions, can cause serious or permanent injury): Gases and vapors whose LC_{50} for acute inhalation toxicity is greater than 1,000 ppm but less than or equal to 3,000 ppm. Dusts and mists whose LC_{50} for acute inhalation toxicity is greater than 0.5 mg/L but less than or equal to 2 mg/L. Materials whose LD_{50} for acute dermal toxicity is greater than 40 mg/kg but less than or equal to 200 mg/kg. Materials whose LD_{50} for acute oral toxicity is greater than 5 mg/kg but less than or equal to 50 mg/kg. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC_{50} for acute inhalation toxicity, if its LC_{50} is less than or equal to 3000 ppm and that does not meet the criteria for degree of hazard 4. Compressed liquefied gases with boiling points between -30°C (-22°F) and -55°C (-66.5°F) that cause frostbite and irreversible tissue damage. Materials that are respiratory irritants. Cryogenic gases that cause frostbite and irreversible tissue damage. Materials that are corrosive to the respiratory tract. Materials that are corrosive to the eyes or cause irreversible corneal opacity. Materials that are corrosive to the skin. **4** (materials that, under emergency conditions, can be lethal): Gases and vapors whose LC_{50} for acute inhalation toxicity less than or equal to 1,000 ppm. Dusts and mists whose LC_{50} for acute inhalation toxicity is less than or equal to 0.5 mg/L. Materials whose LD_{50} for acute dermal toxicity is less than or equal to 40 mg/kg. Materials whose LD_{50} for acute oral toxicity is less than or equal to 5 mg/kg. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC_{50} for acute inhalation toxicity, if its LC_{50} is less than or equal to 1000 ppm.

DEFINITIONS OF TERMS (Continued)

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS (continued):

FLAMMABILITY HAZARD: **0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand: Materials that will not burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in according with Annex D. **1** Materials that must be preheated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur: Materials that will burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in accordance with Annex D. Liquids, solids and semisolids having a flash point at or above 93.4°C (200°F) (i.e. Class IIIB liquids). Liquids with a flash point greater than 35°C (95°F) that do not sustain combustion when tested using the Method of Testing for Sustained Combustibility, per 49 CFR 173, Appendix H or the UN Recommendation on the Transport of Dangerous Goods, Model Regulations (current edition) and the related Manual of Tests and Criteria (current edition). Liquids with a flash point greater than 35°C (95°F) in a water-miscible solution or dispersion with a water non-combustible liquid/solid content of more than 85 percent by weight. Liquids that have no fire point when tested by ASTM D 92 Standard Test Method for Flash and Fire Points by Cleveland Open Cup, up to a boiling point of the liquid or up to a temperature at which the sample being tested shows an obvious physical change. Combustible pellets with a representative diameter of greater than 2 mm (10 mesh). Solids containing greater than 0.5 percent by weight of a flammable or combustible solvent are rated by the closed up flash point of the solvent. Most ordinary combustible materials. **2** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air: Liquids having a flash point at or above 37.8°C (100°F) and below 93.4°C (200°F) (i.e. Class II and Class IIIA liquids.) Solid materials in the form of powders or coarse dusts of representative diameter between 420 microns (40 mesh) and 2 mm (10 mesh) that burn rapidly but that generally do not form explosive mixtures in air. Solid materials in fibrous or shredded form that burn rapidly and create flash fire hazards, such as cotton, sisal and hemp. Solids and semisolids that readily give off flammable vapors. Solids containing greater than 0.5 percent by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **3** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions: Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (73°F) and below 37.8°C (100°F) (i.e. Class IB and IC liquids). Materials that, on account of their physical form or environmental conditions, can form explosive mixtures with air and are readily dispersed in air. Flammable or combustible dusts with a representative diameter less than 420 microns (40 mesh). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5 percent by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **4** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and will burn readily: Flammable gases. Flammable cryogenic materials. Any liquid or gaseous materials that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. Class IA liquids). Materials that ignite when exposed to air, Solids containing greater than 0.5 percent by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent.

INSTABILITY HAZARD: **0** Materials that in themselves are normally stable, even under fire conditions: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) below 0.01 W/mL. Materials that do not exhibit an exotherm at temperatures less than or equal to 500°C (932°F) when tested by differential scanning calorimetry. **1** Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 0.01 W/mL and below 10 W/mL. **2** Materials that readily undergo violent chemical change at elevated temperatures and pressures: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 10 W/mL and below 100W/mL.

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS (continued):

INSTABILITY HAZARD (continued): **3** Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 100 W/mL and below 1000 W/mL. Materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures. **4** Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) of 1000 W/mL or greater. Materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures.

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the **N**ational **F**ire **P**rotection **A**ssociation (**NFPA**). Flash Point - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

ECOLOGICAL INFORMATION:

EC is the effect concentration in water. **BCF** = Bioconcentration Factor, which is used to determine if a substance will concentrate in lifeforms which consume contaminated plant or animal matter. **TL_m** = median threshold limit; Coefficient of Oil/Water Distribution is represented by **log K_{ow}** or **log K_{oc}** and is used to assess a substance's behavior in the environment.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD_{50}** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC_{50}** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m^3** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information: BEI** - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

REGULATORY INFORMATION:

U.S. and CANADA:

ACGIH: American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits.

This section explains the impact of various laws and regulations on the material. **EPA** is the U.S. Environmental Protection Agency. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. **O**ccupational **S**afety and **H**ealth **A**dministration (**OSHA**). **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **DOT** and **TC** are the U.S. Department of Transportation and the Transport Canada, respectively. Superfund Amendments and Reauthorization Act **(SARA)**; the Canadian Domestic/Non-Domestic Substances List **(DSL/NDSL)**; the U.S. Toxic Substance Control Act **(TSCA)**; Marine Pollutant status according to the **DOT**; the Comprehensive Environmental Response, Compensation, and Liability Act **(CERCLA or Superfund)**; and various state regulations. This section also includes information on the precautionary warnings which appear on the material's package label. **OSHA** - U.S. Occupational Safety and Health Administration.

SDS BUBBLE FLUID CHAUVET BF5

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 - Product identifier

Tradename/designation BUBBLE FLUID CHAUVET BF5
Chemical name
Product-type Mixture
UFI: GP5C-65U9-D00S-SXJX

1.2 - Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses
- The product is intended for professional use.
- Bubble Liquid for Event

1.3 - Details of the supplier of the safety data sheet

PREMIUM FACTORY SAS
1 Route Neuve
71710 MONTCENIS France
Telephone : +33 (0) 972 52 83 82
Website premiumfactory.eu
CONTACT SDS: jy.pizzini@premiumfactory.eu

Distributor
CHAUVET

1.4 - Emergency telephone number

Emergency help line: +33 (0) 972 52 83 82 9am to 5pm GMT+1

SECTION 2: Hazards identification

2.1 - Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Eye Irrit. 2	Eye irritation - Category 2

2.2 - Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Signal word : Warning
Hazard pictograms



Hazard statements

H319	Causes serious eye irritation

Precautionary statements

P264	Wash hands thoroughly after handling.
P280	Wear eye protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SDS BUBBLE FLUID CHAUVET BF5

EUH-phrases : None

2.3 - Other hazards

SECTION 3: Composition / information on ingredients

3.1 - Substances

Not applicable

3.2 - Mixtures

Chemical name	No	%	Class(es)	Specific concentration limit
POLYOXYETHYLATED, C11-14 ALCOHOLS	CAS No. : 78330-21-9 Index No. : EC No. :	1 - < 2	Acute Tox. 4 Oral - H302 Aquatic Chronic 3 - H412 Eye Dam. 1 - H318	Not applicable

SECTION 4: First aid measures

4.1 - Description of first aid measures

Following skin contact - No information available.

After eye contact - In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion - When in doubt or if symptoms are observed, get medical advice.

4.2 - Most important symptoms and effects, both acute and delayed

Symptoms and effects - Following inhalation - No information available.

Symptoms and effects - Following skin contact - No data available.

Symptoms and effects - After eye contact - Causes eye irritation.

Symptoms and effects - After ingestion - No information available.

4.3 - Indication of any immediate medical attention and special treatment needed

- No information available.

SECTION 5: Firefighting measures

5.1 - Extinguishing media

Suitable extinguishing media - non-combustible
- Not flammable.

5.2 - Special hazards arising from the substance or mixture

Special hazards arising from the substance or mixture - No data available.

Hazardous decomposition products - No data available.

5.3 - Advice for firefighters

- Co-ordinate fire-fighting measures to the fire surroundings.

SDS BUBBLE FLUID CHAUVET BF5

SECTION 6: Accidental release measures

6.1 - Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	- Use personal protection equipment.
For emergency responders	- Use personal protection equipment.

6.2 - Environmental precautions

- No information available.

6.3 - Methods and material for containment and cleaning up

Methods and material for containment	- No information available.
Methods and material for cleaning up	- Take up mechanically. - Wash with plenty of water.
Inappropriate techniques	- No information available.

6.4 - Reference to other sections

- Disposal: see section 13
- Personal protection equipment: see section 8
- Safe handling: see section 7

SECTION 7: Handling and storage

7.1 - Precautions for safe handling

Recommendation	- It is recommended to design all work processes always so that the following is excluded:Eye contact
Advices on general occupational hygiene	- Wash hands before breaks and after work.

7.2 - Conditions for safe storage, including any incompatibilities

- Keep/store only in original container.

7.3 - Specific end use(s)

- Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1 - Control parameters

- No data available.

8.2 - Exposure controls

Appropriate engineering controls	- No information available.
Individual protection measures, such as personal protective equipment	- Spectacles with side protection.
Environmental exposure controls	- No data available.



SDS BUBBLE FLUID CHAUVET BF5

SECTION 9: Physical and chemical properties

9.1 - Information on basic physical and chemical properties

Physical state	Liquid	Appearance	Liquid
Colour	Fluo	Odour	odourless

Odour threshold	No data available
pH	6 < V < 7,5
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Evaporation rate	No data available
flammability	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Density	No data available
Solubility (Water)	No data available
Solubility (Ethanol)	No data available
Solubility (Acetone)	No data available
Solubility (Organic solvents)	No data available
Log KOC	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Kinematic viscosity	No data available
Dynamic viscosity	No data available

Particle characteristics

Particle size	No data available

9.2 - Other information

VOC content	0 %
Minimum ignition energy	No data available
Conductivity	No data available

- No data available.

SECTION 10: Stability and reactivity

10.1 - Reactivity

- This material is considered to be non-reactive under normal use conditions.

10.2 - Chemical stability

- The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 - Possibility of hazardous reactions

SDS BUBBLE FLUID CHAUVET BF5

- No hazardous reaction when handled and stored according to provisions.

10.4 - Conditions to avoid

- Stable under recommended storage and handling conditions.

10.5 - Incompatible materials

- No data available.

10.6 - Hazardous decomposition products

- Does not decompose when used for intended uses.

SECTION 11: Toxicological information

11.1 - Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity - Not classified

Toxicity : Mixture

LD50 oral (rat)	No data available
LD50 dermal (rat)	No data available
LD50 dermal (rabbit)	No data available
LC50 inhalation (rat)	No data available
LC50 inhalation dusts and mists (rat)	No data available
LC50 inhalation vapours (rat)	No data available

- No data available.

Skin corrosion/irritation - Not classified

- No data available.

Serious eye damage/eye irritation - Eye irritation - Category 2 - Causes serious eye irritation

- Irritating to eyes.

Respiratory or skin sensitisation - Not classified

- No data available.

Germ cell mutagenicity - Not classified

- No data available.

Carcinogenicity - Not classified

- No data available.

Reproductive toxicity - Not classified

- No data available.

STOT-single exposure - Not classified

- No data available.

STOT-repeated exposure - Not classified

SDS BUBBLE FLUID CHAUVET BF5

	- No data available.
Aspiration hazard	- Not classified

11.2 - Information on other hazards

- No information available.

SECTION 12: Ecological information

12.1 - Toxicity

Toxicity : Mixture

EC50 48 hr crustacea	No data available
LC50 96 hr fish	No data available
ErC50 algae	No data available
ErC50 other aquatic plants	No data available
NOEC chronic fish	No data available
NOEC chronic crustacea	No data available
NOEC chronic algae	No data available
NOEC chronic other aquatic plants	No data available

- The substance/mixture does not fullfill the criteria of the acute aquatic toxicity according to Regulation (EC) No 1272/2008 [CLP], Annex I.

12.2 - Persistence and degradability

Biochemical oxygen demand (BOD)	No data available
Chemical oxygen demand (COD)	No data available
% of biodegradation in 28 days	No data available

- No data available.

12.3 - Bioaccumulative potential

Bioconcentration factor (BCF)	No data available
Log KOC	No data available

- No data available.

12.4 - Mobility in soil

- No data available.

12.5 - Results of PBT and vPvB assessment

12.6 - Endocrine disrupting properties

- No information available.

12.7 - Other adverse effects

- No data available.

SECTION 13: Disposal considerations

13.1 - Waste treatment methods

SDS BUBBLE FLUID CHAUVET BF5

Waste treatment methods	- Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Sewage disposal	- No information available.
Special precautions for waste treatment	- No special environmental measures are necessary.
Community or national or regional provisions	- Dispose of waste according to applicable legislation.

SECTION 14: Transport information

14.1 - UN number or ID number
Not applicable

14.2 - UN proper shipping name
Not applicable

14.3 - Transport hazard class(es)
Not applicable

14.4 - Packing group
Not applicable

14.5 - Environmental hazards
Not applicable

14.6 - Special precautions for user
Not applicable

14.7 - Maritime transport in bulk according to IMO instruments
Not applicable

SECTION 15: Regulatory information

15.1 - Safety, health and environmental regulations/legislation specific for the substance or mixture

Substances REACH candidates	None
Substances Annex XIV	None
Substances Annex XVII	None
VOC content	0 %

15.2 - Chemical Safety Assessment

SECTION 16: Other information

SDS versions

Version	Issue date	Author	Description of the amendments
1,01	24/05/2023		
1	30/12/2022		

Texts of the regulatory sentences

Acute Tox. 4 Oral	Acute toxicity (oral) - Category 4

SDS BUBBLE FLUID CHAUVET BF5

Aquatic Chronic 3	Hazardous to the aquatic environment - Aquatic Chronic 3
Eye Dam. 1	Serious eye damage, Category 1
Eye Irrit. 2	Eye irritation - Category 2
H319	Causes serious eye irritation

*** *** ***

HEALTH & SAFETY DATA SHEET

TITLE 1 : Identification of the Substance / Preparation and Company

1.1. Identification of the preparation

Product form : Mixture
Product Name : HIGH PERFORMANCE HAZER FLUID - CHAUVET LIGHTING - REF: HF5 - CAN 5L

1.2. Relevant identified uses of the substance or mixture and uses

1.2.1. Relevant identified uses

Use of the substance / mixture: Liquid formulation used to produce an artificial hazer used in the entertainment events, shows, clubs, theaters, training occupational safety drills.
Professional use and general public use

1.2.2. Uses deprecated No additional information available

1.3. Idendification of the company

CHAUVET EUROPE LTD
UNIT C - BROOKHILL ROAD INDUSTRIAL ESTATE PINXTON
NOTTINGHAM - UK - NG 16 6NT
TEL : +44 1773 511115 - WEBSITE : WWW.CHAUVETLIGHTING.COM

1.4. Emergency Telephone Number

Country	Company	Emergency Number
France	ORFILA	+33 (0) 1 45 42 59 59

See page 6 List of Emergency Numbers - Europe

TITLE 2 : Hazards idendification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Physicochemical harmful effects , for human health and the environment

To our knowledge, this product does not present any particular risk, subject to compliance with the general rules of industrial hygiene

2.2. Label Elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Precautionary statements (CLP) :
P101 - If medical advice is needed, keep at disposal the container or label
P102 - Keep out of reach of children
P271 - Use only outdoors or in a well ventilated area
P270 - Do not eat, drink or smoke when using this product
P234 - Keep only in the original container

2.3. Other Hazards

No additional information available

TITLE 3 : Composition / information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Product	Product Identifier	%	Classification according to Regulation EC No 1272/2008 (CLP)
(2,2'-(ETHYLENEDIOXY)DIETHANOL)	(CAS Number) 112-27-6 (CE Number) 203-953-2 (N° REACH) 01-2119438366-35	20 - 30	Unclassified

Full text of H-phrases: see section 16

TITLE 4 : First Aid

4.1. First aid indications

First aid after inhalation :	Remove the person to fresh air and keep her in a position comfortable for breathing.
First aid for skin contact:	Wash skin with plenty of water.
First aid after eye contact :	Flush eyes with water as a precaution.
First aid after ingestion:	Call a poison control center or physician if you feel unwell.

4.2. Main symptoms and effects, acute and delayed

No additional information available

4.3. Indication of immediate medical attention and special treatment needed

Symptomatic treatment.

TITLE 5 : Measures against fire

5.1. Extinguishing Media

Appropriated Extinguishing Media:	Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing agents:	Direct jet water.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire :	Possible release of toxic fumes

5.3. Advice for firefighters

Protection in case of fire:	Do not work without suited protective equipment. Respiratory protection , Self-contained. Complete protection of the body

TITLE 6 : Measures Accidental Release

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non first-aiders

Emergency Procedures:	Ventilate spill area

6.1.2. For rescuers

Protection Equipment:	Do not work without suited protective equipment. For more information, refer to Section 8: "Control of individual exposure-protection ".

6.2. Precautions for environmental protection

Avoid release into the environment.

6.3. Methods and materials for containment and cleaning

Cleaning processes:	Absorb the spilled liquid in absorbent material.
Other informations :	Remove materials or solid residues in an authorized center

6.4. Reference to other sections

For more information, see Section 13.

TITLE 7 : Handling and storage

7.1. Precautions for safe handling

Precautions for handling	Ensure good ventilation at the workplace
without danger :	Wear personal protective equipment.
Hygiene measures:	Do not eat, drink or smoke when using this product Wash hands after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions :	Store at temperatures above 0 ° C and below 50 ° C. Keep only in the original container. Store in a well ventilated area. Store away from light.
Storage temperature :	0 - 50 °C

7.3. Particular end use

No additional information available

TITLE 8 : Exposure controls / personal protection

8.1. Control Parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:	Ensure good ventilation at the workplace.
Hand protection :	Protective gloves
Eye protection:	Safety glasses
Skin and body protections:	Wear suitable protective clothing
Respiratory Protection :	In case of insufficient ventilation, wear suitable respiratory equipment
Control of environmental exposure:	Avoid release into the environment.

TITLE 9 : Physical and chemical properties

9.1. Basic physical and chemical properties Information

Physical state:	Liquid
Colour :	Colorless
Odour :	no smell
Odour threshold:	No data available
pH :	7 - 8
Relative evaporation rate (butylacetate = 1):	No data available
Fusion point:	Not applicable
Freezing point :	No data available
Boiling point :	100 - 290 °C
Flash point :	> 175 °C
Auto ignition temperature :	370 °C
Decomposition Temperature :	No data available
Flammability (solid, gas):	Not applicable
Vapor Pressure:	No data available
Relative vapor density at 20 ° C:	No data available
Relative density:	No data available
Density :	1018 kg /m3 at 20°C.
Solubility :	Soluble in water. Partially soluble in organic solvents by the presence of glycolic derivative
Log Pow :	No data available
Kinematic viscosity:	No data available
Dynamic viscosity:	No data available
Explosive properties:	No data available
Oxidising properties:	No data available
Explosion limits:	No data available

9.2. Other informations

No additional information available

TITLE 10 : Stability and reactivity

10.1. Reactivity

The product is not reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.
Reacts violently with oxidants.
Reactions with strong acids.

10.4. Conditions to avoid

None under conditions of storage and handling recommendations (see section 7).

10.5. Incompatible materials

Strong acids. oxidizing agent.

10.6. Hazardous decomposition products

Hazardous decomposition products should not be generated under normal conditions of storage and use.
Thermal decomposition generates: Carbon monoxide. Carbon dioxide.

TITLE 11 : Toxicological informations

11.1. Information on toxicological effects

Acute toxicty: Unclassified

(2,2'-(ETHYLENEDIOXY)DIETHANOL) - 112-27-6

LD50 oral rat > 15 000 mg / kg
LD50 rat dermal > 22 000 mg / kg

Skin corrosion / irritation: Not classified
pH: 7 - 8
Serious eye damage / eye irritation: Not classified
pH: 7 - 8
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
carcinogenicity : Not classified
Reproductive toxicity: Not classified
Specific toxicity for target organs (single exposure): Not classified
Specific toxicity for target organs (repeated exposure): Not classified
Aspiration hazard: Not classified

TITLE 12 : Ecological informations

12.1. Toxicity

Ecology - general: This product is not considered toxic to aquatic organisms and does not cause long-term adverse effects in the environment.

(2,2'-(ETHYLENEDIOXY)DIETHANOL) 112-27-6	
LC50 fish 1	10000 mg/l Leuciscus idus(Ide); 48h
LC50 fish 2	5000 mg/l 24h
ErC50 (algae)	10000 mg/l Daphnie; 24h
NOEC (acute)	320 mg/l Pseudomonas putida; 16h

12.2. Persistence

(2,2'-(ETHYLENEDIOXY)DIETHANOL) 112-27-6	
Persistence and degradability:	Not readily biodegradable

12.3. Potential for bioaccumulation

(2,2'-(ETHYLENEDIOXY)DIETHANOL) 112-27-6	
Potential for bioaccumulation:	High

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB

No additional information available

12.6. Other adverse effects

Additional information: Avoid release into the environment

TITLE 13 : Considerations Disposal

13.1. Waste treatment methods

Waste treatment methods: Dispose of contents / container in accordance with the sorting instructions from approved collector.

TITLE 14 : Transport informations

In accordance with the requirements of ADR / RID / IMDG / IATA / ADN

14.1. ONU number

N° ONU (ADR) :	Not applicable
N° ONU (IMDG) :	Not applicable
N° ONU (IATA) :	Not applicable
N° ONU (ADN) :	Not applicable
N° ONU (RID) :	Not applicable

14.2. Official shipping transport name ONU

Proper Shipping Name (ADR) :	Not applicable
Proper Shipping Name (IMDG) :	Not applicable
Proper Shipping Name (IATA) :	Not applicable
Proper Shipping Name (ADN) :	Not applicable
Proper Shipping Name (RID) :	Not applicable

14.3. Hazard class for transport

ADR
Hazard class for transport (ADR) : Not applicable
IMDG
Hazard class for transport (IMDG) : Not applicable
IATA
Hazard class for transport (IATA) : Not applicable
ADN
Hazard class for transport (ADN) : Not applicable
RID
Hazard class for transport (RID) : Not applicable

14.4. Packing Group

Packing Group (ADR) :	Not applicable
Packing Group (IMDG) :	Not applicable
Packing Group (IATA) :	Not applicable
Packing Group (ADN) :	Not applicable
Packing Group (RID) :	Not applicable

14.5. Environmental hazards

Dangerous for the environment:	No
Marine pollutant:	No
Other informations :	No additional information available

14.6. Special precautions for user

- Overland transport	No data available
- Maritime transport	No data available
- Air transport	No data available
- Waterway transport	No data available
- Rail transport	No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

TITLE 15 : Regulatory information

15.1. Regulations / legislation for the substance or mixture Safety, health and environment

15.1.1. EU regulations

Contains no substance subject to restrictions according to Annex XVII of REACH
Contains no substances of the candidate list of REACH
Does not contain substances listed in Annex XIV of REACH

15.1.2. national regulations

No additional information available

15.2. Evaluation of chemical safety

No chemical safety assessment has been carried out

TITLE 16 : Other informations

Other informations : None.

EMERGENCY NUMBERS

Australia	Poison control Center	+61 02 9515 1267
Austria	Poison Control Centre - Emergency helpline:	+43 1 406 43 43
Belgium	Centre Antipoisons / bruxelles	070 245 245
Bulgaria	National Toxicology Center,	+359 2 9154 233
Canada	Centre Toxicologie Quebec	+1 418 650 6115
California – Usa	Poison control system	+1 415-502-6000
Croatia	Poison Control Centre	+385 1 23-48-342.
Czech Republic	Toxikologické informační středisko	+420 224 919 293
Denmark	Bispibjerg Hospital - Giftlinjen ring	82 12 12 12
Estonia	Poisoning Information Centre	16 662
Finland	Poison Information Centre	09 471977
France	Orfila	+33 1 45 42 59 59
Germany	Giftnotruf Berlin, Emergency telephone:	+49 30 19240
Greece	Poison Information Centre	+30 2107793777
India	National Poison Center Information	+91 011 26589391
Hungary	Health Information - Toxicological Service	+36 80 20 11 99
Iceland	Landspitali - Poison Centre	543 2222
Ireland	Poisons information center of ireland	01 809 2166
Italy	Centro anti veleni	+39 02
Latvia	Valsts Toksikoloģijas centrs	+ 371 67042473 or 112
Lithuania	Nuodų Centras	+370 687 533 78
Luxembourg	Belgian Poison Center	+352 8002-5500.
Maroc	Centre Anti Poison	+212 80 1000180
Netherlands	Nationaal vergiftigingen informatie centrum	030 274 88 88
Norway	Giftinformasjonen	22 59 13 00
Portugal	CIAV	808 250 143
Romania	Centru de Control Otravă	+402 212 106 282
Singapore	Poison Information Center	+ 65 6423 9119
Slovakia	Narodné Toxikologické Informacné Centrum	+421 (0) 2 5477 4166
South Africa	Poison Control Center / Johanesburg	+ 27 11 642 2417
Spain	Urgencias toxicológicas	+34 91 562 04 20
Sweden	Giftinformationscentralen (Sverige)	08 33 12 31
Switzerland	Tox Info Suisse	+41 044 251 66 66
Tunisia	Centre Anti Poison	+ 216 71 335 500
Turkye	Poison Control Center Istanbul	114
United Kingdom	UK National Poisons Emergency number	+44 870 600 6266

The contents and format of this SDS are in accordance with Regulation (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

The information contained in this safety data sheet is based on the state of our knowledge on the indicated date. The information given in this sheet should be considered as a description of the product safety requirements, they should not be considered as a warranty or quality specification and have no contractual value on the properties of the product. The information contained in this safety data sheet relates to the specifically designated product, and cannot be valid for a product associated with another product. The conditions or methods of handling, soring, using or eliminating the product are beyond our control and cannot be under our responsibility.

HEALTH & SAFETY DATA SHEET

(REACH Regulation (EC) No. 1907/2006 - No. 2015/830)

SECTION 1 : Identification of the Substance / Preparation and Company

1.1. Identification of the preparation

Product form : Mixture
Product Name : LOW LYING FOG FLUID - CHAUVET LIGHTING - REF: LLF5X4 - CAN 5L

1.2. Relevant identified uses of the substance or mixture and uses

1.2.1. Relevant identified uses

Use of the substance / mixture: Liquid formulation used to produce an artificial smoke with low fog effect used in the entertainment events, shows, clubs, theaters, training occupational safety drills. Professional use and general public use

1.2.2. Uses deprecated No additional information available

1.3. Idendification of the company

CHAUVET EUROPE LTD
UNIT C - BROOKHILL ROAD INDUSTRIAL ESTATE PINXTON
NOTTINGHAM - UK - NG 16 6NT
TEL : +44 1773 511115 - WEBSITE : WWW.CHAUVETLIGHTING.COM

1.4. Emergency Telephone Number

Country	Organisation/Company	Address	Emergency Number	Comments
France	ORFILA		+33 1 45 42 59 59	

See page 6 List of Emergency Numbers - Europe

SECTION 2 : Hazards idendification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Unclassified

Physicochemical harmful effects , for human health and the environment

To our knowledge, this product does not present any particular risk, subject to compliance with the general rules of industrial hygiene

2.2. Label Elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Precautionary statements (CLP) :
P101 - If medical advice is needed, keep at disposal the container or label
P102 - Keep out of reach of children
P271 - Use only outdoors or in a well ventilated area
P270 - Do not eat, drink or smoke when using this product
P234 - Keep only in the original container

2.3. Other Hazards

No additional information available

SECTION 3 : Composition / information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Product	Product Identifier	%	Classification according to Regulation EC No 1272/2008 (CLP)
(2,2'-(ETHYLENEDIOXY)DIETHANOL)	(CAS Number) 112-27-6 (CE Number) 203-953-2 (N° REACH) 01-2119438366-35	< 6	Unclassified
(1,2-DIHYDROXYPROPANE)	(CAS Number) 57-55-6 (CE Number) 200-338-0 (N° REACH) 01-2119456809-23	< 30	Unclassified

Full text of H-phrases: see section 16

SECTION 4 : First Aid

4.1. First aid indications

First aid after inhalation :	Remove the person to fresh air and keep her in a position comfortable for breathing.
First aid for skin contact:	Wash skin with plenty of water.
First aid after eye contact :	Flush eyes with water as a precaution.
First aid after ingestion:	Call a poison control center or physician if you feel unwell.

4.2. Main symptoms and effects, acute and delayed

No additional information available

4.3. Indication of immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5 : Measures against fire

5.1. Extinguishing Media

Appropriated Extinguishing Media:	Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing agents:	Direct jet water.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire :	Possible release of toxic fumes

5.3. Advice for firefighters

Protection in case of fire:	Do not work without suited protective equipment. Respiratory protection , Self-contained. Complete protection of the body

SECTION 6 : Measures Accidental Release

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non first-aiders

Emergency Procedures: Ventilate spill area

6.1.2. For rescuers

Protection Equipment: Do not work without suited protective equipment.
For more information, refer to Section 8: "Control of individual exposure-protection ".

6.2. Precautions for environmental protection

Avoid release into the environment.

6.3. Methods and materials for containment and cleaning

Cleaning processes:	Absorb the spilled liquid in absorbent material.
Other informations :	Remove materials or solid residues in an authorized center

.

6.4. Reference to other sections

For more information, see Section 13.

SECTION 7 : Handling and storage

7.1. Precautions for safe handling

Precautions for handling without danger :	Ensure good ventilation at the workplace Wear personal protective equipment.
Hygiene measures:	Do not eat, drink or smoke when using this product Wash hands after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions :	Store at temperatures above 0 ° C and below 50 ° C. Keep only in the original container. Store in a well ventilated area. Store away from light.
Storage temperature :	0 - 50 °C

7.3. Particular end use

No additional information available

SECTION 8 : Exposure controls / personal protection

8.1. Control Parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:	Ensure good ventilation at the workplace.
Hand protection :	Protective gloves
Eye protection:	Safety glasses
Skin and body protections:	Wear suitable protective clothing
Respiratory Protection :	In case of insufficient ventilation, wear suitable respiratory equipment
Control of environmental exposure:	Avoid release into the environment.

SECTION 9 : Physical and chemical properties

9.1. Basic physical and chemical properties Information

Physical state:	Liquid
Colour :	Colorless
Odour :	no smell
Odour threshold:	No data available
pH :	7 - 8
Relative evaporation rate (butylacetate = 1):	No data available
Fusion point:	Not applicable
Freezing point :	No data available
Boiling point :	100 - 290 °C
Flash point :	> 175 °C
Auto ignition temperature :	370 °C
Decomposition Temperature :	No data available
Flammability (solid, gas):	Not applicable
Vapor Pressure:	No data available
Relative vapor density at 20 ° C:	No data available
Relative density:	No data available
Density :	1018 kg /m3 at 20°C.
Solubility :	Soluble in water. Partially soluble in organic solvents by the presence of glycolic derivative
Log Pow :	No data available
Kinematic viscosity:	No data available
Dynamic viscosity:	No data available
Explosive properties:	No data available
Oxidising properties:	No data available
Explosion limits:	No data available

9.2. Other informations

No additional information available

SECTION 10 : Stability and reactivity

10.1. Reactivity

The product is not reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.
Reacts violently with oxidants.
Reactions with strong acids.

10.4. Conditions to avoid

None under conditions of storage and handling recommendations (see section 7).

10.5. Incompatible materials

Strong acids. oxidizing agent.

10.6. Hazardous decomposition products

Hazardous decomposition products should not be generated under normal conditions of storage and use.
Thermal decomposition generates: Carbon monoxide. Carbon dioxide.

SECTION 11 : Toxicological informations

11.1. Information on toxicological effects

Acute toxicty: Unclassified
(1,2-DIHYDROXYPROPANE)

(1,2-DIHYDROXYPROPANE) - (57-55-6)

LD50 oral rat > 2000 mg / kg

2,2'-(ETHYLENEDIOXY) DIETHANOL (112-27-6)

LD50 oral rat > 15 000 mg / kg
LD50 rat dermal > 22 000 mg / kg

Skin corrosion / irritation: Not classified
pH: 7 - 8
Serious eye damage / eye irritation: Not classified
pH: 7 - 8
respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
carcinogenicity : Not classified
Reproductive toxicity: Not classified
Specific toxicity for target organs (single exposure): Not classified
Specific toxicity for target organs (repeated exposure): Not classified
Aspiration hazard: Not classified

SECTION 12 : Ecological informations

12.1. Toxicity

Ecology - general: This product is not considered toxic to aquatic organisms and does not cause long-term adverse effects in the environment.

(1,2-DIHYDROXYPROPANE) (57-55-6)	
LC50 fish 1	> 500 mg/l 96h

(2,2'-(ETHYLENEDIOXY)DIETHANOL) (112-27-6)	
LC50 fish 1	10000 mg/l Leuciscus idus(Ide); 48h
LC50 fish 2	5000 mg/l 24h
ErC50 (algae)	10000 mg/l Daphnie; 24h
NOEC (acute)	320 mg/l Pseudomonas putida; 16h

12.2. Persistence

(1,2-DIHYDROXYPROPANE) (57-55-6)	
Persistence and degradability:	readily biodegradable
Degradation :	> 70% Exposure time 28 days

(2,2'-(ETHYLENEDIOXY)DIETHANOL) (112-27-6)	
Persistence and degradability:	Not readily biodegradable

12.3. Potential for bioaccumulation

(2,2'-(ETHYLENEDIOXY)DIETHANOL) (112-27-6)	
Potential for bioaccumulation:	High

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB

No additional information available

12.6. Other adverse effects

Additional information: Avoid release into the environment

SECTION 13 : Considerations Disposal

13.1. Waste treatment methods

Waste treatment methods: Dispose of contents / container in accordance with the sorting instructions from approved collector.

SECTION 14 : Transport informations

In accordance with the requirements of ADR / RID / IMDG / IATA / ADN

14.1. ONU number

N° ONU (ADR) :	Not applicable
N° ONU (IMDG) :	Not applicable
N° ONU (IATA) :	Not applicable
N° ONU (ADN) :	Not applicable
N° ONU (RID) :	Not applicable

14.2. Official shipping transport name ONU

Proper Shipping Name (ADR) :	Not applicable
Proper Shipping Name (IMDG) :	Not applicable
Proper Shipping Name (IATA) :	Not applicable
Proper Shipping Name (ADN) :	Not applicable
Proper Shipping Name (RID) :	Not applicable

14.3. Hazard class for transport

ADR
Hazard class for transport (ADR) : Not applicable
IMDG
Hazard class for transport (IMDG) : Not applicable
IATA
Hazard class for transport (IATA) : Not applicable
ADN
Hazard class for transport (ADN) : Not applicable
RID
Hazard class for transport (RID) : Not applicable

14.4. Packing Group

Packing Group (ADR) :	Not applicable
Packing Group (IMDG) :	Not applicable
Packing Group (IATA) :	Not applicable
Packing Group (ADN) :	Not applicable
Packing Group (RID) :	Not applicable

14.5. Environmental hazards

Dangerous for the environment:	No
Marine pollutant:	No
Other informations :	No additional information available

14.6. Special precautions for user

- Overland transport	No data available
- Maritime transport	No data available
- Air transport	No data available
- Waterway transport	No data available
- Rail transport	No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15 : Regulatory information

15.1. Regulations / legislation for the substance or mixture Safety, health and environment

15.1.1. EU regulations

Contains no substance subject to restrictions according to Annex XVII of REACH
Contains no substances of the candidate list of REACH
Does not contain substances listed in Annex XIV of REACH

15.1.2. national regulations

No additional information available

15.2. Evaluation of chemical safety

No chemical safety assessment has been carried out

SECTION 16 : Other informations

Other informations : None.

EMERGENCY NUMBERS

Australia	Poison control Center	+61 02 9515 1267
Austria	Poison Control Centre - Emergency helpline:	+43 1 406 43 43
Belgium	Centre Antipoisons / bruxelles	070 245 245
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Canada	Centre Toxicologie Quebec	+1 418 650 6115
California – Usa	Poison control system	+1 415-502-6000
Croatia	Poison Control Centre	+385 1 23-48-342.
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Finland	Poison Information Centre	09 471977
France	Orfila	+33 1 45 42 59 59
Germany	Giftnotruf Berlin, Emergency telephone:	+49 30 19240
Greece	Poison Information Centre	+30 2107793777
India	National Poison Center Information	+91 011 26589391
Hungary	Health Information - Toxicological Service	+36 80 20 11 99
Iceland	Landspitali - Poison Centre	543 2222
Ireland	Poisons information center of ireland	01 809 2166
Italy	Centro anti veleni	+39 02
Latvia	Valsts Toksikoloģijas centrs	+ 371 67042473 or 112
Lithuania	Nuodų Centras	+370 687 533 78
Luxembourg	Belgian Poison Center	+352 8002-5500.
Maroc	Centre Anti Poison	+212 80 1000180
Netherlands	Nationaal vergiftigingen informatie centrum	030 274 88 88
Norway	Giftinformasjonen	22 59 13 00
Portugal	CIAV	808 250 143
Romania	Centru de Control Otravă	+402 212 106 282
Singapore	Poison Information Center	+ 65 6423 9119
Slovakia	Narodné Toxikologické Informacné Centrum	+421 (0) 2 5477 4166
South Africa	Poison Control Center / Johanesburg	+ 27 11 642 2417
Spain	Urgencias toxicológicas	+34 91 562 04 20
Sweden	Giftinformationscentralen (Sverige)	08 33 12 31
Switzerland	Tox Info Suisse	+41 044 251 66 66
Tunisia	Centre Anti Poison	+ 216 71 335 500
Turkye	Poison Control Center Istanbul	114
United Kingdom	UK National Poisons Emergency number	+44 870 600 6266

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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 8.2
Revision Date 23.01.2025
Print Date 17.08.2026

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	:	Di water for synthesis
Product Number	:	8.48333
Catalogue No.	:	848333
Brand	:	Millipore
REACH No.	:	A registration number is not available for this substance as the substance or its uses are exempted from registration or the annual tonnage does not require a registration.
CAS-No.	:	7732-18-5

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	:	Chemical for synthesis

1.3 Details of the supplier of the safety data sheet

Company	:	Merck Life Science UK Limited New Road The Old Brickyard GILLINGHAM Dorset SP8 4XT UNITED KINGDOM
Telephone	:	+44 (0)1747 833-000
Fax	:	+44 (0)1747 833-313
E-mail address	:	TechnicalService@merckgroup.com

1.4 Emergency telephone

Emergency Phone #	:	+44 (0)870 8200418 (CHEMTREC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Label elements

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

The life science business of Merck operates as MilliporeSigma in the US and Canada

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Toxicological information:
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula	:	H2O
Molecular weight	:	18.02 g/mol
CAS-No.	:	7732-18-5
EC-No.	:	231-791-2

No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice
No hazards which require special first aid measures.

If inhaled
No hazards which require special first aid measures.

In case of skin contact
No hazards which require special first aid measures.

In case of eye contact
No hazards which require special first aid measures.

If swallowed
No hazards which require special first aid measures.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

The life science business of Merck operates as MilliporeSigma in the US and Canada

5.2 Special hazards arising from the substance or mixture
Not combustible.

5.3 Advice for firefighters
none

5.4 Further information
none

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
No special precautionary measures necessary.
For personal protection see section 8.

6.2 Environmental precautions
No special precautionary measures necessary.

6.3 Methods and materials for containment and cleaning up
Observe possible material restrictions (see sections 7 and 10).Pour into drain.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
No special storage conditions required.
Tightly closed.

Recommended storage temperature see product label.

Storage class
Storage class (TRGS 510): 12: Non Combustible Liquids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Personal protective equipment

Eye/face protection
not required

Skin protection
not required

The life science business of Merck operates as MilliporeSigma in the US and Canada

Respiratory protection
No special protective equipment required.

Control of environmental exposure
No special precautionary measures necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Physical state	liquid
b)	Color	colorless
c)	Odor	No data available
d)	Melting point/freezing point	Melting point/ range: 0.0 °C
e)	Initial boiling point and boiling range	100.0 °C at 1,013 hPa
f)	Flammability (solid, gas)	No data available
g)	Upper/lower flammability or explosive limits	No data available
h)	Flash point	No data available
i)	Autoignition temperature	No data available
j)	Decomposition temperature	No data available
k)	pH	6.0 - 8.0 at 25 °C
l)	Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m)	Water solubility	completely miscible
n)	Partition coefficient: n-octanol/water	log Pow: -0.467 - Bioaccumulation is not expected.
o)	Vapor pressure	No data available
p)	Density	1.000 g/cm3 at 3.98 °C - lit.
	Relative density	No data available
q)	Relative vapor density	No data available
r)	Particle characteristics	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	none

9.2 Other safety information

No data available

The life science business of Merck operates as MilliporeSigma in the US and Canada

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions
Violent reactions possible with:
The generally known reaction partners of water.

10.4 Conditions to avoid
no information available

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - > 90,000 mg/kg
Remarks: (RTECS)
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

The life science business of Merck operates as MilliporeSigma in the US and Canada

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties
Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects
No ecological problems are to be expected when the product is handled and used with due care and attention.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Taking into account local regulations the product may be disposed of as waste water after neutralization. Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste.

The life science business of Merck operates as MilliporeSigma in the US and Canada

Handle uncleaned containers like the product itself. Notice Directive on waste 2008/98/EC.

SECTION 14: Transport information

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

No data available

Further information

Not classified as dangerous in the meaning of transport regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

The life science business of Merck operates as MilliporeSigma in the US and Canada

SECTION 16: Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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The life science business of Merck operates as MilliporeSigma in the US and Canada

The life science business of Merck operates as MilliporeSigma in the US and Canada

SAFETY DATA SHEET

GLYCERINE

Revision date: 14/10/2023

Revision No: 7

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: GLYCERINE

REACH registered number(s): EXEMPTION UNDER ANNEX V

CAS number: 56-81-5

EINECS number: 200-289-5

Synonyms: 1,2,3 PROPANETRIOL

GLYCEROL

GLYCYL ALCOHOL

INCI name: Glycerin

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of substance / mixture: * Anti-freezing Agent. Chemical Intermediate. Chemical manufacturing. Food Additive. Personal care products. Plasticiser. Solvent. Animal Feed Processing.

1.3. Details of the supplier of the safety data sheet

Company name: Hexeal Chemicals Limited

Norwich Road

Great Plumstead

Norfolk

NR13 5FW

United Kingdom

Tel: 01603 720202 (09:00 - 17:00 Mon-Fri)

Email: sales@hexchem.co.uk

1.4. Emergency telephone number

Emergency tel: 01603 720202 (Out of Hours)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: This product has no classification under CLP.

2.2. Label elements

Label elements: This product has no label elements.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

[cont...]

Section 3: Composition/information on ingredients

3.1. Substances

Chemical identity: GLYCERINE (*WEL)

CAS number: 56-81-5

EINECS number: 200-289-5

REACH registered number(s): EXEMPTION UNDER ANNEX V

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes.

Ingestion: * If conscious, wash the mouth out with water. Do not induce vomiting.

Inhalation: * Not applicable under normal conditions of use. Move to fresh air in case of accidental inhalation of vapours. Consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: * May cause mild irritation of the gastrointestinal tract if large quantities are ingested.

Inhalation: * Not applicable under normal conditions of use. Prolonged inhalation of mists may cause lung inflamation.

Delayed / immediate effects: * Significant effects and/or symptoms are not anticipated.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: * No special requirements.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: * Water spray. Carbon dioxide. Dry chemical powder. Alcohol resistant foam. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: * In combustion emits toxic fumes of carbon dioxide / carbon monoxide. Acrolein. Keep containers exposed to fire cool with waterspray.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

[cont...]

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: * Refer to section 8 of SDS. Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Wear suitable protective clothing. Avoid the formation or spread of mists in the air. Avoid contact with the material. Causes slippery surface when spilled.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: * Store in a cool, well ventilated area. Keep container tightly closed. Avoid contact with water or humidity.

Suitable packaging: * Must only be kept in original packaging. Polyethylene. Stainless steel. Aluminium containers.

7.3. Specific end use(s)

Specific end use(s): * No special requirement.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: **Respirable dust**

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	10 mg/m-3 (mist)	-	-	-

Hazardous ingredients:

GLYCERINE

Workplace exposure limits: **Respirable dust**

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	10 mg/m-3 (mist)	-	-	-

[cont...]

DNEL/PNEC Values

GLYCERINE

Type	Exposure	Value	Population	Effect
DNEL	Oral (repeated dose)	229 mg/kg bw/day	Consumers	Systemic
DNEL	Inhalation (repeated dose)	33 mg/m3	Consumers	Local
DNEL	Inhalation (repeated dose)	56 mg/m3	Workers	Local
PNEC	Soil (agricultural)	0.141 mg/kg	-	-
PNEC	Microorganisms in sewage treatment	1000 mg/l	-	-
PNEC	Fresh water	0.885 mg/l	-	-
PNEC	Intermittent Release	8.85 mg/l	-	-
PNEC	Marine water	0.0885 mg/l	-	-
PNEC	Fresh water sediments	3.3 mg/kg	-	-
PNEC	Marine sediments	0.33 mg/kg	-	-

Hazardous ingredients:

GLYCERINE

Type	Exposure	Value	Population	Effect
DNEL	Oral (repeated dose)	229 mg/kg bw/day	Consumers	Systemic
DNEL	Inhalation (repeated dose)	33 mg/m3	Consumers	Local
DNEL	Inhalation (repeated dose)	56 mg/m3	Workers	Local
PNEC	Soil (agricultural)	0.141 mg/kg	-	-
PNEC	Microorganisms in sewage treatment	1000 mg/l	-	-
PNEC	Fresh water	0.885 mg/l	-	-
PNEC	Intermittent Release	8.85 mg/l	-	-
PNEC	Marine water	0.0885 mg/l	-	-
PNEC	Fresh water sediments	3.3 mg/kg	-	-
PNEC	Marine sediments	0.33 mg/kg	-	-

8.2. Exposure controls

Engineering measures: Ensure all engineering measures mentioned in section 7 of SDS are in place.

Respiratory protection: * Not normally required under normal conditions of use. Wear suitable respiratory protection if exposure levels approach or exceed the stated exposure levels. Wear suitable respiratory protection when aerosols or mist are present. Gas/vapour filter, type A: organic vapours (EN141). Particle filter class P2SL (EN143).

Hand protection: Protective gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Protective clothing.

Environmental: No special requirement.

[cont...]

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: * See other information.

Odour: * See other information.

Evaporation rate: Negligible

Oxidising: Non-oxidising (by EC criteria)

Solubility in water: Soluble

Also soluble in: Ethanol.

Viscosity: Viscous

Boiling point/range°C: ~ 290

Melting point/range°C: ~ 18

Flammability limits %: lower: 2.6

upper: 11.3

Flash point°C: ~ 160

Part.coeff. n-octanol/water: ~ -1.76/2.6

Autoflammability°C: ~ 400

Vapour pressure: < 0.1 hPa @ 20 oC

Relative density: ~ 1.26 g/ml @ 20 oC

pH: ~ 5 (100g/l Aqu)

9.2. Other information

Other information: * EP & high purity grades of glycerine are generally colourless to pale yellow. Technical grade material can vary from colourless to dark brown dependent upon the specific grade. EP & high purity grades of glycerine are normally found to have a barely perceptible to mild odour. Tech 2 & Feed grade products generally have a organic type odour which can vary from mild to strong.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: * Stable under normal conditions. In case of elevated temperatures (> 200oC) there is a risk of exothermic polymerisation.

10.3. Possibility of hazardous reactions

Hazardous reactions: * Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below. On contact with strong oxidising substances like nitric acid or other strong acids, explosive reactions may be possible.

10.4. Conditions to avoid

Conditions to avoid: Heat.

[cont...]

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: * In combustion emits toxic fumes of carbon dioxide / carbon monoxide. Acrolein.

Section 11: Toxicological information

11.1. Information on toxicological effects

*** Toxicity values:**

Route	Species	Test	Value	Units
DERMAL	RBT	LD50	> 18700	mg/kg
DERMAL	GPG	LD50	56750	mg/kg
ORAL	GPG	LD50	11500	mg/kg
ORAL	MUS	LD50	~ 23000	mg/kg
ORAL	RAT	LD50	27200	mg/kg

Hazardous ingredients:

GLYCERINE

DERMAL	GPG	LD50	56750	mg/kg
DERMAL	RBT	LD50	> 18700	mg/kg
ORAL	GPG	LD50	11500	mg/kg
ORAL	MUS	LD50	~ 23000	mg/kg
ORAL	RAT	LD50	27200	mg/kg

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: * May cause mild irritation of the gastrointestinal tract if large quantities are ingested.

Inhalation: * Not applicable under normal conditions of use. Prolonged inhalation of mists may cause lung inflammation.

Delayed / immediate effects: * Significant effects and/or symptoms are not anticipated.

Other information: * There is no further information at this time.

Section 12: Ecological information

12.1. Toxicity

*** Ecotoxicity values:**

Species	Test	Value	Units

[cont...]

Daphnia magna	48H LC50	1955	mg/l
Bacteria, Activated Sludge	48H	> 1000	mg/l
RAINBOW TROUT (Oncorhynchus mykiss)	96H LC50	54000	mg/l
Pimephales promelas	96H LC50	885	mg/l
Carrassius auratus	24H LC50	> 5000	mg/l
Scenedesmus quadricauda	8D EC3	> 10000	mg/l

Hazardous ingredients:

GLYCERINE

Carrassius auratus	24H LC50	> 5000	mg/l
Pimephales promelas	96H LC50	885	mg/l
Scenedesmus quadricauda	8D EC3	> 10000	mg/l
RAINBOW TROUT (Oncorhynchus mykiss)	96H LC50	54000	mg/l
Bacteria, Activated Sludge	48H	> 1000	mg/l
Daphnia magna	48H LC50	1955	mg/l

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: * There is no evidence of bioaccumulation.

12.4. Mobility in soil

Mobility: Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: * Not expected to cause significant environmental impact. Considered to be slightly hazardous to water. Do not allow to enter watercourses or soils. Spillage in sewers or waterways must be avoided.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Recovery operations: No information available at this time.

Disposal of packaging: Contaminated containers must not be treated as household waste. Where practical, containers and packaging should be recycled by a licensed contractor.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

[cont...]

Section 14: Transport information

Transport class: This product does not require a classification for transport.

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Specific regulations: * Exemption from registration under REACH in accordance with Annex V. Commission Decision 96/335/EC establishing an inventory and a common nomenclature of ingredients employed in cosmetic products (INCI). Council Directive 76/768/EEC on the approximation of the laws of the Member States relating to cosmetic products. Regulation (EC) No 1223/2009 of the European Parliament and of the Council on cosmetic products. Toy Safety Directive 2009/48/EC of the European Parliament and of the Council on toy products. The product use may be controlled under the TPD - Tobacco Products Directive (2014/40/EU). Product is listed on IOFI (International Organization of the Flavor Industry) Global Reference List - Flavouring sector list. Product is listed on IFRA (International Fragrance Association) Transparency List - Fragrance sector list.

15.2. Chemical Safety Assessment

Chemical safety assessment: * A chemical safety assessment has not been carried out for the substance or the mixture by the supplier. Due to the hazard classification a chemical safety report (CSR) is not required for this product.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

* indicates text in the SDS which has changed since the last revision.

There are no levels set for this product thus normal standards of industrial hygiene should be observed.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

No. 1 Houghton Hill Industries
Sawtry Way
Houghton, Huntingdon,
Cambridgeshire
PE28 2DH
England
Tel: +44 (0)1480 494540
Fax: +44 (0)1480 494206
Email: warehouse@lemark.co.uk
Web: www.lemark.co.uk

Le Mark Pal Cleaner

with Pump Spray Applicator

Hazards Identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008: The substance is not classified according to the CLP regulation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008: Void
· **Hazard pictograms:** Void
· **Signal word:** Void
· **Hazard statements:** Void

Precautionary statements
P261 Avoid breathing spray.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to
do. Continue rinsing.

Additional information:
Keep out of the reach of children

Safety data sheet
according to 1907/2006/EC, Article 31
Printing date 01.02.2016 Version: 1 Revision: 01.02.2016

· **2.3 Other hazards**

Results of PBT and vPvB assessment
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.
· **Dangerous components:** Void
· **Ingredients according to Detergents Regulation 648/2004/EC** For the wording of the listed risk phrases refer to section 16.

First Aid Measures

·

4.1 Description of first aid measures
· **General information:** No special measures required.

·

After inhalation: Supply fresh air; consult doctor in case of complaints.

·

After skin contact: Generally the product does not irritate the skin.

·

After eye contact: Rinse opened eye for several minutes under running water.

·

After swallowing: If symptoms persist consult doctor.

·

4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

·

4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

Firefighting Measures

·

5.1 Extinguishing media
· **Suitable extinguishing agents:** CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

·

5.2 Special hazards arising from the substance or mixture No further relevant information available.

·

5.3 Advice for firefighters
· **Protective equipment:** No special measures required.

Accidental Release Measures

·

6.1 Personal precautions, protective equipment and emergency procedures Not required.

·

6.2 Environmental precautions: Dilute with plenty of water.

·

6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, universal binders).
Ensure adequate ventilation.

·

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

Handling and Storage

·

7.1 Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

·

Information about fire - and explosion protection: No special measures required.

·

7.2 Conditions for safe storage, including any incompatibilities
· **Storage:**

·

Requirements to be met by storerooms and receptacles: No special requirements.

·

Information about storage in one common storage facility: Not required.

·

Further information about storage conditions: None.

·

7.3 Specific end use(s) No further relevant information available.

Exposure Controls/Personal Protection

·

Additional information about design of technical facilities: No further data;

·

8.1 Control parameters
· **Ingredients with limit values that require monitoring at the workplace:**
34590-94-8 (2-methoxymethylethoxy)propanol (75-100%)
WEL (Great Britain) Long-term value: 308 mg/m³, 50 ppm
Sk
IOELV (European Union) Long-term value: 308 mg/m³, 50 ppm
Skin
· **Additional information:** The lists valid during the making were used as basis.

·

8.2 Exposure controls

·

Personal protective equipment:

·

General protective and hygienic measures: Do not inhale gases / fumes / aerosols.

·

Respiratory protection: Not required.

·

Protection of hands:

·

Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from
manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not
be calculated in advance and has therefore to be checked prior to the application.

·

Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Goggles recommended during refilling

Physical and Chemical Properties

9.1 Information on basic physical and chemical properties
· **General Information**
· **Appearance:**

Form: Liquid

Colour: Colourless

Odour: Characteristic

pH-value: Not applicable.

Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 189 °C

Flash point: > 55 °C

Flammability (solid, gaseous): Not applicable.

Ignition temperature: 207 °C

Decomposition temperature: Not determined.

Self-igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower: 1.1 Vol %

Upper: 14.0 Vol %

Vapour pressure: Not determined.

Density at 20 °C: 0.956 g/cm³

Relative density Not determined.

Vapour density Not determined.

Evaporation rate Not determined.

Solubility in / Miscibility with

water: Fully miscible.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

Solvent content:

Organic solvents: 99.0 %

9.2 Other information No further relevant information available.

Stability and Reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

Toxicological Information

11.1 Information on toxicological effects
· **Acute toxicity** Based on available data, the classification criteria are not met.
· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

Serious eye damage/irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

Ecological Information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

Additional ecological information:
· **General notes:** Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

Disposal Considerations

13.1 Waste treatment methods
· **Recommendation**
Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local
Authority requirements.

Uncleaned packaging:
· **Recommendation:** Disposal must be made according to official regulations.

Transport Information

14.1 UN-Number
· **ADR, IMDG, IATA** Void

14.2 UN proper shipping name
· **ADR, IMDG, IATA** Void

14.3 Transport hazard class(es)
· **ADR, IMDG, IATA**
· **Class** Void

14.4 Packing group

Registered Office: Le Mark Self-Adhesive Ltd. Houghton Hill Industries, Sawtry Way, Houghton, Huntingdon, Cambridgeshire, PE28 2DH
Registered in England 1761971 VAT Reg. No. GB 395772693. Directors S.P. Gibbons & L.I. Gibbons

· **ADR, IMDG, IATA** Void

·

14.5 Environmental hazards: Not applicable.

·

14.6 Special precautions for user Not applicable.

·

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.
· **UN "Model Regulation":** Void

Regulatory Information

·

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Reg . (EC) n. 1272/2008 - CLP;
Reg. (EC) n. 1907/2006 – Reach;
Reg. (EC) n. 2015/830 annex II of REACH;
Reg. (EC) n. 648/04 (Detergents);
Reg. (EC) n. 528/12 (Biocides BPR);
Reg. (EC) n. 1223/2009 (Cosmetics);
Dir. 06/08 ADR – RID - IMDG - IATA;
Dir. 47/08 (Aerosols); Dir. 12/18 (Seveso III);
Dir. 2008/98/CE and Reg. (EC) n.1357/2014 (Waste management)

·

Directive 2012/18/EU

·

Named dangerous substances - ANNEX I None of the ingredients is listed.

·

National regulations:
· **Technical instructions (air):**
Class Share in %
NK 75-100

·

Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

·

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SAFETY DATA SHEET

MARTIN EFFECT FLUIDS

For the most up to date version of this document, please scan this QR Code or visit:

http://www.martin.com/EN-US/Safety-Documents

1. Identification of the Substance/Mixture & of the Company/Undertaking

1.1. Product Identifier:

Name:

JEM Pro-Fog Fluid, Extra Quick Dissipating
JEM Pro-Fog Fluid, Quick Dissipating
JEM Pro-Fog Fluid
JEM Pro-Fog Fluid, High Density
JEM Low-Fog Fluid, Quick Dissipating
JEM Low-Fog Fluid
JEM Low-Fog Fluid, High Density
JEM K1 Haze Fluid
JEM C-Plus Haze Fluid
RUSH Club Smoke Dual Fluid
RUSH & THRILL Fog Fluid
RUSH & THRILL Haze Fluid
Martin Pro-Clean and Storage Fluid
Pro Steam (Extra Fast) HP

Discontinued Effect Fluid Types covered by this SDS:

Pro Smoke Super Fluid (ZR), (Freshly Fragranced)
Pro Smoke Studio Fluid (DX)
Pro Smoke High Density Fluid (SP)
Pro Steam Simulation Fluid
i-Fog Fluid
Heavy Fog Fluid (A1)
Heavy Fog Fluid (B2)
Heavy Fog Fluid (C3)
RUSH Fog Fluid
RUSH Haze Fluid
Pro Clean Supreme Fluid
Regular DJ Fluid (DJ)
Pro Haze Fluid, (Freshly Fragranced)
RUSH ELX Smoke Fluid
RUSH ELX Haze Fluid

Revision No.: N Date: 07/02/2025
Replaces SDS No.:111M Date: 13/10/2022

1.2. Relevant Identified Uses Of The Substance Or Mixture And Uses Advised Against:
Fluid mixture for use in the creation of atmospheric fog or haze effects using a dedicated Martin brand atmospheric effect machine.

1.3. Details of the Supplier of the Safety Data Sheet:
Martin Manufacturing UK – Division of Harman International Industries Ltd
Belvoir Way,
Fairfield Industrial Estate,
Louth,
Lincolnshire,
LN11 0LQ
UK
Tel: +44 (0) 1507 604399
Email: mailto:hprotechsupportemea@harman.com

1.4. Emergency Telephone Number and contact:
+44 1707 668110 (24-hour)
mailto:hprotechsupportemea@harman.com

2. Hazards Identification:

2.1. Classification of the Substance or Mixture:
This substance does not meet the criteria for classification in accordance with Regulation (EC) No 1272/2008.
No risk or safety phrases stipulated.

2.2. Label Elements:

Label Name:
JEM Pro-Fog Fluid, Extra Quick Dissipating
JEM Pro-Fog Fluid, Quick Dissipating
JEM Pro-Fog Fluid
JEM Pro-Fog Fluid, High Density
JEM Low-Fog Fluid, Quick Dissipating
JEM Low-Fog Fluid
JEM Low-Fog Fluid, High Density
JEM K1 Haze Fluid
JEM C-Plus Haze Fluid
RUSH Club Smoke Dual Fluid
RUSH & THRILL Fog Fluid
RUSH & THRILL Haze Fluid
Martin Pro-Clean and Storage Fluid
Pro Steam (Extra Fast) HP

Discontinued Fluid Types covered by this SDS:

Pro Smoke Super Fluid (ZR), (Freshly Fragranced)
Pro Smoke Studio Fluid (DX)
Pro Smoke High Density Fluid (SP)
Pro Steam Simulation Fluid
i-Fog Fluid
Heavy Fog Fluid (A1)
Heavy Fog Fluid (B2)
Heavy Fog Fluid (C3)
RUSH Fog Fluid
RUSH Haze Fluid
Pro Clean Supreme Fluid
Regular DJ Fluid (DJ)
Pro Haze Fluid
RUSH ELX Smoke Fluid
RUSH ELX Haze Fluid

No other elements are needed in accordance with Article 25 and Article 32(6) of Regulation (EC) No 1272/2008.

2.3. Other Hazards:

This mixture is for the production of synthetic atmospheric effects in an approved Martin brand effect machine only.

Ingestion	Very low toxicity
Eye/skin	Very low toxicity
Inhalation	Low concentration of hazardous substances in vapour. Undiluted vapour should not be inhaled. (Note: The concentration of smoke components in the final product is below the OES under normal operating conditions)

3. Composition/Information on Ingredients

3.1. Substances:

Food/High Grade glycols:
Monopropylene Glycol: CAS Registry Number: 57-55-6
Triethylene Glycol: CAS Registry Number: 112-27-6

De-mineralised water.

Contains no substances stated in the Globally Harmonised System of Classification and Labelling of Chemicals.

Contains monopropylene glycol, for which a community workplace exposure limit has been set.

3.2. Mixtures:

The largest single component of this product is de-mineralised water.
Other ingredients: 5% - 40%

4. First Aid Measures

4.1. Description of First Aid Measures:

Exposure Route	Symptom	Treatment
Inhalation	Mild irritation of nose & throat	Remove from exposure, rest and keep warm. In severe cases, or if recovery is not rapid or complete, seek medical attention
Skin Contact	Mild irritation	Drench the skin with plenty of water. Remove contaminated clothing and wash before re-use. If large areas of the skin are damaged or if irritation persists seek medical attention
Eye Contact	Mild irritation	Irrigate thoroughly with water for at least 10-minutes. Obtain medical attention
Ingestion	Mild irritation of gastro-intestinal tract	Wash out mouth with water. Do not induce vomiting. If patient is conscious, give water to drink. If patient feels unwell seek medical attention

4.2. Most Important Symptoms and Effects, Both Acute and Delayed:

Mild irritation of nose & throat

Remove from exposure, rest and keep warm.
In severe cases, or if recovery is not rapid or complete, seek medical attention.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed:

None stated.

5. Fire Fighting Measures

5.1. Extinguishing Media:

Suitable Extinguishers:
Alcohol-resistant or all-purpose-type foam.
Use carbon dioxide or dry powder for small fires only.

Unsuitable Extinguishers:
Do not direct a solid stream of water or foam into hot burning pools as this may cause frothing and increase the intensity of a fire.

5.2. Special Hazards Arising from the Substance or Mixture:

Hazardous Combustion Product
Oxides of carbon including aldehydes.

5.3. Advice for Firefighters:

Special equipment for firefighting:
Self-contained breathing apparatus.

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures:

Wear appropriate PPE when handling - see section 8.2.

6.2. Environmental Precautions:

Prevent entry into drains and water courses.

6.3. Methods and Material for Containment and Cleaning Up:

Cover drains to prevent entry into water courses.
Bund or absorb material with sand, earth or other suitable absorbent material.
If possible, transfer to a salvage tank, otherwise absorb residues and place in suitable labelled containers and hold for waste disposal.

6.4. Reference to Other Sections:

See section 13 for disposal procedures.

7. Handling and Storage

7.1. Precautions for Safe Handling:

Avoid prolonged skin contact.
Avoid contact with eyes.
Avoid spills.
Ensure good general ventilation of area.
Avoid creating spray.
Do not breathe undiluted vapour.

7.2. Conditions for Safe Storage, Including Any Incompatibilities:

Store in original closed containers.
Store at ambient temperature.
Store away from materials listed in section 10.

7.3. Specific End Use(s):

Only for use in a designated effect machine to produce fog or haze as a special effect.

8. Exposure Controls/Personal Protection

8.1. Control Parameters:

8.1.3. Exposure Limit Values

Does not exceed 10 mg/m³ for particulate suspension and 474 mg/m³ for total vapour plus particulates.

OES for monopropylene glycol set at 150 ppm (total vapour and particulates) for 8-hour TWA, and 10 mg/m3 (particulates) for 15-minute STEL.

Norway - Substance with CAS number 57-55-6 has Norwegian exposure limits of: 25 ppm and 79 mg/m³

8.2. Exposure Controls:

Recommended PPE:

Respiratory	None needed under normal handling conditions
Hand	None needed under normal handling conditions
Eye	None needed under normal handling conditions
Skin	Overalls and boots
Hygiene	Always wash thoroughly after handling chemicals

9. Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties:

Appearance:	Colourless liquid
Odour:	Mild
Odour threshold:	No data available to us
pH:	Neutral
Melting point/range:	< -20° C (-4° F)
Boiling point/range:	101.6 - 201.6° C (214.8 - 394.8° F)
Flash point:	> 103° C (217.4° F)
	Test flame extinguished at 103° C (217.4° F)
Evaporation rate:	0.003
Flammability:	No data available to us
Flammability limits:	2.9 - 18.1 v/v (estimated)
Vapour pressure:	2.67 kPa at 20° C (68° F)
Vapour density:	3.9

Relative density:	1.050 at 20° C/20° C (1.050 at 68° F/68° F)
Solubility:	Completely miscible in water
Partition coefficient: n-octanol/water:	No data available to us
Auto-ignition temperature:	No data available to us
Decomposition temperature:	No data available to us
Viscosity:	No data available to us
Explosive properties:	No data available to us
Oxidising properties:	No data available to us

9.2. Other Information:

No data available to us.

10. Stability and Reactivity

10.1. Reactivity:

No data available to us.

10.2. Chemical Stability:

Stable in normal conditions.

10.3. Possibility of Hazardous Reactions:

Possibility of explosive decomposition if combined with strong acids or bases at elevated temperatures.

10.4. Conditions to Avoid:

Elevated temperatures.

10.5. Incompatible Materials:

Strong acids and bases; strong oxidisers.

10.6. Hazardous decomposition products:

Oxides of carbon, including aldehydes.

11. Toxicological Information

11.1. Information on Toxicological Effects:

LD50 for monopropylene glycol:
21000 - 33700 mg/kg oral - rat, >10000 mg/kg skin - rabbit.

May cause slight irritation to skin, eyes and mucous membranes.
Large doses may produce adverse effects on liver, kidneys and central nervous system.

No evidence in developmental toxicity studies for either embryotoxic or teratogenic effects.

12. Ecological Information

12.1. Toxicity:

Short and long-term effects
LC50, fathead minnow = 4600 - 54900 mg/l
EC50, Daphnia magna = 4850 - 34400 mg/l

12.2. Persistence and Degradability:

The preparation is largely biodegradable:
BOD5 = 1.08 gO2/g; ThOD = 1.68 gO2/g; COD = 1.63 gO2/g
BOD20/ThOD = 86%

12.3. Bioaccumulative Potential:

Low.

12.4. Mobility in Soil:

Liquid with low volatility, soluble in water, predicted to have high mobility in soil.

12.5. Results Of PBT And vPvB Assessment:

No data available to us.

12.6. Other Adverse Effects:

None known

13. Disposal Considerations

13.1. Waste Treatment Methods:

a. Substance:
Via an authorised waste disposal contractor to an approved waste disposal site, observing all local and national regulations.

b. Container:
As for substance. Used containers must not be cut up or punctured until completely purged of product residues.

14. Transport Information

No special precautions for transport

14.1. UN Number:

Not Regulated.

14.2. UN Proper Shipping Name:
Not Regulated.

14.3. Transport Hazard Class:
Not Regulated.

14.4. Packing Group:
Not Regulated.

14.5. Environmental Hazards:
Not Regulated.

14.6. Special Precautions for User:
Not Regulated.

14.7. Transport in Bulk According To Annex II of MARPOL73/78 and the IBC Code:
Not Regulated.

IATA Not Regulated – Goods are not dangerous, hazardous or restricted for transport by the International Air Transport Association

15. Regulatory Information

15.1. Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

Symbol: No risk or safety phrases stipulated
Risk phrases: No risk or safety phrases stipulated
Safety phrases: No risk or safety phrases stipulated
E.E.C. Number: No risk or safety phrases stipulated

Use of this material may be governed by the following regulations:
EU Regulation 453/2010
Users are advised to consult these regulations for further information.

15.2. Chemical Safety Assessment:
No data available to us.

16. Other Information

The information contained in this data sheet does not constitute an assessment of workplace risk as required by other health and safety legislation.
No special training is required for handling this preparation other than normal precautions for safe handling of chemicals

This material is usually used to produce synthetic atmospheric effects such as fog or haze in an approved Martin brand effect machine.
The concentration of fog components is below the OES under normal operating conditions.
It must not be used for any other purpose, or in any other equipment
Further details may be available on request from the supplier, whose address, telephone number and email address are provided in section 1.

Sources of information:

1. Suppliers' Safety Data Sheets for substances used as raw materials in the preparation.
2. Regulation (EC) No 1907/2006 – REACH
3. Regulation (EC) 453/2010 – REACH Amendment
4. Regulation (EC) No 1272/2008 - CLP Regulation
5. GB 13690-2009 National Standard of the People's Republic of China
6. NFPA 325M Guide to fire hazard properties of flammable liquids, gases, and volatile solids
7. Globally Harmonized System of Classification and Labelling of Chemicals – GHS

Legal Disclaimer:

Although we always attempt to make our information as accurate, current, and complete as possible, the information herein is provided "as is" without any express or implied warranty of any kind. As such we disclaim liability for any inaccuracy, non-currency or incompleteness of any individual item herein and the inability to fulfil any purpose contemplated.
We disclaim liability for any injury, damage, direct or indirect loss, consequential or economic loss or any other loss occasioned by any use of, the product not in conformity with the instructions herein.

If you have purchased the product for supply to a third party, it is your duty to take all necessary steps to ensure that any person handling and using the product is provided with the information in this sheet. If you are an employer, it is your duty to tell your employees and others who may be affected by any hazard described in this sheet and of any precautions that should be taken. We disclaim liability for any injury, damage, direct or indirect loss, consequential or economic loss or any other loss occasioned by you by any non-compliance with this instruction

Any further information needed please contact e-mail:
mailto:hprotechsupportemea@harman.com

SAFETY DATA SHEET

MARTIN EFFECT FLUIDS

For the most up to date version of this document, please scan this QR Code or visit:

http://www.martin.com/EN-US/Safety-Documents

1. Identification of the Substance/Mixture & of the Company/Undertaking

1.1. Product Identifier:

Name:

JEM Pro-Fog Fluid, Extra Quick Dissipating
JEM Pro-Fog Fluid, Quick Dissipating
JEM Pro-Fog Fluid
JEM Pro-Fog Fluid, High Density
JEM Low-Fog Fluid, Quick Dissipating
JEM Low-Fog Fluid
JEM Low-Fog Fluid, High Density
JEM K1 Haze Fluid
JEM C-Plus Haze Fluid
RUSH Club Smoke Dual Fluid
RUSH & THRILL Fog Fluid
RUSH & THRILL Haze Fluid
Martin Pro-Clean and Storage Fluid
Pro Steam (Extra Fast) HP

Discontinued Effect Fluid Types covered by this SDS:

Pro Smoke Super Fluid (ZR), (Freshly Fragranced)
Pro Smoke Studio Fluid (DX)
Pro Smoke High Density Fluid (SP)
Pro Steam Simulation Fluid
i-Fog Fluid
Heavy Fog Fluid (A1)
Heavy Fog Fluid (B2)
Heavy Fog Fluid (C3)
RUSH Fog Fluid
RUSH Haze Fluid
Pro Clean Supreme Fluid
Regular DJ Fluid (DJ)
Pro Haze Fluid, (Freshly Fragranced)
RUSH ELX Smoke Fluid
RUSH ELX Haze Fluid

Revision No.: N Date: 07/02/2025
Replaces SDS No.:111M Date: 13/10/2022

1.2. Relevant Identified Uses Of The Substance Or Mixture And Uses Advised Against:
Fluid mixture for use in the creation of atmospheric fog or haze effects using a dedicated Martin brand atmospheric effect machine.

1.3. Details of the Supplier of the Safety Data Sheet:
Martin Manufacturing UK – Division of Harman International Industries Ltd
Belvoir Way,
Fairfield Industrial Estate,
Louth,
Lincolnshire,
LN11 0LQ
UK
Tel: +44 (0) 1507 604399
Email: mailto:hprotechsupportemea@harman.com

1.4. Emergency Telephone Number and contact:
+44 1707 668110 (24-hour)
mailto:hprotechsupportemea@harman.com

2. Hazards Identification:

2.1. Classification of the Substance or Mixture:
This substance does not meet the criteria for classification in accordance with Regulation (EC) No 1272/2008.
No risk or safety phrases stipulated.

2.2. Label Elements:

Label Name:
JEM Pro-Fog Fluid, Extra Quick Dissipating
JEM Pro-Fog Fluid, Quick Dissipating
JEM Pro-Fog Fluid
JEM Pro-Fog Fluid, High Density
JEM Low-Fog Fluid, Quick Dissipating
JEM Low-Fog Fluid
JEM Low-Fog Fluid, High Density
JEM K1 Haze Fluid
JEM C-Plus Haze Fluid
RUSH Club Smoke Dual Fluid
RUSH & THRILL Fog Fluid
RUSH & THRILL Haze Fluid
Martin Pro-Clean and Storage Fluid
Pro Steam (Extra Fast) HP

Discontinued Fluid Types covered by this SDS:

Pro Smoke Super Fluid (ZR), (Freshly Fragranced)
Pro Smoke Studio Fluid (DX)
Pro Smoke High Density Fluid (SP)
Pro Steam Simulation Fluid
i-Fog Fluid
Heavy Fog Fluid (A1)
Heavy Fog Fluid (B2)
Heavy Fog Fluid (C3)
RUSH Fog Fluid
RUSH Haze Fluid
Pro Clean Supreme Fluid
Regular DJ Fluid (DJ)
Pro Haze Fluid
RUSH ELX Smoke Fluid
RUSH ELX Haze Fluid

No other elements are needed in accordance with Article 25 and Article 32(6) of Regulation (EC) No 1272/2008.

2.3. Other Hazards:

This mixture is for the production of synthetic atmospheric effects in an approved Martin brand effect machine only.

Ingestion	Very low toxicity
Eye/skin	Very low toxicity
Inhalation	Low concentration of hazardous substances in vapour. Undiluted vapour should not be inhaled. (Note: The concentration of smoke components in the final product is below the OES under normal operating conditions)

3. Composition/Information on Ingredients

3.1. Substances:

Food/High Grade glycols:
Monopropylene Glycol: CAS Registry Number: 57-55-6
Triethylene Glycol: CAS Registry Number: 112-27-6

De-mineralised water.

Contains no substances stated in the Globally Harmonised System of Classification and Labelling of Chemicals.

Contains monopropylene glycol, for which a community workplace exposure limit has been set.

3.2. Mixtures:

The largest single component of this product is de-mineralised water.
Other ingredients: 5% - 40%

4. First Aid Measures

4.1. Description of First Aid Measures:

Exposure Route	Symptom	Treatment
Inhalation	Mild irritation of nose & throat	Remove from exposure, rest and keep warm. In severe cases, or if recovery is not rapid or complete, seek medical attention
Skin Contact	Mild irritation	Drench the skin with plenty of water. Remove contaminated clothing and wash before re-use. If large areas of the skin are damaged or if irritation persists seek medical attention
Eye Contact	Mild irritation	Irrigate thoroughly with water for at least 10-minutes. Obtain medical attention
Ingestion	Mild irritation of gastro-intestinal tract	Wash out mouth with water. Do not induce vomiting. If patient is conscious, give water to drink. If patient feels unwell seek medical attention

4.2. Most Important Symptoms and Effects, Both Acute and Delayed:

Mild irritation of nose & throat

Remove from exposure, rest and keep warm.
In severe cases, or if recovery is not rapid or complete, seek medical attention.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed:

None stated.

5. Fire Fighting Measures

5.1. Extinguishing Media:

Suitable Extinguishers:
Alcohol-resistant or all-purpose-type foam.
Use carbon dioxide or dry powder for small fires only.

Unsuitable Extinguishers:
Do not direct a solid stream of water or foam into hot burning pools as this may cause frothing and increase the intensity of a fire.

5.2. Special Hazards Arising from the Substance or Mixture:

Hazardous Combustion Product
Oxides of carbon including aldehydes.

5.3. Advice for Firefighters:

Special equipment for firefighting:
Self-contained breathing apparatus.

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures:

Wear appropriate PPE when handling - see section 8.2.

6.2. Environmental Precautions:

Prevent entry into drains and water courses.

6.3. Methods and Material for Containment and Cleaning Up:

Cover drains to prevent entry into water courses.
Bund or absorb material with sand, earth or other suitable absorbent material.
If possible, transfer to a salvage tank, otherwise absorb residues and place in suitable labelled containers and hold for waste disposal.

6.4. Reference to Other Sections:

See section 13 for disposal procedures.

7. Handling and Storage

7.1. Precautions for Safe Handling:

Avoid prolonged skin contact.
Avoid contact with eyes.
Avoid spills.
Ensure good general ventilation of area.
Avoid creating spray.
Do not breathe undiluted vapour.

7.2. Conditions for Safe Storage, Including Any Incompatibilities:

Store in original closed containers.
Store at ambient temperature.
Store away from materials listed in section 10.

7.3. Specific End Use(s):

Only for use in a designated effect machine to produce fog or haze as a special effect.

8. Exposure Controls/Personal Protection

8.1. Control Parameters:

8.1.3. Exposure Limit Values

Does not exceed 10 mg/m³ for particulate suspension and 474 mg/m³ for total vapour plus particulates.

OES for monopropylene glycol set at 150 ppm (total vapour and particulates) for 8-hour TWA, and 10 mg/m3 (particulates) for 15-minute STEL.

Norway - Substance with CAS number 57-55-6 has Norwegian exposure limits of: 25 ppm and 79 mg/m³

8.2. Exposure Controls:

Recommended PPE:

Respiratory	None needed under normal handling conditions
Hand	None needed under normal handling conditions
Eye	None needed under normal handling conditions
Skin	Overalls and boots
Hygiene	Always wash thoroughly after handling chemicals

9. Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties:

Appearance:	Colourless liquid
Odour:	Mild
Odour threshold:	No data available to us
pH:	Neutral
Melting point/range:	< -20° C (-4° F)
Boiling point/range:	101.6 - 201.6° C (214.8 - 394.8° F)
Flash point:	> 103° C (217.4° F)
	Test flame extinguished at 103° C (217.4° F)
Evaporation rate:	0.003
Flammability:	No data available to us
Flammability limits:	2.9 - 18.1 v/v (estimated)
Vapour pressure:	2.67 kPa at 20° C (68° F)
Vapour density:	3.9

Relative density:	1.050 at 20° C/20° C (1.050 at 68° F/68° F)
Solubility:	Completely miscible in water
Partition coefficient: n-octanol/water:	No data available to us
Auto-ignition temperature:	No data available to us
Decomposition temperature:	No data available to us
Viscosity:	No data available to us
Explosive properties:	No data available to us
Oxidising properties:	No data available to us

9.2. Other Information:

No data available to us.

10. Stability and Reactivity

10.1. Reactivity:

No data available to us.

10.2. Chemical Stability:

Stable in normal conditions.

10.3. Possibility of Hazardous Reactions:

Possibility of explosive decomposition if combined with strong acids or bases at elevated temperatures.

10.4. Conditions to Avoid:

Elevated temperatures.

10.5. Incompatible Materials:

Strong acids and bases; strong oxidisers.

10.6. Hazardous decomposition products:

Oxides of carbon, including aldehydes.

11. Toxicological Information

11.1. Information on Toxicological Effects:

LD50 for monopropylene glycol:
21000 - 33700 mg/kg oral - rat, >10000 mg/kg skin - rabbit.

May cause slight irritation to skin, eyes and mucous membranes.
Large doses may produce adverse effects on liver, kidneys and central nervous system.

No evidence in developmental toxicity studies for either embryotoxic or teratogenic effects.

12. Ecological Information

12.1. Toxicity:

Short and long-term effects
LC50, fathead minnow = 4600 - 54900 mg/l
EC50, Daphnia magna = 4850 - 34400 mg/l

12.2. Persistence and Degradability:

The preparation is largely biodegradable:
BOD5 = 1.08 gO2/g; ThOD = 1.68 gO2/g; COD = 1.63 gO2/g
BOD20/ThOD = 86%

12.3. Bioaccumulative Potential:

Low.

12.4. Mobility in Soil:

Liquid with low volatility, soluble in water, predicted to have high mobility in soil.

12.5. Results Of PBT And vPvB Assessment:

No data available to us.

12.6. Other Adverse Effects:

None known

13. Disposal Considerations

13.1. Waste Treatment Methods:

a. Substance:
Via an authorised waste disposal contractor to an approved waste disposal site, observing all local and national regulations.

b. Container:
As for substance. Used containers must not be cut up or punctured until completely purged of product residues.

14. Transport Information

No special precautions for transport

14.1. UN Number:

Not Regulated.

14.2. UN Proper Shipping Name:
Not Regulated.

14.3. Transport Hazard Class:
Not Regulated.

14.4. Packing Group:
Not Regulated.

14.5. Environmental Hazards:
Not Regulated.

14.6. Special Precautions for User:
Not Regulated.

14.7. Transport in Bulk According To Annex II of MARPOL73/78 and the IBC Code:
Not Regulated.

IATA Not Regulated – Goods are not dangerous, hazardous or restricted for transport by the International Air Transport Association

15. Regulatory Information

15.1. Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

Symbol: No risk or safety phrases stipulated
Risk phrases: No risk or safety phrases stipulated
Safety phrases: No risk or safety phrases stipulated
E.E.C. Number: No risk or safety phrases stipulated

Use of this material may be governed by the following regulations:
EU Regulation 453/2010
Users are advised to consult these regulations for further information.

15.2. Chemical Safety Assessment:
No data available to us.

16. Other Information

The information contained in this data sheet does not constitute an assessment of workplace risk as required by other health and safety legislation.
No special training is required for handling this preparation other than normal precautions for safe handling of chemicals

This material is usually used to produce synthetic atmospheric effects such as fog or haze in an approved Martin brand effect machine.
The concentration of fog components is below the OES under normal operating conditions.
It must not be used for any other purpose, or in any other equipment
Further details may be available on request from the supplier, whose address, telephone number and email address are provided in section 1.

Sources of information:

1. Suppliers' Safety Data Sheets for substances used as raw materials in the preparation.
2. Regulation (EC) No 1907/2006 – REACH
3. Regulation (EC) 453/2010 – REACH Amendment
4. Regulation (EC) No 1272/2008 - CLP Regulation
5. GB 13690-2009 National Standard of the People's Republic of China
6. NFPA 325M Guide to fire hazard properties of flammable liquids, gases, and volatile solids
7. Globally Harmonized System of Classification and Labelling of Chemicals – GHS

Legal Disclaimer:

Although we always attempt to make our information as accurate, current, and complete as possible, the information herein is provided "as is" without any express or implied warranty of any kind. As such we disclaim liability for any inaccuracy, non-currency or incompleteness of any individual item herein and the inability to fulfil any purpose contemplated.
We disclaim liability for any injury, damage, direct or indirect loss, consequential or economic loss or any other loss occasioned by any use of, the product not in conformity with the instructions herein.

If you have purchased the product for supply to a third party, it is your duty to take all necessary steps to ensure that any person handling and using the product is provided with the information in this sheet. If you are an employer, it is your duty to tell your employees and others who may be affected by any hazard described in this sheet and of any precautions that should be taken. We disclaim liability for any injury, damage, direct or indirect loss, consequential or economic loss or any other loss occasioned by you by any non-compliance with this instruction

Any further information needed please contact e-mail:
mailto:hprotechsupportemea@harman.com

SAFETY DATA SHEET

MARTIN EFFECT FLUIDS

For the most up to date version of this document, please scan this QR Code or visit:

http://www.martin.com/EN-US/Safety-Documents

1. Identification of the Substance/Mixture & of the Company/Undertaking

1.1. Product Identifier:

Name:

JEM Pro-Fog Fluid, Extra Quick Dissipating
JEM Pro-Fog Fluid, Quick Dissipating
JEM Pro-Fog Fluid
JEM Pro-Fog Fluid, High Density
JEM Low-Fog Fluid, Quick Dissipating
JEM Low-Fog Fluid
JEM Low-Fog Fluid, High Density
JEM K1 Haze Fluid
JEM C-Plus Haze Fluid
RUSH Club Smoke Dual Fluid
RUSH & THRILL Fog Fluid
RUSH & THRILL Haze Fluid
Martin Pro-Clean and Storage Fluid
Pro Steam (Extra Fast) HP

Discontinued Effect Fluid Types covered by this SDS:

Pro Smoke Super Fluid (ZR), (Freshly Fragranced)
Pro Smoke Studio Fluid (DX)
Pro Smoke High Density Fluid (SP)
Pro Steam Simulation Fluid
i-Fog Fluid
Heavy Fog Fluid (A1)
Heavy Fog Fluid (B2)
Heavy Fog Fluid (C3)
RUSH Fog Fluid
RUSH Haze Fluid
Pro Clean Supreme Fluid
Regular DJ Fluid (DJ)
Pro Haze Fluid, (Freshly Fragranced)
RUSH ELX Smoke Fluid
RUSH ELX Haze Fluid

Revision No.: N Date: 07/02/2025
Replaces SDS No.:111M Date: 13/10/2022

1.2. Relevant Identified Uses Of The Substance Or Mixture And Uses Advised Against:
Fluid mixture for use in the creation of atmospheric fog or haze effects using a dedicated Martin brand atmospheric effect machine.

1.3. Details of the Supplier of the Safety Data Sheet:
Martin Manufacturing UK – Division of Harman International Industries Ltd
Belvoir Way,
Fairfield Industrial Estate,
Louth,
Lincolnshire,
LN11 0LQ
UK
Tel: +44 (0) 1507 604399
Email: mailto:hprotechsupportemea@harman.com

1.4. Emergency Telephone Number and contact:
+44 1707 668110 (24-hour)
mailto:hprotechsupportemea@harman.com

2. Hazards Identification:

2.1. Classification of the Substance or Mixture:
This substance does not meet the criteria for classification in accordance with Regulation (EC) No 1272/2008.
No risk or safety phrases stipulated.

2.2. Label Elements:

Label Name:
JEM Pro-Fog Fluid, Extra Quick Dissipating
JEM Pro-Fog Fluid, Quick Dissipating
JEM Pro-Fog Fluid
JEM Pro-Fog Fluid, High Density
JEM Low-Fog Fluid, Quick Dissipating
JEM Low-Fog Fluid
JEM Low-Fog Fluid, High Density
JEM K1 Haze Fluid
JEM C-Plus Haze Fluid
RUSH Club Smoke Dual Fluid
RUSH & THRILL Fog Fluid
RUSH & THRILL Haze Fluid
Martin Pro-Clean and Storage Fluid
Pro Steam (Extra Fast) HP

Discontinued Fluid Types covered by this SDS:

Pro Smoke Super Fluid (ZR), (Freshly Fragranced)
Pro Smoke Studio Fluid (DX)
Pro Smoke High Density Fluid (SP)
Pro Steam Simulation Fluid
i-Fog Fluid
Heavy Fog Fluid (A1)
Heavy Fog Fluid (B2)
Heavy Fog Fluid (C3)
RUSH Fog Fluid
RUSH Haze Fluid
Pro Clean Supreme Fluid
Regular DJ Fluid (DJ)
Pro Haze Fluid
RUSH ELX Smoke Fluid
RUSH ELX Haze Fluid

No other elements are needed in accordance with Article 25 and Article 32(6) of Regulation (EC) No 1272/2008.

2.3. Other Hazards:

This mixture is for the production of synthetic atmospheric effects in an approved Martin brand effect machine only.

Ingestion	Very low toxicity
Eye/skin	Very low toxicity
Inhalation	Low concentration of hazardous substances in vapour. Undiluted vapour should not be inhaled. (Note: The concentration of smoke components in the final product is below the OES under normal operating conditions)

3. Composition/Information on Ingredients

3.1. Substances:

Food/High Grade glycols:
Monopropylene Glycol: CAS Registry Number: 57-55-6
Triethylene Glycol: CAS Registry Number: 112-27-6

De-mineralised water.

Contains no substances stated in the Globally Harmonised System of Classification and Labelling of Chemicals.

Contains monopropylene glycol, for which a community workplace exposure limit has been set.

3.2. Mixtures:

The largest single component of this product is de-mineralised water.
Other ingredients: 5% - 40%

4. First Aid Measures

4.1. Description of First Aid Measures:

Exposure Route	Symptom	Treatment
Inhalation	Mild irritation of nose & throat	Remove from exposure, rest and keep warm. In severe cases, or if recovery is not rapid or complete, seek medical attention
Skin Contact	Mild irritation	Drench the skin with plenty of water. Remove contaminated clothing and wash before re-use. If large areas of the skin are damaged or if irritation persists seek medical attention
Eye Contact	Mild irritation	Irrigate thoroughly with water for at least 10-minutes. Obtain medical attention
Ingestion	Mild irritation of gastro-intestinal tract	Wash out mouth with water. Do not induce vomiting. If patient is conscious, give water to drink. If patient feels unwell seek medical attention

4.2. Most Important Symptoms and Effects, Both Acute and Delayed:

Mild irritation of nose & throat

Remove from exposure, rest and keep warm.
In severe cases, or if recovery is not rapid or complete, seek medical attention.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed:

None stated.

5. Fire Fighting Measures

5.1. Extinguishing Media:

Suitable Extinguishers:
Alcohol-resistant or all-purpose-type foam.
Use carbon dioxide or dry powder for small fires only.

Unsuitable Extinguishers:
Do not direct a solid stream of water or foam into hot burning pools as this may cause frothing and increase the intensity of a fire.

5.2. Special Hazards Arising from the Substance or Mixture:

Hazardous Combustion Product
Oxides of carbon including aldehydes.

5.3. Advice for Firefighters:

Special equipment for firefighting:
Self-contained breathing apparatus.

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures:

Wear appropriate PPE when handling - see section 8.2.

6.2. Environmental Precautions:

Prevent entry into drains and water courses.

6.3. Methods and Material for Containment and Cleaning Up:

Cover drains to prevent entry into water courses.
Bund or absorb material with sand, earth or other suitable absorbent material.
If possible, transfer to a salvage tank, otherwise absorb residues and place in suitable labelled containers and hold for waste disposal.

6.4. Reference to Other Sections:

See section 13 for disposal procedures.

7. Handling and Storage

7.1. Precautions for Safe Handling:

Avoid prolonged skin contact.
Avoid contact with eyes.
Avoid spills.
Ensure good general ventilation of area.
Avoid creating spray.
Do not breathe undiluted vapour.

7.2. Conditions for Safe Storage, Including Any Incompatibilities:

Store in original closed containers.
Store at ambient temperature.
Store away from materials listed in section 10.

7.3. Specific End Use(s):

Only for use in a designated effect machine to produce fog or haze as a special effect.

8. Exposure Controls/Personal Protection

8.1. Control Parameters:

8.1.3. Exposure Limit Values

Does not exceed 10 mg/m³ for particulate suspension and 474 mg/m³ for total vapour plus particulates.

OES for monopropylene glycol set at 150 ppm (total vapour and particulates) for 8-hour TWA, and 10 mg/m3 (particulates) for 15-minute STEL.

Norway - Substance with CAS number 57-55-6 has Norwegian exposure limits of: 25 ppm and 79 mg/m³

8.2. Exposure Controls:

Recommended PPE:

Respiratory	None needed under normal handling conditions
Hand	None needed under normal handling conditions
Eye	None needed under normal handling conditions
Skin	Overalls and boots
Hygiene	Always wash thoroughly after handling chemicals

9. Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties:

Appearance:	Colourless liquid
Odour:	Mild
Odour threshold:	No data available to us
pH:	Neutral
Melting point/range:	< -20° C (-4° F)
Boiling point/range:	101.6 - 201.6° C (214.8 - 394.8° F)
Flash point:	> 103° C (217.4° F)
	Test flame extinguished at 103° C (217.4° F)
Evaporation rate:	0.003
Flammability:	No data available to us
Flammability limits:	2.9 - 18.1 v/v (estimated)
Vapour pressure:	2.67 kPa at 20° C (68° F)
Vapour density:	3.9

Relative density:	1.050 at 20° C/20° C (1.050 at 68° F/68° F)
Solubility:	Completely miscible in water
Partition coefficient: n-octanol/water:	No data available to us
Auto-ignition temperature:	No data available to us
Decomposition temperature:	No data available to us
Viscosity:	No data available to us
Explosive properties:	No data available to us
Oxidising properties:	No data available to us

9.2. Other Information:

No data available to us.

10. Stability and Reactivity

10.1. Reactivity:

No data available to us.

10.2. Chemical Stability:

Stable in normal conditions.

10.3. Possibility of Hazardous Reactions:

Possibility of explosive decomposition if combined with strong acids or bases at elevated temperatures.

10.4. Conditions to Avoid:

Elevated temperatures.

10.5. Incompatible Materials:

Strong acids and bases; strong oxidisers.

10.6. Hazardous decomposition products:

Oxides of carbon, including aldehydes.

11. Toxicological Information

11.1. Information on Toxicological Effects:

LD50 for monopropylene glycol:
21000 - 33700 mg/kg oral - rat, >10000 mg/kg skin - rabbit.

May cause slight irritation to skin, eyes and mucous membranes.
Large doses may produce adverse effects on liver, kidneys and central nervous system.

No evidence in developmental toxicity studies for either embryotoxic or teratogenic effects.

12. Ecological Information

12.1. Toxicity:

Short and long-term effects
LC50, fathead minnow = 4600 - 54900 mg/l
EC50, Daphnia magna = 4850 - 34400 mg/l

12.2. Persistence and Degradability:

The preparation is largely biodegradable:
BOD5 = 1.08 gO2/g; ThOD = 1.68 gO2/g; COD = 1.63 gO2/g
BOD20/ThOD = 86%

12.3. Bioaccumulative Potential:

Low.

12.4. Mobility in Soil:

Liquid with low volatility, soluble in water, predicted to have high mobility in soil.

12.5. Results Of PBT And vPvB Assessment:

No data available to us.

12.6. Other Adverse Effects:

None known

13. Disposal Considerations

13.1. Waste Treatment Methods:

a. Substance:
Via an authorised waste disposal contractor to an approved waste disposal site, observing all local and national regulations.

b. Container:
As for substance. Used containers must not be cut up or punctured until completely purged of product residues.

14. Transport Information

No special precautions for transport

14.1. UN Number:

Not Regulated.

14.2. UN Proper Shipping Name:
Not Regulated.

14.3. Transport Hazard Class:
Not Regulated.

14.4. Packing Group:
Not Regulated.

14.5. Environmental Hazards:
Not Regulated.

14.6. Special Precautions for User:
Not Regulated.

14.7. Transport in Bulk According To Annex II of MARPOL73/78 and the IBC Code:
Not Regulated.

IATA Not Regulated – Goods are not dangerous, hazardous or restricted for transport by the International Air Transport Association

15. Regulatory Information

15.1. Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

Symbol: No risk or safety phrases stipulated
Risk phrases: No risk or safety phrases stipulated
Safety phrases: No risk or safety phrases stipulated
E.E.C. Number: No risk or safety phrases stipulated

Use of this material may be governed by the following regulations:
EU Regulation 453/2010
Users are advised to consult these regulations for further information.

15.2. Chemical Safety Assessment:
No data available to us.

16. Other Information

The information contained in this data sheet does not constitute an assessment of workplace risk as required by other health and safety legislation.
No special training is required for handling this preparation other than normal precautions for safe handling of chemicals

This material is usually used to produce synthetic atmospheric effects such as fog or haze in an approved Martin brand effect machine.
The concentration of fog components is below the OES under normal operating conditions.
It must not be used for any other purpose, or in any other equipment
Further details may be available on request from the supplier, whose address, telephone number and email address are provided in section 1.

Sources of information:

1. Suppliers' Safety Data Sheets for substances used as raw materials in the preparation.
2. Regulation (EC) No 1907/2006 – REACH
3. Regulation (EC) 453/2010 – REACH Amendment
4. Regulation (EC) No 1272/2008 - CLP Regulation
5. GB 13690-2009 National Standard of the People's Republic of China
6. NFPA 325M Guide to fire hazard properties of flammable liquids, gases, and volatile solids
7. Globally Harmonized System of Classification and Labelling of Chemicals – GHS

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We disclaim liability for any injury, damage, direct or indirect loss, consequential or economic loss or any other loss occasioned by any use of, the product not in conformity with the instructions herein.

If you have purchased the product for supply to a third party, it is your duty to take all necessary steps to ensure that any person handling and using the product is provided with the information in this sheet. If you are an employer, it is your duty to tell your employees and others who may be affected by any hazard described in this sheet and of any precautions that should be taken. We disclaim liability for any injury, damage, direct or indirect loss, consequential or economic loss or any other loss occasioned by you by any non-compliance with this instruction

Any further information needed please contact e-mail:
mailto:hprotechsupportemea@harman.com

HEALTH & SAFETY PRODUCT DATA SHEET

SECTION 1: Identification of the substance / Preparation and Company

1.1. Identification of the product

Name of the product: qtx BUBBLE FLUID (code 160574 & 160575)
qtx UV BUBBLE FLUID (code 160576 & 160577)

Packaging : Can of 1L, 5L

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1 Relevant identified uses

Spec. Industrial / professional use: For professional use

Application of the substance / preparation: Liquid formulation used to produce a bubble effect for show & party's

1.2.2. unsuitable uses No additional information available

1.3. Details of the Company:

AVSL GROUP LTD
Containerbase, Barton Dock Road
Manchester , M41 7BQ - United Kingdom
Website : www.avslgroup.com

1.4. Emergency call number

Country	Company	Emergency Number
France	ORFILA	+33 (0) 1 45 42 59 59

SECTION 2: Hazard Indentification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP] Show CLP + DPD classification information in section 2.1

Skin Irrit. 2 H315
Eye Dam. 1 H318
Full text of H-phrases: see section 16

Classification according to Directive 67/548 / EEC [DSD] or 1999/45 / EC [DPD]
Xi; R41
Full text of R-phrases: see section 16

Adverse physicochemical, human health and the environment
No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]



Hazard pictograms (CLP): GHS05
Signal word (CLP): Danger
Hazardous ingredients: SODIUM SULFATE LAURETH
Hazard statements (CLP): H315 - Causes skin irritation
H318 - Causes serious eye damage
Precautionary statements (CLP): P264 - Wash hands thoroughly after handling
P280 - Wear protective gloves
P302 + P352 - IF ON SKIN:
Wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES
Rinse cautiously with water for several minutes.
Remove contact lenses if the victim door and if they can be easily removed. Continue rinsing
P310 - Call a physician immediately
P332 + P313 - If skin irritation occurs: Get medical advice
P362 + P364 - Take off contaminated clothing and wash before reuse

2.3. Other hazards
No additional information available

SECTION 3: Composition/informations on ingredients

3.1. Not applicable Substance
3.2.Mixture

Name	Product identifier	%	Classification according to Directive 67/548 / EEC
SODIUM LAURETH SULFATE	(CAS n° : 68891-38-3) (CE n° : 500 -234-8	10 à 15,075 %	Xi; R38 Xi; R41
GLYCEROL	(CAS n° : 56-81-5) (Numéro CE : 200-289-5)	0,1 - 1 %	not rated
Hydroxypropyl Methylcellulose	(CAS n° : 9004-65-3)	0,1 à 1 %	not rated
2- (2-butoxyethoxy) ethanol	(CAS n°) 112-34-5 (CE n°) 203-961-6 (Index n°) 603-096-00-8 - (REACH n°) 01-2119475104-44	< 0,1 %	Xi; R36
Disodium C-isodecyl sulphonatosuccinate	(CAS n°) 37294-49-8 (CE n°) 253-452-8	< 0,025 %	Xi; R41
UNDECETH-5	(CAS n°) 34398-01-1 0	0,0025 - 0,025 %	R41Xn; R22
C9-11 ethoxylated alcohol	(CAS n°) 169107-21-5	0 - 0,0125 %	Xn; R22 Xi; R41
1-dodecanol	(CAS n°) 112-53-8 (CE n°) 203-982	0 < 0,01 %	Xi; R36 N; R50
ETHYLENE BRASSYLATE	(CAS n°) 105-95-3 (CE n°) 203-347-8	0,00125 - 0,005 %	N; R51/53
3- (2,2-dimethyl-3-hydroxypropyl) toluene	(CAS n°) 103694-68-4 (CE n°) 403-140-4 (Index n°) 603-138-00-5	0 - 0,00125 %	R52/53
tetrahydro-2-isobutyl-4-méthylpyranne-4-ol, a mixture of isomers (cis and trans)	(Index n°) 603-101-00-3	0 - 0,00125 %	Xi; R36
BETA-IONONE	(CAS n°) 14901-07-6 - (CE n°) 238-969-9	0 - 0,001250 %	N; R51/53
2-T-BUTYLCYCLOHEXYL ACETATE	(CAS n°) 88-41-5 (CE n°) 201-828-7	0 - 0,00125 %	N; R51/53
CIS-3-HEXENYL SALICYLATE	(CAS n°) 65405-77-8 (CE n°) 265-745-8	0 - 0,00125 %	R43 N; R50/53
HEXYL SALICYLATE	(CAS n°) 6259-76-3 (CE n°) 228-408-6	0 - 0,00125 %	Xi; R38 R43 N; R50/53
ALLYL HEPTANOATE	(CAS n°) 142-19-8 (CE n°) 205-527-1	0 - 0,00125 %	Xi; R38 Xn; R21/22 N; R50/53

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
SODIUM LAURETH SULFATE	(CAS n°) 68891-38-3 (CE n°) 500-234-8	10 - 15,075 %	Skin Irrit. 2, H315 Eye Dam. 1, H318
Glycérol	(CAS n°) 56-81-5 (CE n°) 200-289-5	0,1 - 1 %	not rated
Hydroxypropyl Methylcellulose	CAS n°) 9004-65-3	0,1 - 1 %	not rated
2- (2-butoxyethoxy) ethanol	(CAS n°) 112-34-5 - (CE n°) 203-961-6 (Index n°) 603-096-00-8 (REACH n°) 01-2119475104-44	< 0,1 %	Eye Irrit. 2, H319
Disodium C-isodecyl sulphonatosuccinate	(CAS n°) 37294-49-8 (CE n°) 253-452-8	< 0,025	Dam. 1, H318
UNDECETH-5	(CAS n°) 34398-01-1	0,0025 - 0,025 %	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
C9-11 ethoxylated alcohol	(CAS n°) 169107-21-5	0 - 0,0125	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
1-dodecanol	(CAS n°) 112-53-8 (CE n°) 203-982-0	< 0,01 %	Eye Irrit. 2, H319 Aquatic Acute 1, H400
ETHYLENE BRASSYLATE	(CAS n°) 105-95-3 (CE n°) 203-347-8	0,00125 - 0,005 %	Aquatic Chronic 2, H411
3- (2,2-dimethyl-3-hydroxypropyl) toluene	(CAS n°) 103694-68-4 (CE n°) 403-140-4 (Index n°) 603-138-00-5	0 - 0,00125 %	Aquatic Chronic 3, H412
tetrahydro-2-isobutyl-4-méthylpyranne-4-ol, a mixture of isomers (cis and trans)	(CE n°) 405-040-6 (Index n°) 603-101-00-3	0 - 0,00125 %	Eye Irrit. 2, H319
BETA-IONONE	IONONE (CAS n°) 14901-07-6 (CE n°) 238-969-9	0 - 0,00125	Aquatic Chronic 2, H411
2-T-BUTYLCYCLOHEXYL ACETATE	(CAS n°) 88-41-5 (CE n°) 201-828-7	0 - 0,00125 %	Aquatic Chronic 2, H411
CIS-3-HEXENYL SALICYLATE	(CAS n°) 65405-77-8 (CE n°) 265-745-8	0 - 0,00125 %	Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
HEXYL SALICYLATE	(CAS n°) 6259-76-3 (CE n°) 228-408-6	0 - 0,00125 %	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
ALLYL HEPTANOATE	(CAS n°) 142-19-8 (CE n°) 205-527-1	0 - 0,00125 %	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Text of R and H phrases: see section

SECTION 4: First Aid

4.1. Description of the first aid :

General First Aid: Never give anything by mouth to an unconscious person. If you feel unwell consult a doctor (if possible show the label).

First aid for inhalation:	Fresh air. Allow the victim to rest.
First aid for skin contact:	Wash thoroughly with soap and water. Wash contaminated clothing before re use.
If skin irritation occurs:	Get medical attention. See a doctor. Specific treatment (see ... on this label).
First aid after eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses if the victim door and if they can be easily removed. Continue rinsing. Call a POISON CENTER or physician.

First aid after swallowing: Rinse mouth. DO NOT induce vomiting. Obtain emergency medical attention.

4.2. Important symptoms and effects, both acute and delayed

Symptoms / injuries after skin contact:	Causes skin irritation.
Symptoms / injuries after eye contact:	Causes serious eye damage.

4.3. Indication of immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Measures against fire

5.1. Extinguishing Media

Suitable extinguishing media:	Foam. Dry powder. Carbon dioxide. Water spray. Sable.
Unsuitable extinguishing media:	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Instructions fight against fire:	Cool exposed containers by water spray or fog. Exercise caution when fighting any chemical fire. Avoid wastewater struggle against fire contaminate the environment.
Protection in the event of fire:	Do not enter fire area without proper protective equipment, including protection breathing.

SECTION 6: Measures in case of Accidental Release

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non rescuers

Emergency procedures:	Evacuate unnecessary personnel.

6.1.2. For rescuers

Protective equipment:	Provide adequate protection to cleaning teams.
Emergency procedures:	Ventilate the area.

6.2. Precautions for environmental protection

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and materials for containment and cleaning

Methods for cleaning:	Absorb spilled as quickly as possible with inert solids such as clay or diatomaceous earth. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Section 8. Exposure controls / personal protection.

SECTION 7: Handling & Storage

7.1. Precautions for safe handling

Precautions for safe handling:	Wash hands and other exposed areas with mild soap and water before eating, drinking, smoking and when leaving work. Ensure good ventilation of the work area to avoid vapor formation.
Hygiene measures:	Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage:	Keep only in the original container in a cool, well ventilated place away Keep containers closed when not in use.
Incompatible products:	Strong bases. Strong acids.
Incompatible materials:	Ignition sources. Direct sunlight.

7.3. Use (s) Final (s) specific (s)
No additional information available

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

2-(2-butoxyethoxy)ethanol (112-34-5)

France	local Name	2- (2-butoxyethoxy) ethanol
France	VME (mg/m³)	67,5 mg/m³
France	VME (ppm)	10 ppm
France	VLE (mg/m³)	101,2 mg/m³
France	VLE (ppm)	15 ppm
United Kingdom	local Name	2-(2-Butoxyethoxy)ethanol
United Kingdom	WEL TWA (mg/m³)	67,5 mg/m
United Kingdom	WEL TWA (ppm)	10 ppm
United Kingdom	WEL STEL (mg/m³)	101,2 mg/m³
United Kingdom	WEL STEL (ppm	15 ppm

Glycerol (56-81-5)

France	local Name	Glycerol (aerosol)
France	VME (mg/m³)	10 mg/m³
United Kingdom	Nom local	Glycerol, mist
United Kingdom	WEL TWA (mg/m³)	10 mg/m³

8.2. Exposure controls

Personal protective equipment:	Avoid all unnecessary exposure.
Hand protection:	Wear protective gloves
Eye Protection:	Splash goggles or safety glasses
Skin and body:	Wear suitable protective clothing
Respiratory protection:	Wear a suitable mask
Other information:	Do not eat, do not drink and do not smoke while use.

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties Information

Physical State:	Liquid
Color:	Colorless.
Odour:	Characteristic.
Odour threshold:	No data available
pH:	6.5 to 7.5

Relative evaporation rate (butylacetate = 1): No data available

Melting point:	No data available
Freezing point:	No data available
Boiling point:	100 ° C
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Flammability (solid, gas):	Non flammable
Vapour pressure:	No data available
Relative vapor density at 20 ° C:	No data available
Relative density:	No data available
Solubility:	No data available
Log Pow:	No data available
Viscosity, kinematic:	No data available
Viscosity, dynamic:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available
Explosive limits:	No data available

9.2. other information
No additional information available

SECTION 10: Stability & Reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Not established.

10.3. Possibility of hazardous reactions
Not established.

10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible Materials
Strong acids. Strong bases.

10.6. Hazardous decomposition products
smoke. Carbon monoxide. Carbon dioxide.

SECTION 11: toxicological information
11.1. Information on toxicological effects
Acute toxicity: Not ranked

SODIUM LAURETH SULFATE (68891-38-3)

LD50 oral rat	2000 mg / kg
LD 50 rat derma	2000 mg / kg

2- (2-butoxyethoxy) ethanol (112-34-5)

Oral LD50	5660 mg / kg body weight
Dermal LD50	2764 mg / kg body weight

LC50 rat inhalation (Fog / Dust - mg / l / 4h)> 0.196 mg / l / 4h

ETHYLENE BRASSYLATE (105-95-3)

LD50 oral rat	> 5000 mg / kg
Rabbit dermal LD50	5000 mg / kg

Skin corrosion / irritation:	Causes skin irritation. pH: 6.5 to 7.5
Serious eye damage / eye irritation:	Causes serious eye damage. pH: 6.5 to 7.5
Respiratory or skin sensitization:	Not classified

Given the available data, the classification criteria are not met

Germ cell mutagenicity:	Not ranked Given the available data, the classification criteria are not met
Carcinogenicity:	Not ranked Given the available data, the classification criteria are not met
Reproductive toxicity:	Uncategorized Given the available data, the classification criteria are not met

Specific target organ toxicity (single exposure): Not classified
Given the available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure): Not classified
Given the available data, the classification criteria are not met

Aspiration hazard:	Not ranked Given the available data, the classification criteria are not met

Potential adverse effects on human health and possible symptoms: Based on available data, the classification criteria are not met.

SECTION 12: Ecological Informations

12.1. Toxicity

Fish LC50	11300 mg / l
EC50 other aquatic organisms 1	> 100 mg / l waterflea EC50 (48 h)
EC50 other aquatic organisms 2	> 1000 mg / l algea IC50 (72 h) mg / l

12.2. Persistence and degradability
Standard liquid bubbles and concentrated
Persistence and degradability : Not established.

12.3. Bioaccumulation potential
Standard liquid bubbles and concentrated
Bioaccumulative potential : Not established.

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB
No additional information available

12.6. Other adverse effects
Additional information: Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods Recommendations for waste disposal
Dispose of according to local safety regulations / national regulations.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information
Pursuant to the requirements of ADR / RID / IMDG / IATA / DNA

14.1. UN number
Not regulated for transport
14.2. UN shipping name
Shipping name (ADR): Not applicable
Shipping name (IMDG): Not applicable
Shipping name (IATA): Not applicable
Shipping Name (ADN): Not applicable
Shipping Name (RID): Not applicable

14.3. Class (es) hazard ADR transportation
Class (es) of danger for transport (ADR): Not applicable
IMDG
Class (es) of danger for transport (IMDG): Not applicable
IATA
Class (es) of danger for transport (IATA): Not applicable
DNA
Class (es) of danger for transport (ADN): Not applicable
RID
Class (es) of Transport hazard (RID): Not applicable

14.4. Packing group
Packing Group (ADR): Not applicable
Packing Group (IMDG): Not applicable
Packing Group (IATA): Not applicable
Packing Group (ADN): Not applicable
Packing group (RID): Not applicable

14.5. Environmental hazards
Dangerous for the environment: No
Marine pollutant: No
Other information: No supplementary information available

14.6. Special precautions for user
14.6.1. Road transport
14.6.2. Maritime transport
14.6.3. Air transport
14.6.4. Waterway transportation
Not subject to ADN: No
14.6.5. Rail transport
Prohibited transport (RID): No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

SECTION 15: Regulatory information

15.1. Regulations / legislation specific for the substance or mixture Safety, health and environment
15.1.1. EU regulations
Does not contain substances subject to restrictions of Annex XVII
Does not contain substances of the REACH candidate list
Does not contain substances listed in Annex XIV of REACH

15.1.2. National regulations
No additional information available

15.2. Chemical Safety Assessment
No chemical safety assessment has been carried out

SECTION 16: Others informations

Data sources: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548 / EEC and 1999/45 / EC and amending Regulation (EC) No 1907/2006.

Other information: None (e).

Textes des phrases R-,H- et EUH:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (Oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage / eye irritation, Category 1
Eye Irrit. 2	Corrosive / irritating to the skin, category
Skin Irrit. 2	Corrosive / irritating to the skin, category 2
Skin Sens. 1	Skin sensitization, Category 1
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H400	Very toxic to aquatic organisms
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic organisms,may cause long-term adverse effects
H412	Harmful to aquatic, may cause long-term adverse effects
R21/22	Harmful in contact with skin and if swallowed
R22	Harmful if swallowed
R36	Irritating to eyes
R38	Irritating to the skin
R41	Risk of eye damage
R43	May cause sensitization by skin contact
R50	Very toxic to aquatic organisms
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
N	Dangerous for the environment
Xi	Irritant
Xn	Harmful

Classification and procedure used to determine the classification of mixtures in accordance with regulation (EC) 1272/2008 [CLP]

Skin Irrit. 2	H315	Calculation method
Eye Dam. 1	H318	Calculation method

HEALTH & SAFETY
PRODUCT DATA SHEET

Name :

Range
QTX Smoke & Haze Fluids

AVSL GROUP - Containerbase, Barton Dock Road, Manchester, M41 7BQ, United Kingdom
Website : www.avslgroup.com

1 – IDENTIFICATION OF SUBSTANCE / PREPARATION & COMPANY

1.1 Identification of substance :

Name of the product : QTX – STANDARD SMOKE FLUID
Synonyms : QTX – HIGH GRADE SMOKE FLUID
QTX – HIGH QUALITY SMOKE FLUID
QTX – PREMIUM SMOKE FLUID
QTX – HAZE FLUID

Using : Fluid used for creating artificial smoke and fog wich are used in application such as shows or professional training.

1.2 Identification of the Provider :

AVSL GROUP LTD
Containerbase, Barton Dock Road
Manchester , M41 7BQ
United Kingdom

Tel. + **44 0 161 749 8180**
Fax. + **44 0 161 749 7960**
Website : www.avslgroup.com

2 – COMPOSITION / INFORMATION ON THE COMPONENTS

Composition : The product is a mixture of mineral oil ,glycol, poliglycol and osmozed water in various proportions.

- CAS Number of the main chemicals : 112-27-6 & 111-46-6
- ENECS Number of the main chemicals : 203-953-2 & 203-872-2
- Number given by EDEXIM European Authorities. (REACH Directives)

3 – IDENTIFICATION OF THE DANGERS

The products contain no dangerous components classified in the EC directive on the dangerous products (67/548/CEE). Our products are straightly conforming to the International norms.

Under normal operating conditions, the products don't show any special danger.

By hazard :
Ingestion : Low toxicity.
Eye / Skin : The chemical component is neither an eye nor a skin irritant.
Inhalation : Acceptable limits of exposure in professional premises, confirm the very low toxicity and the low level that could result from several hours of occupational exposure.

4 – FIRST AID MEASURES

4.1 Inhalation :
- Remove from exposure and rest.
- Call a doctor if necessary.

4.2 Skin contact :
- Drench the skin with a lot of water.
- Call a doctor if irritation persists.

4.3 Eye contact :
- Irrigate thoroughly with water for ten minutes at least.
- Obtain medical attention if necessary.

4.4 Ingestion :
- Wash out mouth with water.
- Do not try to make the patient vomit, make him drink water.
- Call a doctor if necessary.

5 – FIRE FIGHTING MEASURES

5.1 Rule One :
Use appropriated tools to fight small fires. If necessary call the firemen.

5.2 Extinction ways :
Carbon dioxide, dry powder, stream of water in function of the type of fire.

5.3 Dangerous decomposition products :
The thermal decomposition may cause dangerous release of carbon oxides.

5.4 Appropriated dressing and breathing equipment against fire :
Use Isolated Breathing Apparatus and use clothes especially made for fire fighting.

6 – ACCIDENTAL RELEASE MEASURES

6.1 Safety precaution :
Wear gloves and protection glasses.

6.2 Precautions to protect environment :
Do not let the product spread on the ground, in the ground and under ground . Use sand or absorbent material.

6.3 Cleaning :
Wash the floor with a lot of water. Do not send water on the damaged packaging.

7 – HANDLING & STORAGE

7.1 Safe handling :
- Avoid prolonged skin contact.
- Avoid contact with eyes.
- Ensure good ventilation of area.
- Avoid creating spray.
- Do not breathe the undiluted vapor.

7.2 Storage :
- Store in original close container only.
- Store at ambient temperature only.
- Do not store next to food.
-

8 – EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1 Respiratory :
Use Isolated Breathing Apparatus for organic vapor mists.

8.2 Hand :
Wear PVC coated or rubber gloves.

8.3 Eye :
Wear glasses or face shield.

9 – PHYSICAL & CHEMICAL PROPERTIES

9.1 Appearance : Liquid.
9.2 Color : Colorless and blue, red, yellow, green, orange.
9.3 Smell : Weak.
9.4. Flash point : > 124°C
9.5 Auto-ignition : 229°C
9.6 Specifical density : (H_2O = 1) > 1
9.7 Stream density (Air = 1) : < 3,7
9.8 Water solubility : Completely miscible.
9.9 pH : Neutral.
9.10 Exposure values - TWA – used glycol
USA : 50 ppm (216 mg/m³) 8 hours.

10 – STABILITY AND REACTIVITY

10.1 Stability
Product stable under normal conditions of use (temperature and pressure).

10.2 Conditions to avoid
Elevated temperatures, heat, flames.

10.3 Materials to avoid
- Strong acids and bases
- Oxidants.
- There's no known reactivity with normal products

11 – TOXICOLOGICAL INFORMATION

11.1 Inhalation :

- Long exposition :
  An important concentration of vapor might cause adverse effects on the central nervous system.

- Slight effects :
  May cause headake, or vomiting.

11.2 Contact with skin

- Long exposition :
  A regular and long contact with the pure product may cause irritation and make the skin dry.

11.3 Contact with the eyes

- May cause irritation.

11.4 High Toxicity

The product is neither an eye nor a skin irritant
- DL 50 (rats) under 20 mg/kg
- DL 50 (mice) under 30 mg/kg

12 – ECOLOGICAL INFORMATION

12.1 Degradability :
The product is largely biodegradable

12.2 Eco-toxicity:

The product is not toxic to the aquatic organisms
Fish : LC 50 (96 hours) > 32 mg/liter
Daphnia LC 50 (24 hours) > 10 g/liter
Algae LC 50 (8 hours) of 1,7 mg/liter

13 – ELIMINATION CONSIDERATION

- Do not reject in the rivers or in the drippings.
- Use authorized waste disposal in your country for products and packages.

14 – TRANSPORT INFORMATION

- No special precautions for transport,
- No known laws, the user must be careful with the possible changes or adding in the official's texts.

15 – REGULATORY INFORMATIONS

15.1 Information on the label :

The symbol and phrases have been written in accordance with the rules on the dangerous substances preparations (88/379/CEE, 67/548/CEE, and addenda) 23rd and 24th adaptations :

Non applicable for this product.

15.2 National Rules

User has to respect their national rules, especially to the COSHH, HSWA and MHSW.
Please make sure you read them.

16 – OTHER INFORMATIONS

16.1 Advise for Training :

No special training is necessary to use the product in the appropriated generators.
Only prepare the employees to a safety measures plan.

16.2 Major information sources used in this sheet :

- Toxicological files INRS
- American data OHS
- Folders INRS
- International and national rules for transport of dangerous materials.

16.3 Date of creation of this health and safety sheet :

Last updated : January 2010
The above information is based on the present state of our knowledge of the product at the time of publication of this data sheet. It is given in good faith. No warranty is implied with respect to the quality of the specification of the product. The user must check himself that the product is entirely suitable for his purpose.

16.4 This sheet is conform to the Directive 91/155/CEE and modifications, and the last Reach Directives

AVSL GROUP - Containerbase, Barton Dock Road, Manchester, M41 7BQ, United Kingdom
Website : www.avslgroup.com

Material Safety Data Sheet according to decree (EG) 1907 / 2006

Product name:	**Fog liquid „Unique-Fluid“, „Tiny-Fluid“**
Date of printing:	21.09.2023
Date of adaption:	21.09.2023
Others:	Facultative Safety Data Sheet

1. Name of the material or mixture and Company Identification

1.1 Product identificator

Material name/Product name:	Fog liquid „Unique-Fluid“, „Tiny-Fluid“
Indes-Nr.:	none
EG-Nr.:	none
CAS-Nr.:	none
REACH-Registrierungsnummer:	inapplicable

1.2 Relevant identified use of the material or mixture and disadvised uses

Use:	Fog- and smoke simulation
Identified use:	none

1.3 Particulars about the supplier who provides the Safety Data Sheet

Manufacturer / Supplier:	Look Solutions GmbH & Co. KG Buenteweg 33 DE-30989 Gehrden
Phone:	+49-(0)5108-912210
Fax:	+49-(0)5108-9122111
Homepage:	www.looksolutions.com
E-Mail:	info@looksolutions.com

1.4 Emergency call

Emergency call:	+49-(0)5108-91 22 10 (Mo. - Fr., 8.00 - 17.00 Uhr)
Cognisant:	Ms Eicher, phone.: +49-(0)5108-91 22 10, info@looksolutions.com

2. Possible risks

2.1 Classification of the substance or mixture

According to Regulation (EC) No 1272/2008.
Not classified according to CLP Regulation.

2.2 Labeling elements

According to Regulation (EC) No. 1272/2008 (substances)

Pictogram / Hazard symbol:	---
Signal word:	---
Hazard-determining components	
For labeling:	---
Other labeling elements:	---

2.3 Other hazards

Physico-chemical hazards:	See Chapter 10.
Results of PBT and vPvB assessment	
PBT:	Not applicable
vPvB:	Not applicable
Health Hazards:	No particular hazards known
Environmental hazards:	No special hazards known

Other Not classified as dangerous according to EU criteria.

Material Safety Data Sheet according to decree (EG) 1907 / 2006

Product name:	**Fog liquid „Unique-Fluid“, „Tiny-Fluid“**
Date of printing:	21.09.2023
Date of adaption:	21.09.2023
Others:	Facultative Safety Data Sheet

3. Composition / Information on ingredients

3.1 Substances

The products are mixtures

3.2 Mixtures

Chemical characterization: Mixture of polyhydric alcohols and water

Ingredient comments: No hazardous ingredients contained.

4. First - aid - measures

4.1 Description of first aid measures.

After inhalation: Seek medical treatment if symptoms occur.

After skin contact: Wash off with soap and water.

After eye contact: Rinse with water, seek medical attention if symptoms occur.

After ingestion: Consult a doctor in case of discomfort.

General information: No acute hazards expected under normal use.

4.2 Important acute and delayed symptoms and effects

4.3 Indication of any immediate medical attention and special treatment needed

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5. Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing media: The product is not flammable.
Extinguish surrounding fire with foam, extinguishing powder, carbon dioxide or water spray.

Extinguishing media unsuitable for safety reasons:
None

5.2 Special hazards arising from the substance or mixture

Hazardous vapors/gases may be generated in case of fire: Carbon monoxide, Carbon dioxide

5.3 Advice for firefighters

Stay in the danger zone only with self-contained breathing apparatus.
Cool endangered containers with spray water from a safe distance.
Prevent penetration of extinguishing water into surface and ground water and soil.

6. Measures in case of accidental release

6.1 Personal precautions, protective equipment and emergency procedures.

Risk of slipping due to leaked / spilled product.

6.2 Environmental precautions

The product is not an environmentally hazardous mixture.
Do not allow to enter drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Absorb with sand, soil or absorbent material and
Dispose of in accordance with local regulatory guidelines.
Absorb small quantities (up to approx. 1 ltr.) with plenty of water and dispose of in the sewerage system.

6.4 Reference to other sections

---

7. Handling and storage

7.1 Precautions for safe handling

Store in shatterproof containers (delivery containers).

7.2 Conditions for safe storage, taking into account incompatibilities.

Requirements to be met by storerooms and containers:	Store only in closed containers. Containers must be clean, dry and rustproof.
Information about protection against fire and explosion protection:	No special measures required
Storage temperature:	Ambient temperature max. 60oC
Storage class:	None
Information on storage in one common storage facility:	None

7.3 Specific end uses

Fog and smoke simulation

8. Exposure controls / Personal protective equipment

8.1 Parameters to be monitored

Components with workplace related limit values to be monitored limit values:	None

8.2 Exposure controls / Personal protective equipment

Additional information on the design of technical equipment:	None

Personal protective equipment, general protective and hygienic measures:

Respiratory protection:	Not required
Hand protection:	Not required
Eye protection:	Not required
Body protection:	Not required

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Color:	clear, colorless
Odor:	neutral
Melting point/Freezing point:	< -10°C
Flammability:	not applicable
pH value:	6-8
pH-value 1%:	not determined
Boiling point:	from 100°C
Flash point:	> 100°C
Ignition temperature:	not determined
Decomposition temperature:	not determined
Autoflammability:	no
Oxidizing properties:	no

Explosion hazard:	none
Explosion limits	lower: not determined
	upper: not determined
Vapor pressure at 20°C:	not determined
Density:	1,04 - 1,10 g / cm3
Solubility in water (20°C):	any
Viscosity:	low viscosity

9.2 Other information

---

10. Stability and reactivity

10.1 Reactivity

Reacts with strong oxidizing agents

10.2 Chemical stability

Stable under normal conditions.

10.3 Possible hazardous reactions

When used as directed no dangerous reactions are to be expected.

10.4 Conditions to avoid

10.5 Incompatible materials

10.6 Hazardous decomposition products

None

11. Toxicological data

11.1 Information on toxicological effects

Acute toxicity:	The product has not been tested on animals.
Irritation:	Non-irritant.
Corrosivity:	Not corrosive.
Sensitization:	Not sensitizing.
Repeated dose toxicity:	None
Carcinogenicity:	None
Mutagenicity:	None
Reproductive Toxicity:	None
General remark:	No classification

11.2 Information on other hazards

Endocrine disrupting properties:	Not applicable

12. Environmental information

12.1 Toxicity

No toxic effect known

12.2 Persistence and degradability

The product has no harmful effect on the environment.
It is readily biodegradable according to OECD 301E / EEC 84/449 C3.

12.3 Bioaccumulative potential

No bioaccumulation

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

Criteria for classification as PBT or vPvB are not met

12.6 Endocrine disrupting properties

Contains no ingredients with endocrine disrupting properties

12.7 Other adverse effects

None

13. Disposal instructions

13.1 Waste treatment methods

Product: Dispose of in accordance with local regulations.
Uncleaned packaging: Dispose of in accordance with local regulations.

14. Transport information

14.1 UN number

None

14.2 UN proper shipping name

ADR/RID: ---
IMDG Code: ---
ICAO-TI / IATA-DGR: ---

14.3 Transport hazard classes

ADR/RID/IMDG-Code/ICAO-TI/IATA-DGR: ---

14.4 Packing group

14.5 Environmental hazards

Environmentally hazardous substances
ADR/RID / IMDG-Code / ICAO-TI / IATA-DGR: No
Marine Pollutant: No

14.6 Special precautions for user

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and according to IBC Code

The product is to be delivered exclusively in transport-approved and suitable packaging.

Material Safety Data Sheet according to decree (EG) 1907 / 2006

Product name:	**Fog liquid „Unique-Fluid“, „Tiny-Fluid“**
Date of printing:	21.09.2023
Date of adaption:	21.09.2023
Others:	Facultative Safety Data Sheet

15. Regulations

15.1 Safety, health and environmental regulations / specific legislation for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 (substances that deplete the ozone layer)
Not applicable

Regulation (EC) No 850/2004 (Persistent organic substances)
Not applicable

Regulation (EC) No. 689/2008 (Export and import of dangerous chemicals)
Not applicable

Regulation (EC) No. 648/2004 (Detergents Regulation)
Not applicable

Authorizations according to Title VII of Regulation (EC) No 1007/2006
None

Restrictions according to Title VIII of Regulation (EC) No 1907/2006
None

National regulations Water hazard class
Class 1

Reference to technical rules for hazardous substances (TRGS)
Not applicable

Solvent regulation (31.BImSchV)
VOC content: 0.0

15.2 Chemical safety assessment

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16. Others

Data sheet issuing department:	Management
Contact person:	Mrs. Eicher
Exposure scenario:	Professional fog fluid for the creation of short-term, artificial fog and show effects in the event industry, theater and film production. Taking into account the visibility and the desired effect, the fog fluid concentration in the air is to be dosed between 25 and max. 80 mg/m3. In particular, the fog density is to be dosed in such a way that exits and emergency exits in closed rooms are always visible. The same applies to the illumination of escape routes, their markings, stairway exits, shafts, fall edges, etc. Visibility distances of 25 m (according to VStättV max. distance to the next exit) are to be observed. With a view to avoiding anxiety states, fogged rooms must never be locked. The product is to be used properly and in the condition in which it was delivered. Keep away from children and store out of reach.

This information is based on our present knowledge and experience. The safety data sheet describes products with regard to safety requirements. The information does not have the meaning of an assurance of properties in the sense of a quality description.

Material Safety Data Sheet according to decree (EG) 1907 / 2006

Product name:	**Fog liquid „Unique-Fluid“, „Tiny-Fluid“**
Date of printing:	21.09.2023
Date of adaption:	21.09.2023
Others:	Facultative Safety Data Sheet

1. Name of the material or mixture and Company Identification

1.1 Product identificator

Material name/Product name:	Fog liquid „Unique-Fluid“, „Tiny-Fluid“
Indes-Nr.:	none
EG-Nr.:	none
CAS-Nr.:	none
REACH-Registrierungsnummer:	inapplicable

1.2 Relevant identified use of the material or mixture and disadvised uses

Use:	Fog- and smoke simulation
Identified use:	none

1.3 Particulars about the supplier who provides the Safety Data Sheet

Manufacturer / Supplier:	Look Solutions GmbH & Co. KG Buenteweg 33 DE-30989 Gehrden
Phone:	+49-(0)5108-912210
Fax:	+49-(0)5108-9122111
Homepage:	www.looksolutions.com
E-Mail:	info@looksolutions.com

1.4 Emergency call

Emergency call:	+49-(0)5108-91 22 10 (Mo. - Fr., 8.00 - 17.00 Uhr)
Cognisant:	Ms Eicher, phone.: +49-(0)5108-91 22 10, info@looksolutions.com

2. Possible risks

2.1 Classification of the substance or mixture

According to Regulation (EC) No 1272/2008.
Not classified according to CLP Regulation.

2.2 Labeling elements

According to Regulation (EC) No. 1272/2008 (substances)

Pictogram / Hazard symbol:	---
Signal word:	---
Hazard-determining components	
For labeling:	---
Other labeling elements:	---

2.3 Other hazards

Physico-chemical hazards:	See Chapter 10.
Results of PBT and vPvB assessment	
PBT:	Not applicable
vPvB:	Not applicable
Health Hazards:	No particular hazards known
Environmental hazards:	No special hazards known

Other Not classified as dangerous according to EU criteria.

Material Safety Data Sheet according to decree (EG) 1907 / 2006

Product name:	**Fog liquid „Unique-Fluid“, „Tiny-Fluid“**
Date of printing:	21.09.2023
Date of adaption:	21.09.2023
Others:	Facultative Safety Data Sheet

3. Composition / Information on ingredients

3.1 Substances

The products are mixtures

3.2 Mixtures

Chemical characterization: Mixture of polyhydric alcohols and water

Ingredient comments: No hazardous ingredients contained.

4. First - aid - measures

4.1 Description of first aid measures.

After inhalation: Seek medical treatment if symptoms occur.

After skin contact: Wash off with soap and water.

After eye contact: Rinse with water, seek medical attention if symptoms occur.

After ingestion: Consult a doctor in case of discomfort.

General information: No acute hazards expected under normal use.

4.2 Important acute and delayed symptoms and effects

4.3 Indication of any immediate medical attention and special treatment needed

---

5. Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing media: The product is not flammable.
Extinguish surrounding fire with foam, extinguishing powder, carbon dioxide or water spray.

Extinguishing media unsuitable for safety reasons:
None

5.2 Special hazards arising from the substance or mixture

Hazardous vapors/gases may be generated in case of fire: Carbon monoxide, Carbon dioxide

5.3 Advice for firefighters

Stay in the danger zone only with self-contained breathing apparatus.
Cool endangered containers with spray water from a safe distance.
Prevent penetration of extinguishing water into surface and ground water and soil.

6. Measures in case of accidental release

6.1 Personal precautions, protective equipment and emergency procedures.

Risk of slipping due to leaked / spilled product.

6.2 Environmental precautions

The product is not an environmentally hazardous mixture.
Do not allow to enter drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Absorb with sand, soil or absorbent material and
Dispose of in accordance with local regulatory guidelines.
Absorb small quantities (up to approx. 1 ltr.) with plenty of water and dispose of in the sewerage system.

6.4 Reference to other sections

---

7. Handling and storage

7.1 Precautions for safe handling

Store in shatterproof containers (delivery containers).

7.2 Conditions for safe storage, taking into account incompatibilities.

Requirements to be met by storerooms and containers:	Store only in closed containers. Containers must be clean, dry and rustproof.
Information about protection against fire and explosion protection:	No special measures required
Storage temperature:	Ambient temperature max. 60oC
Storage class:	None
Information on storage in one common storage facility:	None

7.3 Specific end uses

Fog and smoke simulation

8. Exposure controls / Personal protective equipment

8.1 Parameters to be monitored

Components with workplace related limit values to be monitored limit values:	None

8.2 Exposure controls / Personal protective equipment

Additional information on the design of technical equipment:	None

Personal protective equipment, general protective and hygienic measures:

Respiratory protection:	Not required
Hand protection:	Not required
Eye protection:	Not required
Body protection:	Not required

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Color:	clear, colorless
Odor:	neutral
Melting point/Freezing point:	< -10°C
Flammability:	not applicable
pH value:	6-8
pH-value 1%:	not determined
Boiling point:	from 100°C
Flash point:	> 100°C
Ignition temperature:	not determined
Decomposition temperature:	not determined
Autoflammability:	no
Oxidizing properties:	no

Explosion hazard:	none
Explosion limits	lower: not determined
	upper: not determined
Vapor pressure at 20°C:	not determined
Density:	1,04 - 1,10 g / cm3
Solubility in water (20°C):	any
Viscosity:	low viscosity

9.2 Other information

---

10. Stability and reactivity

10.1 Reactivity

Reacts with strong oxidizing agents

10.2 Chemical stability

Stable under normal conditions.

10.3 Possible hazardous reactions

When used as directed no dangerous reactions are to be expected.

10.4 Conditions to avoid

10.5 Incompatible materials

10.6 Hazardous decomposition products

None

11. Toxicological data

11.1 Information on toxicological effects

Acute toxicity:	The product has not been tested on animals.
Irritation:	Non-irritant.
Corrosivity:	Not corrosive.
Sensitization:	Not sensitizing.
Repeated dose toxicity:	None
Carcinogenicity:	None
Mutagenicity:	None
Reproductive Toxicity:	None
General remark:	No classification

11.2 Information on other hazards

Endocrine disrupting properties:	Not applicable

12. Environmental information

12.1 Toxicity

No toxic effect known

12.2 Persistence and degradability

The product has no harmful effect on the environment.
It is readily biodegradable according to OECD 301E / EEC 84/449 C3.

12.3 Bioaccumulative potential

No bioaccumulation

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

Criteria for classification as PBT or vPvB are not met

12.6 Endocrine disrupting properties

Contains no ingredients with endocrine disrupting properties

12.7 Other adverse effects

None

13. Disposal instructions

13.1 Waste treatment methods

Product: Dispose of in accordance with local regulations.
Uncleaned packaging: Dispose of in accordance with local regulations.

14. Transport information

14.1 UN number

None

14.2 UN proper shipping name

ADR/RID: ---
IMDG Code: ---
ICAO-TI / IATA-DGR: ---

14.3 Transport hazard classes

ADR/RID/IMDG-Code/ICAO-TI/IATA-DGR: ---

14.4 Packing group

14.5 Environmental hazards

Environmentally hazardous substances
ADR/RID / IMDG-Code / ICAO-TI / IATA-DGR: No
Marine Pollutant: No

14.6 Special precautions for user

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and according to IBC Code

The product is to be delivered exclusively in transport-approved and suitable packaging.

Material Safety Data Sheet according to decree (EG) 1907 / 2006

Product name:	**Fog liquid „Unique-Fluid“, „Tiny-Fluid“**
Date of printing:	21.09.2023
Date of adaption:	21.09.2023
Others:	Facultative Safety Data Sheet

15. Regulations

15.1 Safety, health and environmental regulations / specific legislation for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 (substances that deplete the ozone layer)
Not applicable

Regulation (EC) No 850/2004 (Persistent organic substances)
Not applicable

Regulation (EC) No. 689/2008 (Export and import of dangerous chemicals)
Not applicable

Regulation (EC) No. 648/2004 (Detergents Regulation)
Not applicable

Authorizations according to Title VII of Regulation (EC) No 1007/2006
None

Restrictions according to Title VIII of Regulation (EC) No 1907/2006
None

National regulations Water hazard class
Class 1

Reference to technical rules for hazardous substances (TRGS)
Not applicable

Solvent regulation (31.BImSchV)
VOC content: 0.0

15.2 Chemical safety assessment

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16. Others

Data sheet issuing department:	Management
Contact person:	Mrs. Eicher
Exposure scenario:	Professional fog fluid for the creation of short-term, artificial fog and show effects in the event industry, theater and film production. Taking into account the visibility and the desired effect, the fog fluid concentration in the air is to be dosed between 25 and max. 80 mg/m3. In particular, the fog density is to be dosed in such a way that exits and emergency exits in closed rooms are always visible. The same applies to the illumination of escape routes, their markings, stairway exits, shafts, fall edges, etc. Visibility distances of 25 m (according to VStättV max. distance to the next exit) are to be observed. With a view to avoiding anxiety states, fogged rooms must never be locked. The product is to be used properly and in the condition in which it was delivered. Keep away from children and store out of reach.

This information is based on our present knowledge and experience. The safety data sheet describes products with regard to safety requirements. The information does not have the meaning of an assurance of properties in the sense of a quality description.

SAFETY DATA SHEET

16th September 2019

SECTION 1 – PRODUCT IDENTIFICATION

1.1 Product identifier

Product Name: FLASH PAPER, COTTON, CORD, STRING & MATERIAL

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Special effects and/or technical purposes
For indoor use

1.3 Details of the Supplier of the Safety Data Sheet

Supplier: Le Maitre Ltd
Street/P.O. Box: 6 Forval Close
Postcode/City: CR4 4NE, Mitcham
Country: England
Telephone number: +44 (0)20 8646 2222
Email: info@lemaitreltd.com

1.4 Emergency telephone number

Please contact: +44 (0)151 951 3317 Health and Safety Executive (HSE) Chemicals Regulation Directorate
Other comments: Only available during office hours

SECTION 2 – HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

H228: Flammable Solid

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

Hazard category: 4.1
Signal word: Danger
Hazard statement: H228 Flammable Solid
Precautionary Statements Prevention: P210, P264
Precautionary Statements Response: P333 + P313
Precautionary Statements Storage: P403 + P233
Precautionary Statements Disposal: P501

Hazard pictograms:



2.3 Other hazards

There are no chronic effects from handling the product appropriately.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Name	CAS No.	EC No.
Nitrocellulose	9004-70-0	603-037-0

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures

General notes: The usual precautions for handling chemicals should be observed. If any symptoms should occur, seek medical advice.
Following inhalation: Remove casualty to fresh air.
Following skin contact: Wash with soap and water if skin is irritated.
Following eye contact: Immediately flush with water
Following ingestion: If accidently swallowed, rinse the mouth with plenty of water (only if the person is conscious) and obtain medical attention
Self protection of the first aider: Pay attention to self protection!

4.2 Most important symptoms and effects, both acute and delayed

Irritation to the eyes and irritation to the skin

4.3 Indication of any immediate medical attention and special treatment needed

First aid, decontamination, treatment of symptoms

SECTION 5 – FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: If there is a small flame persisting from the effect itself (or from the surrounding area) this can be extinguished with a dry powder or Carbon Dioxide Fire Extinguisher if trained to do so.
For larger fires do not attempt to extinguish any fire unless specifically trained to do so. Evacuate area and contact emergency services
Unsuitable extinguishing media: N/A

5.2 Special hazards arising from the substance or mixture

Flame produced when used in the correct manner. Be aware!

5.3 Advice for firefighters

Exercise extreme caution. Special protective equipment for firefighters: wear self-contained breathing apparatus and chemical protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel: Suitable personal protective equipment. Remove ignition sources.

6.1.2 For emergency responders: Remove persons to safety. Isolate hazard area and deny entry. Ventilate closed spaces before entering.

6.2 Environmental precautions

Prevent products from entering surface water or drains.

6.3 Methods and material for containment and cleaning up

Dispose of as special waste in compliance with local and national regulations.

6.4 Reference to other sections

See sections 8 and 13

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures: Handle with caution.
Measures to prevent fire: No smoking and no naked flames.
Measures to prevent aerosol and dust generation: Do not tamper with the item.
Advice on general occupational hygiene: Do not eat, drink or smoke in work areas. Wash hands after use.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions: Store in cool, dry place.
Requirments for storage rooms and vessels: Always store in original packaging with appropriate marking and labelling. Stores should be adequately secured and identified.

7.3 Specific end use(s)

The identified use for this product is detailed in section 1.2.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Workplace exposure limits.

8.2 Exposure controls

8.2.1 Appropriate engineering controls: Provide adequate ventilation.

8.2.2 Personal protection equipment: No specific measures.

8.2.3 Environmental exposure controls: No specific measures.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: White solid in various forms

9.2 Other information

No additional information relevant to safe use.

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

No specific data related to reactivity available.

10.2 Chemical stability

Stable under recommended conditions of storage and use.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Avoid high temperatures, shock, static discharge, vibrations or other physical stresses that might result in a hazardous situation.

10.5 Incompatible materials

Naked flames.

10.6 Hazardous decomposition products

Decomposition does not occur during normal circumstances of storage, transport and handling.
Upon functioning various gases may be emitted including oxides.

SECTION 11 – TOXILOGICAL INFORMATION

11.1 Information on toxilogical effects

Stable when wetted with water.
May cause eye and skin irritation. Inhalation or ingestion may cause discomfort.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

Not classified as dangerous for the environment/aquatic toxicant

12.2 Persistance and degradability N/A

12.3 Bioaccumulative potential N/A

12.4 Mobility in soil N/A

12.5 Results of PBT and vPvB assessment N/A

12.6 Other adverse effects N/A

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

No specific regulations apply to packagings or spent devices.
Unused products should be returned to the manufacturer or functioned in a safe manner.

SECTION 14 – TRANSPORT INFORMATION

14.1 UN number

UN2555

14.2 UN proper shipping name

Nitrocellulose with water

14.3 Transport hazard class(es)

4.1

14.4 Packing group

PGII

14.5 Environmental hazards

None

14.6 Special precautions for user

No smoking or naked flames

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

N/A

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

RISK PHRASES:
R1 Explosive when dry
R11 Highly flammable

SAFETY PHRASES:
S16 Keep out from sources of ignition – No smoking.
S33 Take precautionary measures against static discharges.
S35 This material and its container must be disposed of in a safe way.

15.2 Chemical Safety Assessment

N/A

SECTION 16 – OTHER INFORMATION

Information for this safety data sheet was obtained from sources considered technically accurate and reliable. Whilst every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of, or reliance on, any information contained in this form.

SAFETY DATA SHEET

16th September 2019

SECTION 1 – PRODUCT IDENTIFICATION

1.1 Product identifier

Product Name: FLASHES, ROBOTICS & SPDS

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Articles pyrotechnic for technical purposes

1.3 Details of the Supplier of the Safety Data Sheet

Supplier: Le Maitre Ltd
Street/P.O. Box: 6 Forval Close
Postcode/City: CR4 4NE, Mitcham
Country: England
Telephone number: +44 (0)20 8646 2222
Email: info@lemaitreltd.com

1.4 Emergency telephone number

Please contact: +44 (0)151 951 3317 Health and Safety Executive (HSE) Chemicals Regulation Directorate
Other comments: Only available during office hours

SECTION 2 – HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

H204: Fire or projection hazard

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

Hazard category: Division 1.4
Signal word: Warning
Hazard statement: H204 Fire or projection hazard
Precautionary Statements Prevention: P210, P234
Precautionary Statements Response: P370 + P372 + P380 + P373
Precautionary Statements Storage: P401
Precautionary Statements Disposal: P501

Hazard pictograms:



2.3 Other hazards

There are no chronic effects from handling the product appropriately
When used in the correct manner, any fallout does not pose a risk to personal health.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Name	CAS No.	EC No.
Aluminium powder	7429-90-5	231-072-3
Ammonium Perchlorate	7798-98-9	232-235-1
Barium Nitrate	10022-31-8	233-020-5
Chlorinated Rubber	9006-03-5	918-668-5
Copper Carbonate	1184-64-1	214-671-4
Diphenylamine	122-39-4	204-539-4
Graphite	7782-42-5	231-955-3
Magnesium powder	7439-54-4	231-104-6
Nitrocellulose	9004-70-0	603-037-0
Potassium Nitrate	7757-79-1	231-818-8
Potassium Perchlorate	7778-47-7	231-912-9
Sodium Nitrate	7631-99-4	231-554-3
Strontium Nitrate	10042-76-9	233-131-9
Talc	14087-96-6	238-877-9
Titanium powder	7440-32-6	231-142-3

List above covers all products within the Flash, Robotic & SPD families

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures

General notes: In the case of accident or sickness, seek medical advice immediately.
Following inhalation: Remove casualty to fresh air and keep warm and at rest.
Following skin contact: Wash immediately with soap and water
Following eye contact: Immediately flush with water
Following ingestion: If accidently swallowed, rinse the mouth with plenty of water (only if the person is conscious) and obtain medical attention
Self protection of the first aider: Pay attention to self protection!

4.2 Most important symptoms and effects, both acute and delayed

Irritation to the eyes and irritation to the skin

4.3 Indication of any immediate medical attention and special treatment needed

First aid, decontamination, treatment of symptoms

SECTION 5 – FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: If there is a small flame persisting from the effect itself (or from the surrounding area) this can be extinguished with a dry powder or Carbon Dioxide Fire Extinguisher if trained to do so.
For larger fires do not attempt to extinguish any fire unless specifically trained to do so. Evacuate area and contact emergency services
Unsuitable extinguishing media: N/A

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products may be produced.
Pyrotechnic devices can burn violently and the state of the fire will be dependent on composition, packaging and containment.

5.3 Advice for firefighters

Exercise extreme caution. Special protective equipment for firefighters: wear self-contained breathing apparatus and chemical protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel: Suitable personal protective equipment. Remove ignition sources.

6.1.2 For emergency responders: Remove persons to safety. Isolate hazard area and deny entry. Ventilate closed spaces before entering.

6.2 Environmental precautions

Prevent large spillages from entering surface water or drains.

6.3 Methods and material for containment and cleaning up

Dispose of as special waste in compliance with local and national regulations.

6.4 Reference to other sections

See sections 8 and 13

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures: Handle with caution.
Measures to prevent fire: No smoking and no naked flames.
Measures to prevent aerosol and dust generation: Do not tamper with the item.
Advice on general occupational hygiene: Do not eat, drink or smoke in work areas. Wash hands after use.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions: Store in cool, dry place.
Requirments for storage rooms and vessels: Always store in original packaging with appropriate marking and labelling. Stores should be adequately secured and identified.

7.3 Specific end use(s)

The identified use for this product is detailed in section 1.2.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Workplace exposure limits.

8.2 Exposure controls

8.2.1 Appropriate engineering controls: Provide adequate ventilation.

8.2.2 Personal protection equipment: Appropriate Safety goggles.

8.2.3 Environmental exposure controls: No specific measures.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Solid sealed tube

As this is a sealed unit chemical properties are not applicable

9.2 Other information

No additional information relevant to safe use.

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

No specific data related to reactivity available.

10.2 Chemical stability

Stable under recommended conditions of storage and use.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Avoid high temperatures, shock, static discharge, vibrations or other physical stresses that might result in a hazardous situation.

10.5 Incompatible materials

As this is a sealed unit incompatible materials are not applicable.

10.6 Hazardous decomposition products

Decomposition does not occur during normal circumstances of storage, transport and handling.
Upon functioning various gases may be emitted including oxides.

SECTION 11 – TOXILOGICAL INFORMATION

11.1 Information on toxilogical effects

As this is a sealed unit this only applies to spillages.
May cause eye and skin irritation. Inhalation or ingestion may cause discomfort.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

Not classified as dangerous for the environment/aquatic toxicant

12.2 Persistance and degradability N/A

12.3 Bioaccumulative potential N/A

12.4 Mobility in soil N/A

12.5 Results of PBT and vPvB assessment N/A

12.6 Other adverse effects N/A

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

No specific regulations apply to packagings or spent devices.
Unused devices should be returned to the manufacturer, functioned in a safe manner or soaked in a vessel of water for 48 hours. If soaked in water review local and national requirements prior to disposal.

SECTION 14 – TRANSPORT INFORMATION

14.1 UN number

UN0431 or UN0432

14.2 UN proper shipping name

Articles pyrotechnic for technical purposes

14.3 Transport hazard class(es)

1.4G (UN0431) or 1.4S (UN0432)

14.4 Packing group

N/A

14.5 Environmental hazards

None

14.6 Special precautions for user

No smoking or naked flames

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

N/A

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Explosives Regulations 2014 and all orders of council, HSG 36, Local Authorities and the Health and Safety Executive.
Pyrotechnic Articles European Directive 2013/29/EU

15.2 Chemical Safety Assessment

N/A

SECTION 16 – OTHER INFORMATION

Information for this safety data sheet was obtained from sources considered technically accurate and reliable. Whilst every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of, or reliance on, any information contained in this form.

SAFETY DATA SHEET

16th September 2019

SECTION 1 – PRODUCT IDENTIFICATION

1.1 Product identifier

Product Name: FLASHES, ROBOTICS & SPDS

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Articles pyrotechnic for technical purposes

1.3 Details of the Supplier of the Safety Data Sheet

Supplier: Le Maitre Ltd
Street/P.O. Box: 6 Forval Close
Postcode/City: CR4 4NE, Mitcham
Country: England
Telephone number: +44 (0)20 8646 2222
Email: info@lemaitreltd.com

1.4 Emergency telephone number

Please contact: +44 (0)151 951 3317 Health and Safety Executive (HSE) Chemicals Regulation Directorate
Other comments: Only available during office hours

SECTION 2 – HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

H204: Fire or projection hazard

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

Hazard category: Division 1.4
Signal word: Warning
Hazard statement: H204 Fire or projection hazard
Precautionary Statements Prevention: P210, P234
Precautionary Statements Response: P370 + P372 + P380 + P373
Precautionary Statements Storage: P401
Precautionary Statements Disposal: P501

Hazard pictograms:



2.3 Other hazards

There are no chronic effects from handling the product appropriately
When used in the correct manner, any fallout does not pose a risk to personal health.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Name	CAS No.	EC No.
Aluminium powder	7429-90-5	231-072-3
Ammonium Perchlorate	7798-98-9	232-235-1
Barium Nitrate	10022-31-8	233-020-5
Chlorinated Rubber	9006-03-5	918-668-5
Copper Carbonate	1184-64-1	214-671-4
Diphenylamine	122-39-4	204-539-4
Graphite	7782-42-5	231-955-3
Magnesium powder	7439-54-4	231-104-6
Nitrocellulose	9004-70-0	603-037-0
Potassium Nitrate	7757-79-1	231-818-8
Potassium Perchlorate	7778-47-7	231-912-9
Sodium Nitrate	7631-99-4	231-554-3
Strontium Nitrate	10042-76-9	233-131-9
Talc	14087-96-6	238-877-9
Titanium powder	7440-32-6	231-142-3

List above covers all products within the Flash, Robotic & SPD families

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures

General notes: In the case of accident or sickness, seek medical advice immediately.
Following inhalation: Remove casualty to fresh air and keep warm and at rest.
Following skin contact: Wash immediately with soap and water
Following eye contact: Immediately flush with water
Following ingestion: If accidently swallowed, rinse the mouth with plenty of water (only if the person is conscious) and obtain medical attention
Self protection of the first aider: Pay attention to self protection!

4.2 Most important symptoms and effects, both acute and delayed

Irritation to the eyes and irritation to the skin

4.3 Indication of any immediate medical attention and special treatment needed

First aid, decontamination, treatment of symptoms

SECTION 5 – FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: If there is a small flame persisting from the effect itself (or from the surrounding area) this can be extinguished with a dry powder or Carbon Dioxide Fire Extinguisher if trained to do so.
For larger fires do not attempt to extinguish any fire unless specifically trained to do so. Evacuate area and contact emergency services
Unsuitable extinguishing media: N/A

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products may be produced.
Pyrotechnic devices can burn violently and the state of the fire will be dependent on composition, packaging and containment.

5.3 Advice for firefighters

Exercise extreme caution. Special protective equipment for firefighters: wear self-contained breathing apparatus and chemical protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel: Suitable personal protective equipment. Remove ignition sources.

6.1.2 For emergency responders: Remove persons to safety. Isolate hazard area and deny entry. Ventilate closed spaces before entering.

6.2 Environmental precautions

Prevent large spillages from entering surface water or drains.

6.3 Methods and material for containment and cleaning up

Dispose of as special waste in compliance with local and national regulations.

6.4 Reference to other sections

See sections 8 and 13

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures: Handle with caution.
Measures to prevent fire: No smoking and no naked flames.
Measures to prevent aerosol and dust generation: Do not tamper with the item.
Advice on general occupational hygiene: Do not eat, drink or smoke in work areas. Wash hands after use.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions: Store in cool, dry place.
Requirments for storage rooms and vessels: Always store in original packaging with appropriate marking and labelling. Stores should be adequately secured and identified.

7.3 Specific end use(s)

The identified use for this product is detailed in section 1.2.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Workplace exposure limits.

8.2 Exposure controls

8.2.1 Appropriate engineering controls: Provide adequate ventilation.

8.2.2 Personal protection equipment: Appropriate Safety goggles.

8.2.3 Environmental exposure controls: No specific measures.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Solid sealed tube

As this is a sealed unit chemical properties are not applicable

9.2 Other information

No additional information relevant to safe use.

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

No specific data related to reactivity available.

10.2 Chemical stability

Stable under recommended conditions of storage and use.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Avoid high temperatures, shock, static discharge, vibrations or other physical stresses that might result in a hazardous situation.

10.5 Incompatible materials

As this is a sealed unit incompatible materials are not applicable.

10.6 Hazardous decomposition products

Decomposition does not occur during normal circumstances of storage, transport and handling.
Upon functioning various gases may be emitted including oxides.

SECTION 11 – TOXILOGICAL INFORMATION

11.1 Information on toxilogical effects

As this is a sealed unit this only applies to spillages.
May cause eye and skin irritation. Inhalation or ingestion may cause discomfort.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

Not classified as dangerous for the environment/aquatic toxicant

12.2 Persistance and degradability N/A

12.3 Bioaccumulative potential N/A

12.4 Mobility in soil N/A

12.5 Results of PBT and vPvB assessment N/A

12.6 Other adverse effects N/A

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

No specific regulations apply to packagings or spent devices.
Unused devices should be returned to the manufacturer, functioned in a safe manner or soaked in a vessel of water for 48 hours. If soaked in water review local and national requirements prior to disposal.

SECTION 14 – TRANSPORT INFORMATION

14.1 UN number

UN0431 or UN0432

14.2 UN proper shipping name

Articles pyrotechnic for technical purposes

14.3 Transport hazard class(es)

1.4G (UN0431) or 1.4S (UN0432)

14.4 Packing group

N/A

14.5 Environmental hazards

None

14.6 Special precautions for user

No smoking or naked flames

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

N/A

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Explosives Regulations 2014 and all orders of council, HSG 36, Local Authorities and the Health and Safety Executive.
Pyrotechnic Articles European Directive 2013/29/EU

15.2 Chemical Safety Assessment

N/A

SECTION 16 – OTHER INFORMATION

Information for this safety data sheet was obtained from sources considered technically accurate and reliable. Whilst every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of, or reliance on, any information contained in this form.

SAFETY DATA SHEET

20th January 2019

SECTION 1 – PRODUCT IDENTIFICATION

1.1 Product identifier

Product Name: GERBS, JETS, CASCADES, WATERFALLS & ROCKETS

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Articles pyrotechnic for technical purposes

1.3 Details of the Supplier of the Safety Data Sheet

Supplier: Le Maitre Ltd
Street/P.O. Box: 6 Forval Close
Postcode/City: CR4 4NE, Mitcham
Country: England
Telephone number: +44 (0)20 8646 2222
Email: info@lemaitreltd.com

1.4 Emergency telephone number

Please contact: +44 (0)151 951 3317 Health and Safety Executive (HSE) Chemicals Regulation Directorate
Other comments: Only available during office hours

SECTION 2 – HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

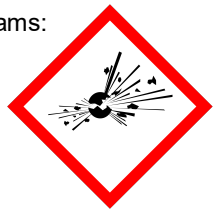
H204: Fire or projection hazard

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

Hazard category: Division 1.4
Signal word: Warning
Hazard statement: H204 Fire or projection hazard
Precautionary Statements Prevention: P210, P234
Precautionary Statements Response: P370 + P372 + P380 + P373
Precautionary Statements Storage: P401
Precautionary Statements Disposal: P501

Hazard pictograms:



2.3 Other hazards

There are no chronic effects from handling the product appropriately.
When used in the correct manner, any fallout does not pose a risk to personal health.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Name	CAS No.	EC No.
Acaroid Resin	93164-80-8	298-861-7
Aluminium powder	7429-90-5	231-072-3
Antimony Sulphide	1345-04-6	215-713-4
Barium Carbonate	513-77-9	208-167-3
Charcoal	16291-96-6	240-383-3
Dextrin	9004-53-9	232-675-4
Graphite	7782-42-5	231-955-3
Iron	7439-89-6	231-096-4
Magnesium powder	7439-54-4	231-104-6
Potassium Benzoate	582-25-2	209-481-3
Sodium Bicarbonate	144-58-8	205-633-8
Potassium Nitrate	7757-79-1	231-818-8
Potassium Perchlorate	7778-47-7	231-912-9
Talc	14087-96-6	238-877-9
Sulphur	7704-34-9	231-722-6
Titanium powder	7440-32-6	231-142-3

List above covers all products within the Gerb, Jet, Cascade, Waterfall & Rocket families

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures

General notes: In the case of accident or sickness, seek medical advice immediately.
Following inhalation: Remove casualty to fresh air and keep warm and at rest.
Following skin contact: Wash immediately with soap and water
Following eye contact: Immediately flush with water
Following ingestion: If accidently swallowed, rinse the mouth with plenty of water (only if the person is conscious) and obtain medical attention
Self protection of the first aider: Pay attention to self protection!

4.2 Most important symptoms and effects, both acute and delayed

Irritation to the eyes and irritation to the skin

4.3 Indication of any immediate medical attention and special treatment needed

First aid, decontamination, treatment of symptoms

SECTION 5 – FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: If there is a small flame persisting from the effect itself (or from the surrounding area) this can be extinguished with a dry powder or Carbon Dioxide Fire Extinguisher if trained to do so.
For larger fires do not attempt to extinguish any fire unless specifically trained to do so. Evacuate area and contact emergency services
Unsuitable extinguishing media: N/A

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products may be produced.
Pyrotechnic devices can burn violently and the state of the fire will be dependent on composition, packaging and containment.

5.3 Advice for firefighters

Exercise extreme caution. Special protective equipment for firefighters: wear self-contained breathing apparatus and chemical protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel: Suitable personal protective equipment. Remove ignition sources.

6.1.2 For emergency responders: Remove persons to safety. Isolate hazard area and deny entry. Ventilate closed spaces before entering.

6.2 Environmental precautions

Prevent large spillages from entering surface water or drains.

6.3 Methods and material for containment and cleaning up

Dispose of as special waste in compliance with local and national regulations.

6.4 Reference to other sections

See sections 8 and 13

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures: Handle with caution.
Measures to prevent fire: No smoking and no naked flames.
Measures to prevent aerosol and dust generation: Do not tamper with the item.
Advice on general occupational hygiene: Do not eat, drink or smoke in work areas. Wash hands after use.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions: Store in cool, dry place.
Requirments for storage rooms and vessels: Always store in original packaging with appropriate marking and labelling. Stores should be adequately secured and identified.

7.3 Specific end use(s)

The identified use for this product is detailed in section 1.2.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Workplace exposure limits.

8.2 Exposure controls

8.2.1 Appropriate engineering controls: Provide adequate ventilation.

8.2.2 Personal protection equipment: Appropriate Safety goggles.

8.2.3 Environmental exposure controls: No specific measures.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Solid tube containing pressed composition

As this is essentially a sealed unit chemical properties are not applicable

9.2 Other information

No additional information relevant to safe use.

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

No specific data related to reactivity available.

10.2 Chemical stability

Stable under recommended conditions of storage and use.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Avoid high temperatures, shock, static discharge, vibrations or other physical stresses that might result in a hazardous situation.

10.5 Incompatible materials

As this is a sealed unit incompatible materials are not applicable.

10.6 Hazardous decomposition products

Decomposition does not occur during normal circumstances of storage, transport and handling.
Upon functioning various gases may be emitted including oxides.

SECTION 11 – TOXILOGICAL INFORMATION

11.1 Information on toxilogical effects

As this is a sealed unit this only applies to spillages.
May cause eye and skin irritation. Inhalation or ingestion may cause discomfort.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

Not classified as dangerous for the environment/aquatic toxicant

12.2 Persistance and degradability N/A

12.3 Bioaccumulative potential N/A

12.4 Mobility in soil N/A

12.5 Results of PBT and vPvB assessment N/A

12.6 Other adverse effects N/A

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

No specific regulations apply to packagings or spent devices.
Unused devices should be returned to the manufacturer, functioned in a safe manner or soaked in a vessel of water for 48 hours. If soaked in water review local and national requirements prior to disposal.

SECTION 14 – TRANSPORT INFORMATION

14.1 UN number

UN0431 or UN0432

14.2 UN proper shipping name

Articles pyrotechnic for technical purposes

14.3 Transport hazard class(es)

1.4G (UN0431) or 1.4S (UN0432)

14.4 Packing group

N/A

14.5 Environmental hazards

None

14.6 Special precautions for user

No smoking or naked flames

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

N/A

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Explosives Regulations 2014 and all orders of council, HSG 36, Local Authorities and the Health and Safety Executive.
Pyrotechnic Articles European Directive 2013/29/EU

15.2 Chemical Safety Assessment

N/A

SECTION 16 – OTHER INFORMATION

Information for this safety data sheet was obtained from sources considered technically accurate and reliable. Whilst every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of, or reliance on, any information contained in this form.

SAFETY DATA SHEET

16th September 2019

SECTION 1 – PRODUCT IDENTIFICATION

1.1 Product identifier

Product Name: LARGE, MEDIUM, PS2 AND LONG DURATION SMOKES & SMOKE MINES

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Articles pyrotechnic for technical purposes

1.3 Details of the Supplier of the Safety Data Sheet

Supplier: Le Maitre Ltd
Street/P.O. Box: 6 Forval Close
Postcode/City: CR4 4NE, Mitcham
Country: England
Telephone number: +44 (0)20 8646 2222
Email: info@lemaitreltd.com

1.4 Emergency telephone number

Please contact: +44 (0)151 951 3317 Health and Safety Executive (HSE) Chemicals Regulation Directorate
Other comments: Only available during office hours

SECTION 2 – HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

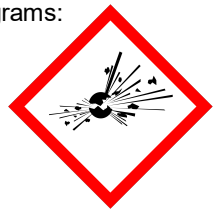
H204: Fire or projection hazard

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

Hazard category: Division 1.4
Signal word: Warning
Hazard statement: H204 Fire or projection hazard
Precautionary Statements Prevention: P210, P234
Precautionary Statements Response: P370 + P372 + P380 + P373
Precautionary Statements Storage: P401
Precautionary Statements Disposal: P501

Hazard pictograms:



2.3 Other hazards

There are no chronic effects from handling the product appropriately
When used in the correct manner, any fallout does not pose a risk to personal health.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Name	CAS No.	EC No.
Potassium Chlorate	3811-04-9	223-289-7
Lactose Monohydrate	10039-26-6	200-559-2
Kaolin	1332-58-7	310-194-1
Thiourea	62-56-6	200-543-5
Disperse Red 9	82-38-2	201-417-2
Solvent Green 3	128-80-3	204-909-5
Solvent Blue 78	2475-44-7	219-602-1
Solvent Yellow 33	8003-22-3	232-318-2
Smoke White	84-58-8	201-539-6
Solvent Violet 13	81-48-1	201-353-5
Terephthalic Acid	100-21-0	202-830-0

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures

General notes: In the case of accident or sickness, seek medical advice immediately.
Following inhalation: Remove casualty to fresh air and keep warm and at rest.
Following skin contact: Wash immediately with soap and water
Following eye contact: Immediately flush with water
Following ingestion: If accidently swallowed, rinse the mouth with plenty of water (only if the person is conscious) and obtain medical attention
Self protection of the first aider: Pay attention to self protection!

4.2 Most important symptoms and effects, both acute and delayed

Irritation to the eyes and irritation to the skin

4.3 Indication of any immediate medical attention and special treatment needed

First aid, decontamination, treatment of symptoms

SECTION 5 – FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: If there is a small flame persisting from the effect itself (or from the surrounding area) this can be extinguished with a dry powder or Carbon Dioxide Fire Extinguisher if trained to do so.
For larger fires do not attempt to extinguish any fire unless specifically trained to do so. Evacuate area and contact emergency services
Unsuitable extinguishing media: N/A

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products may be produced.
Pyrotechnic devices can burn violently and the state of the fire will be dependent on composition, packaging and containment.

5.3 Advice for firefighters

Exercise extreme caution. Special protective equipment for firefighters: wear self-contained breathing apparatus and chemical protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel: Suitable personal protective equipment. Remove ignition sources.

6.1.2 For emergency responders: Remove persons to safety. Isolate hazard area and deny entry. Ventilate closed spaces before entering.

6.2 Environmental precautions

Prevent large spillages from entering surface water or drains.

6.3 Methods and material for containment and cleaning up

Dispose of as special waste in compliance with local and national regulations.

6.4 Reference to other sections

See sections 8 and 13

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures: Handle with caution.
Measures to prevent fire: No smoking and no naked flames.
Measures to prevent aerosol and dust generation: Do not tamper with the item.
Advice on general occupational hygiene: Do not eat, drink or smoke in work areas. Wash hands after use.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions: Store in cool, dry place.
Requirments for storage rooms and vessels: Always store in original packaging with appropriate marking and labelling. Stores should be adequately secured and identified.

7.3 Specific end use(s)

The identified use for this product is detailed in section 1.2.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Workplace exposure limits.

8.2 Exposure controls

8.2.1 Appropriate engineering controls: Provide adequate ventilation.

8.2.2 Personal protection equipment: Appropriate Safety goggles.

8.2.3 Environmental exposure controls: No specific measures.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Solid sealed tube

As this is a sealed unit chemical properties are not applicable

9.2 Other information

No additional information relevant to safe use.

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

No specific data related to reactivity available.

10.2 Chemical stability

Stable under recommended conditions of storage and use.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Avoid high temperatures, shock, static discharge, vibrations or other physical stresses that might result in a hazardous situation.

10.5 Incompatible materials

As this is a sealed unit incompatible materials are not applicable.

10.6 Hazardous decomposition products

Decomposition does not occur during normal circumstances of storage, transport and handling.
Upon functioning various gases may be emitted including oxides.

SECTION 11 – TOXILOGICAL INFORMATION

11.1 Information on toxilogical effects

As this is a sealed unit this only applies to spillages.
May cause eye and skin irritation. Inhalation or ingestion may cause discomfort.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

Not classified as dangerous for the environment/aquatic toxicant

12.2 Persistance and degradability N/A

12.3 Bioaccumulative potential N/A

12.4 Mobility in soil N/A

12.5 Results of PBT and vPvB assessment N/A

12.6 Other adverse effects N/A

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

No specific regulations apply to packagings or spent devices.
Unused devices should be returned to the manufacturer, functioned in a safe manner or soaked in a vessel of water for 48 hours. If soaked in water review local and national requirements prior to disposal.

SECTION 14 – TRANSPORT INFORMATION

14.1 UN number

UN0431 and UN0432

14.2 UN proper shipping name

Articles pyrotechnic for technical purposes

14.3 Transport hazard class(es)

1.4G (UN0431) and 1.4S (UN0432)

14.4 Packing group

N/A

14.5 Environmental hazards

None

14.6 Special precautions for user

No smoking or naked flames

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

N/A

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Explosives Regulations 2014 and all orders of council, HSG 36, Local Authorities and the Health and Safety Executive.
Pyrotechnic Articles European Directive 2013/29/EU

15.2 Chemical Safety Assessment

N/A

SECTION 16 – OTHER INFORMATION

Information for this safety data sheet was obtained from sources considered technically accurate and reliable. Whilst every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of, or reliance on, any information contained in this form.

SAFETY DATA SHEET

16th September 2019

SECTION 1 – PRODUCT IDENTIFICATION

1.1 Product identifier

Product Name: FLASHES, ROBOTICS & SPDS

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Articles pyrotechnic for technical purposes

1.3 Details of the Supplier of the Safety Data Sheet

Supplier: Le Maitre Ltd
Street/P.O. Box: 6 Forval Close
Postcode/City: CR4 4NE, Mitcham
Country: England
Telephone number: +44 (0)20 8646 2222
Email: info@lemaitreltd.com

1.4 Emergency telephone number

Please contact: +44 (0)151 951 3317 Health and Safety Executive (HSE) Chemicals Regulation Directorate
Other comments: Only available during office hours

SECTION 2 – HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

H204: Fire or projection hazard

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

Hazard category: Division 1.4
Signal word: Warning
Hazard statement: H204 Fire or projection hazard
Precautionary Statements Prevention: P210, P234
Precautionary Statements Response: P370 + P372 + P380 + P373
Precautionary Statements Storage: P401
Precautionary Statements Disposal: P501

Hazard pictograms:



2.3 Other hazards

There are no chronic effects from handling the product appropriately
When used in the correct manner, any fallout does not pose a risk to personal health.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Name	CAS No.	EC No.
Aluminium powder	7429-90-5	231-072-3
Ammonium Perchlorate	7798-98-9	232-235-1
Barium Nitrate	10022-31-8	233-020-5
Chlorinated Rubber	9006-03-5	918-668-5
Copper Carbonate	1184-64-1	214-671-4
Diphenylamine	122-39-4	204-539-4
Graphite	7782-42-5	231-955-3
Magnesium powder	7439-54-4	231-104-6
Nitrocellulose	9004-70-0	603-037-0
Potassium Nitrate	7757-79-1	231-818-8
Potassium Perchlorate	7778-47-7	231-912-9
Sodium Nitrate	7631-99-4	231-554-3
Strontium Nitrate	10042-76-9	233-131-9
Talc	14087-96-6	238-877-9
Titanium powder	7440-32-6	231-142-3

List above covers all products within the Flash, Robotic & SPD families

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures

General notes: In the case of accident or sickness, seek medical advice immediately.
Following inhalation: Remove casualty to fresh air and keep warm and at rest.
Following skin contact: Wash immediately with soap and water
Following eye contact: Immediately flush with water
Following ingestion: If accidently swallowed, rinse the mouth with plenty of water (only if the person is conscious) and obtain medical attention
Self protection of the first aider: Pay attention to self protection!

4.2 Most important symptoms and effects, both acute and delayed

Irritation to the eyes and irritation to the skin

4.3 Indication of any immediate medical attention and special treatment needed

First aid, decontamination, treatment of symptoms

SECTION 5 – FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: If there is a small flame persisting from the effect itself (or from the surrounding area) this can be extinguished with a dry powder or Carbon Dioxide Fire Extinguisher if trained to do so.
For larger fires do not attempt to extinguish any fire unless specifically trained to do so. Evacuate area and contact emergency services
Unsuitable extinguishing media: N/A

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products may be produced.
Pyrotechnic devices can burn violently and the state of the fire will be dependent on composition, packaging and containment.

5.3 Advice for firefighters

Exercise extreme caution. Special protective equipment for firefighters: wear self-contained breathing apparatus and chemical protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel: Suitable personal protective equipment. Remove ignition sources.

6.1.2 For emergency responders: Remove persons to safety. Isolate hazard area and deny entry. Ventilate closed spaces before entering.

6.2 Environmental precautions

Prevent large spillages from entering surface water or drains.

6.3 Methods and material for containment and cleaning up

Dispose of as special waste in compliance with local and national regulations.

6.4 Reference to other sections

See sections 8 and 13

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures: Handle with caution.
Measures to prevent fire: No smoking and no naked flames.
Measures to prevent aerosol and dust generation: Do not tamper with the item.
Advice on general occupational hygiene: Do not eat, drink or smoke in work areas. Wash hands after use.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions: Store in cool, dry place.
Requirments for storage rooms and vessels: Always store in original packaging with appropriate marking and labelling. Stores should be adequately secured and identified.

7.3 Specific end use(s)

The identified use for this product is detailed in section 1.2.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Workplace exposure limits.

8.2 Exposure controls

8.2.1 Appropriate engineering controls: Provide adequate ventilation.

8.2.2 Personal protection equipment: Appropriate Safety goggles.

8.2.3 Environmental exposure controls: No specific measures.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Solid sealed tube

As this is a sealed unit chemical properties are not applicable

9.2 Other information

No additional information relevant to safe use.

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

No specific data related to reactivity available.

10.2 Chemical stability

Stable under recommended conditions of storage and use.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Avoid high temperatures, shock, static discharge, vibrations or other physical stresses that might result in a hazardous situation.

10.5 Incompatible materials

As this is a sealed unit incompatible materials are not applicable.

10.6 Hazardous decomposition products

Decomposition does not occur during normal circumstances of storage, transport and handling.
Upon functioning various gases may be emitted including oxides.

SECTION 11 – TOXILOGICAL INFORMATION

11.1 Information on toxilogical effects

As this is a sealed unit this only applies to spillages.
May cause eye and skin irritation. Inhalation or ingestion may cause discomfort.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

Not classified as dangerous for the environment/aquatic toxicant

12.2 Persistance and degradability N/A

12.3 Bioaccumulative potential N/A

12.4 Mobility in soil N/A

12.5 Results of PBT and vPvB assessment N/A

12.6 Other adverse effects N/A

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

No specific regulations apply to packagings or spent devices.
Unused devices should be returned to the manufacturer, functioned in a safe manner or soaked in a vessel of water for 48 hours. If soaked in water review local and national requirements prior to disposal.

SECTION 14 – TRANSPORT INFORMATION

14.1 UN number

UN0431 or UN0432

14.2 UN proper shipping name

Articles pyrotechnic for technical purposes

14.3 Transport hazard class(es)

1.4G (UN0431) or 1.4S (UN0432)

14.4 Packing group

N/A

14.5 Environmental hazards

None

14.6 Special precautions for user

No smoking or naked flames

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

N/A

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Explosives Regulations 2014 and all orders of council, HSG 36, Local Authorities and the Health and Safety Executive.
Pyrotechnic Articles European Directive 2013/29/EU

15.2 Chemical Safety Assessment

N/A

SECTION 16 – OTHER INFORMATION

Information for this safety data sheet was obtained from sources considered technically accurate and reliable. Whilst every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of, or reliance on, any information contained in this form.

SAFETY DATA SHEET

16th September 2019

SECTION 1 – PRODUCT IDENTIFICATION

1.1 Product identifier

Product Name: FLASHES, ROBOTICS & SPDS

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Articles pyrotechnic for technical purposes

1.3 Details of the Supplier of the Safety Data Sheet

Supplier: Le Maitre Ltd
Street/P.O. Box: 6 Forval Close
Postcode/City: CR4 4NE, Mitcham
Country: England
Telephone number: +44 (0)20 8646 2222
Email: info@lemaitreltd.com

1.4 Emergency telephone number

Please contact: +44 (0)151 951 3317 Health and Safety Executive (HSE) Chemicals Regulation Directorate
Other comments: Only available during office hours

SECTION 2 – HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

H204: Fire or projection hazard

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

Hazard category: Division 1.4
Signal word: Warning
Hazard statement: H204 Fire or projection hazard
Precautionary Statements Prevention: P210, P234
Precautionary Statements Response: P370 + P372 + P380 + P373
Precautionary Statements Storage: P401
Precautionary Statements Disposal: P501

Hazard pictograms:



2.3 Other hazards

There are no chronic effects from handling the product appropriately
When used in the correct manner, any fallout does not pose a risk to personal health.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Name	CAS No.	EC No.
Aluminium powder	7429-90-5	231-072-3
Ammonium Perchlorate	7798-98-9	232-235-1
Barium Nitrate	10022-31-8	233-020-5
Chlorinated Rubber	9006-03-5	918-668-5
Copper Carbonate	1184-64-1	214-671-4
Diphenylamine	122-39-4	204-539-4
Graphite	7782-42-5	231-955-3
Magnesium powder	7439-54-4	231-104-6
Nitrocellulose	9004-70-0	603-037-0
Potassium Nitrate	7757-79-1	231-818-8
Potassium Perchlorate	7778-47-7	231-912-9
Sodium Nitrate	7631-99-4	231-554-3
Strontium Nitrate	10042-76-9	233-131-9
Talc	14087-96-6	238-877-9
Titanium powder	7440-32-6	231-142-3

List above covers all products within the Flash, Robotic & SPD families

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures

General notes: In the case of accident or sickness, seek medical advice immediately.
Following inhalation: Remove casualty to fresh air and keep warm and at rest.
Following skin contact: Wash immediately with soap and water
Following eye contact: Immediately flush with water
Following ingestion: If accidently swallowed, rinse the mouth with plenty of water (only if the person is conscious) and obtain medical attention
Self protection of the first aider: Pay attention to self protection!

4.2 Most important symptoms and effects, both acute and delayed

Irritation to the eyes and irritation to the skin

4.3 Indication of any immediate medical attention and special treatment needed

First aid, decontamination, treatment of symptoms

SECTION 5 – FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: If there is a small flame persisting from the effect itself (or from the surrounding area) this can be extinguished with a dry powder or Carbon Dioxide Fire Extinguisher if trained to do so.
For larger fires do not attempt to extinguish any fire unless specifically trained to do so. Evacuate area and contact emergency services
Unsuitable extinguishing media: N/A

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products may be produced.
Pyrotechnic devices can burn violently and the state of the fire will be dependent on composition, packaging and containment.

5.3 Advice for firefighters

Exercise extreme caution. Special protective equipment for firefighters: wear self-contained breathing apparatus and chemical protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel: Suitable personal protective equipment. Remove ignition sources.

6.1.2 For emergency responders: Remove persons to safety. Isolate hazard area and deny entry. Ventilate closed spaces before entering.

6.2 Environmental precautions

Prevent large spillages from entering surface water or drains.

6.3 Methods and material for containment and cleaning up

Dispose of as special waste in compliance with local and national regulations.

6.4 Reference to other sections

See sections 8 and 13

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures: Handle with caution.
Measures to prevent fire: No smoking and no naked flames.
Measures to prevent aerosol and dust generation: Do not tamper with the item.
Advice on general occupational hygiene: Do not eat, drink or smoke in work areas. Wash hands after use.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions: Store in cool, dry place.
Requirments for storage rooms and vessels: Always store in original packaging with appropriate marking and labelling. Stores should be adequately secured and identified.

7.3 Specific end use(s)

The identified use for this product is detailed in section 1.2.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Workplace exposure limits.

8.2 Exposure controls

8.2.1 Appropriate engineering controls: Provide adequate ventilation.

8.2.2 Personal protection equipment: Appropriate Safety goggles.

8.2.3 Environmental exposure controls: No specific measures.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Solid sealed tube

As this is a sealed unit chemical properties are not applicable

9.2 Other information

No additional information relevant to safe use.

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

No specific data related to reactivity available.

10.2 Chemical stability

Stable under recommended conditions of storage and use.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Avoid high temperatures, shock, static discharge, vibrations or other physical stresses that might result in a hazardous situation.

10.5 Incompatible materials

As this is a sealed unit incompatible materials are not applicable.

10.6 Hazardous decomposition products

Decomposition does not occur during normal circumstances of storage, transport and handling.
Upon functioning various gases may be emitted including oxides.

SECTION 11 – TOXILOGICAL INFORMATION

11.1 Information on toxilogical effects

As this is a sealed unit this only applies to spillages.
May cause eye and skin irritation. Inhalation or ingestion may cause discomfort.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

Not classified as dangerous for the environment/aquatic toxicant

12.2 Persistance and degradability N/A

12.3 Bioaccumulative potential N/A

12.4 Mobility in soil N/A

12.5 Results of PBT and vPvB assessment N/A

12.6 Other adverse effects N/A

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

No specific regulations apply to packagings or spent devices.
Unused devices should be returned to the manufacturer, functioned in a safe manner or soaked in a vessel of water for 48 hours. If soaked in water review local and national requirements prior to disposal.

SECTION 14 – TRANSPORT INFORMATION

14.1 UN number

UN0431 or UN0432

14.2 UN proper shipping name

Articles pyrotechnic for technical purposes

14.3 Transport hazard class(es)

1.4G (UN0431) or 1.4S (UN0432)

14.4 Packing group

N/A

14.5 Environmental hazards

None

14.6 Special precautions for user

No smoking or naked flames

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

N/A

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Explosives Regulations 2014 and all orders of council, HSG 36, Local Authorities and the Health and Safety Executive.
Pyrotechnic Articles European Directive 2013/29/EU

15.2 Chemical Safety Assessment

N/A

SECTION 16 – OTHER INFORMATION

Information for this safety data sheet was obtained from sources considered technically accurate and reliable. Whilst every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of, or reliance on, any information contained in this form.

SAFETY DATA SHEET

Creation Date 12-Mar-2009 **Revision Date** 18-Dec-2025 **Revision Number** 12

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

1. Identification

Product Name **Nitric acid, Trace Metal Grade**

Cat No. : **A509-212; A509-500; A509-P212; A509-P500; A509-SK212**

CAS No 7697-37-2
Synonyms Azotic acid; Engraver's acid; Aqua fortis

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company
Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

Oxidizing liquids	Category 3
Corrosive to metals	Category 1
Acute Inhalation Toxicity - Vapors	Category 3
Skin Corrosion/Irritation	Category 1 A
Serious Eye Damage/Eye Irritation	Category 1

Label Elements

Signal Word
Danger

Hazard Statements
May intensify fire; oxidizer

May be corrosive to metals
Causes severe skin burns and eye damage
Toxic if inhaled



Precautionary Statements
Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep away from clothing and other combustible materials
Take any precaution to avoid mixing with combustibles
Keep only in original packaging
Wear respiratory protection
Response
Immediately call a POISON CENTER or doctor
Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Immediately call a POISON CENTER or doctor
Skin
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
Take off contaminated clothing and wash before reuse
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Ingestion
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
Fire
In case of fire: Use CO2, dry chemical, or foam to extinguish
Spills
Absorb spillage to prevent material damage
Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Store in corrosive resistant polypropylene container with a resistant inliner
Store in a dry place
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
Corrosive to the respiratory tract

Hazards classified under paragraph (d)(1)(ii) of 1910.1200
No information available

3. Composition/information on Ingredients

Component	CAS No	Weight %
Nitric acid …% [C ≤ 70 %]	7697-37-2	65 - 70
Water	7732-18-5	30 - 35

4. First-aid measures

General Advice Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.

Inhalation If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Remove from exposure, lie down. Call a physician immediately.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Clean mouth with water. Call a physician immediately.

Most important symptoms and effects Causes burns by all exposure routes. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated

Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media CO_2, dry chemical, dry sand, alcohol-resistant foam.

Unsuitable Extinguishing Media No information available

Flash Point Not applicable
Method - No information available

Autoignition Temperature No information available

Explosion Limits
Upper No data available
Lower No data available

Oxidizing Properties Oxidizer

Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical
Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.).

Hazardous Combustion Products
Nitrogen oxides (NOx). Thermal decomposition can lead to release of irritating gases and vapors.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health	Flammability	Instability	Physical hazards
4	0	0	OX

6. Accidental release measures

Personal Precautions Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment as required.

Environmental Precautions Should not be released into the environment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal. Wear self-contained breathing apparatus and protective suit.

7. Handling and Storage

Handling Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Do not breathe mist/vapors/spray. Keep away from clothing and other combustible materials.

Storage. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Incompatible Materials. Combustible material. Strong bases. Reducing Agent. Metals. Finely powdered metals. Organic materials. Aldehydes. Alcohols. Cyanides. Ammonia. Strong reducing agents.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH	Mexico OEL (TWA)
Nitric acid …% [C ≤ 70 %]	TWA: 2 ppm STEL: 4 ppm	(Vacated) TWA: 2 ppm (Vacated) TWA: 5 mg/m³ (Vacated) STEL: 4 ppm (Vacated) STEL: 10 mg/m³ TWA: 2 ppm TWA: 5 mg/m³	IDLH: 25 ppm REL = 2 ppm (TWA) REL = 5 mg/m³ (TWA) STEL: 4 ppm STEL: 10 mg/m³	TWA: 2 ppm STEL: 4 ppm

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Tight sealing safety goggles. Face protection shield.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended Filter type: Particulates filter conforming to EN 143. or. Acid gases filter. Type E. Yellow. conforming to EN14387.

Hygiene Measures Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wear suitable gloves and eye/face protection.

9. Physical and chemical properties

Appearance

Physical State	Liquid		
Color	Clear Colorless, Light yellow		
Odor	Strong Acrid		
Odor Threshold	No information available		
Property	**Values**	**Remarks**	**• Method**
Melting Point/Range	-41 °C / -41.8 °F		
Softening Point	No data available		
Boiling Point/Range	Not applicable		
Flash Point	Not applicable	**Method -** No information available	
Flammability (liquid)	No data available		
Flammability (solid,gas)	Not applicable	Liquid	
Explosion Limits	No data available		
Autoignition Temperature	No data available		
Decomposition Temperature	No data available		
pH	< 1.0	(0.1M)	
Viscosity	No data available		
Water Solubility	Miscible		
Solubility in other solvents	No information available		

Partition Coefficient (n-octanol/water)

Component	**log Pow**
Nitric acid …% [C ≤ 70 %]	-2.3

Vapor Pressure	0.94 kPa (20°C)		
Density / Specific Gravity	1.40		
Bulk Density	Not applicable	Liquid	
Vapor Density	No data available	(Air = 1.0)	
Particle characteristics	Not applicable (liquid)		

Other Information

Molecular Formula	HNO3
Molecular Weight	63.01
Oxidizing Properties	Oxidizer

10. Stability and reactivity

Reactive Hazard Yes

Stability Oxidizer: Contact with combustible/organic material may cause fire.

Conditions to Avoid Incompatible products. Combustible material. Excess heat. Exposure to air or moisture over prolonged periods.

Incompatible Materials Combustible material, Strong bases, Reducing Agent, Metals, Finely powdered metals, Organic materials, Aldehydes, Alcohols, Cyanides, Ammonia, Strong reducing agents

Hazardous Decomposition Products Nitrogen oxides (NOx), Thermal decomposition can lead to release of irritating gases and vapors

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Information on expected route of exposure

Inhalation Causes severe burns. May be harmful if inhaled. May cause pulmonary edema. Harmful by inhalation.

Ingestion Ingestion causes burns of the upper digestive and respiratory tracts. May be harmful if swallowed. Can burn mouth, throat, and stomach. Harmful if swallowed.

Eyes Causes severe burns. May cause blindness or permanent eye damage. Causes burns. Corrosive to the eyes and may cause severe damage including blindness. Risk of serious damage to eyes.

Skin Causes severe burns. May be harmful in contact with skin. Causes burns.

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Nitric acid …% [C ≤ 70 %]	-	-	LC50 = 2500 ppm. (Rat) 1h
Water	-	-	-

Toxicologically Synergistic Products No information available

(b) skin corrosion/irritation; Category 1 A

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

Respiratory Based on available data, the classification criteria are not met

Skin Based on available data, the classification criteria are not met

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

(f) carcinogenicity; Based on available data, the classification criteria are not met

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Nitric acid …% [C ≤ 70 %]	7697-37-2	Not listed	Not listed	Not listed	Not listed	Not listed
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed

(g) reproductive toxicity; Based on available data, the classification criteria are not met

(h) STOT-single exposure; Based on available data, the classification criteria are not met

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met

Target Organs None known.

(j) aspiration hazard; Based on available data, the classification criteria are not met

Symptoms / effects,both acute and delayed Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated.

Other Adverse Effects The toxicological properties have not been fully investigated.

Endocrine Disrupting Properties This product does not contain any known or suspected endocrine disruptors.

12. Ecological information

Ecotoxicity

Do not empty into drains. Large amounts will affect pH and harm aquatic organisms.

Persistence and Degradability Miscible with water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

Component	log Pow
Nitric acid …% [C ≤ 70 %]	-2.3

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No	UN2031
Proper Shipping Name	NITRIC ACID
Hazard Class	8
Subsidiary Hazard Class	5.1
Packing Group	II

TDG

UN-No	UN2031
Proper Shipping Name	NITRIC ACID
Hazard Class	8
Subsidiary Hazard Class	5.1
Packing Group	II

IATA

UN-No	UN2031
Proper Shipping Name	NITRIC ACID
Hazard Class	8
Subsidiary Hazard Class	5.1
Packing Group	II

IMDG/IMO

UN-No	UN2031
Proper Shipping Name	NITRIC ACID
Hazard Class	8
Subsidiary Hazard Class	5.1
Packing Group	II

15. Regulatory Information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags

Nitric acid …% [C ≤ 70 %]	7697-37-2	X	ACTIVE	-
Water	7732-18-5	X	ACTIVE	-

Legend:
TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)
X - Listed
'-' - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT) Not applicable

TSCA 12(b) - Notices of Export Not applicable

International Inventories
Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Nitric acid …% [C ≤ 70 %]	7697-37-2	X	-	231-714-2	X	X	X	X	X	KE-25911
Water	7732-18-5	X	-	231-791-2	X	X		X	X	KE-35400

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS No	Weight %	SARA 313 - Threshold Values %	SARA 313 - Reporting threasholds
Nitric acid …% [C ≤ 70 %]	7697-37-2	65 - 70	1.0 %	-

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Nitric acid …% [C ≤ 70 %]	X	1000 lb	-	-

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration

Component	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Nitric acid …% [C ≤ 70 %]	-	TQ: 500 lb

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

Component	Hazardous Substances RQs	CERCLA Extremely Hazardous Substances RQs	SARA Reportable Quantity (RQ)
Nitric acid …% [C ≤ 70 %]	1000 lb	1000 lb	1000 lb 454 kg

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Nitric acid …% [C ≤ 70 %]	X	X	X	X	X
Water	-	-	X	-	-

U.S. Department of Transportation
Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product contains the following DHS chemicals:
Legend - STQs = Screening Threshold Quantities, APA = A placarded amount

Component	DHS Chemical Facility Anti-Terrorism Standard
Nitric acid …% [C ≤ 70 %]	Release STQs - 15000lb Theft STQs - 400lb

Other International Regulations

Mexico - Grade No information available

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Nitric acid …% [C ≤ 70 %]	7697-37-2	-	Use restricted. See entry 75. (see link for restriction details)	-
Water	7732-18-5	-	-	-

REACH links
https://echa.europa.eu/substances-restricted-under-reach

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Nitric acid …% [C ≤ 70 %]	7697-37-2	Listed	Not applicable	Not applicable	Not applicable
Water	7732-18-5	Listed	Not applicable	Not applicable	Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?
Not applicable

Other International Regulations

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities	Seveso III Directive (2012/18/EC) - Qualifying Quantities	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)

		for Major Accident Notification	for Safety Report Requirements		
Nitric acid …% [C ≤ 70 %]	7697-37-2	Not applicable	Not applicable	Not applicable	Annex I - Y34
Water	7732-18-5	Not applicable	Not applicable	Not applicable	Not applicable

16. Other Information

Prepared By
Product stewardship (Regulatory Affairs)
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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS