

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by UK REACH Regulation SI 2019/758

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

1.1 Product identifier

Product identifier : REEPGAL
Product name : RAPTOR ENGINE ENAMEL PRIMER GREY
Product type : Aerosol.
Other means of identification : REEPG/AL
Date of issue/ Date of revision : 19 June 2025
Version : 1.01
Date of previous issue : 19 June 2025

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

Identified uses : Coating component.
Uses advised against : Not for sale to or use by consumers.

1.3 Details of the supplier of the safety data sheet

U-POL Limited
 Denington Road
 Wellingborough, Northamptonshire, NN8 2QH
 +44 (0) 1933 230310
 technicalsupport@u-pol.com
e-mail address of person responsible for this SDS : sds-competence@axalta.com
 U-POL Netherlands
 B.V. Hoorgoorddreef 15
 Amsterdam, Netherlands 1101BA
 +31 20 240 2216
 technicalsupport@u-pol.com

1.4 Emergency telephone number

Supplier

Telephone number : +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK CLP/GHS

Aerosol 1, H222, H229
 Skin Irrit. 2, H315
 Eye Dam. 1, H318
 STOT SE 3, H336
 Aquatic Chronic 2, H411

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.


SECTION 2: Hazards identification

Ingredients of unknown toxicity : 17.8 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

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 : Danger

Contains : methyl acetate
butan-1-ol

Hazard statements : H222, H229 - Extremely flammable aerosol. Pressurised container: may burst if heated.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H336 - May cause drowsiness or dizziness.
H411 - Toxic to aquatic life with long lasting effects.

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.

Response : P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor.

Storage : P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Disposal : Not applicable.

Supplemental label elements : EUH205 - Contains epoxy constituents. May produce an allergic reaction.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : 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

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification	Type
dimethyl ether	REACH #: 01-2119472128-37 EC: 204-065-8 CAS: 115-10-6 Index: 603-019-00-8	≥25 - ≤50	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	[1] [2]
methyl acetate	REACH #: 01-2119459211-47 EC: 201-185-2 CAS: 79-20-9 Index: 607-021-00-X	≥10 - <20	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[1] [2]
butan-1-ol	REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6	≤10	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	[1] [2]
1-methoxy-2-propanol	REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2	≤5	Flam. Liq. 3, H226 STOT SE 3, H336	[1] [2]
trizinc bis(orthophosphate)	REACH #: 01-2119485044-40 EC: 231-944-3 CAS: 7779-90-0 Index: 030-011-00-6	≤3	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
cyclohexane	REACH #: 01-2119463273-41 Exempt EC: 203-806-2 CAS: 110-82-7 Index: 601-017-00-1	≤3	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1] [2]
2-methylpropan-1-ol	REACH #: 01-2119484609-23 EC: 201-148-0 CAS: 78-83-1	≤2.5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336 See Section 16 for the full text of the H statements declared above.	[1] [2]

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 physical, 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 : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

SECTION 4: First aid measures

- | | |
|-----------------------------------|---|
| Inhalation | : Get medical attention immediately. Call a poison center or physician. 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. 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. |
| Skin contact | : Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| Ingestion | : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- | | |
|---------------------|---|
| Eye contact | : Adverse symptoms may include the following:
pain
watering
redness |
| Inhalation | : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness |
| Skin contact | : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur |
| Ingestion | : Adverse symptoms may include the following:
stomach pains |

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
|----------------------------|---|
| Notes to physician | : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Specific treatments | : No specific treatment. |

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO₂, 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 combustion products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Exclude sources of ignition and ventilate the area. 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 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 (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

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

Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits.

In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

Mixture may charge electrostatically: always use earthing leads when transferring from one container to another.

Operators should wear antistatic footwear and clothing and floors should be of the conducting type.

Keep away from heat, sparks and flame. No sparking tools should be used.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.

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).

SECTION 7: Handling and storage

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.

Information on fire and explosion protection

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

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

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.

Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Seveso Directive - Reporting thresholds**Danger criteria**

Category	Notification and MAPP threshold	Safety report threshold
P3a	150 tonnes	500 tonnes
E2	200 tonnes	500 tonnes

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational exposure limits**

dimethyl ether	EH40/2005 WELs (United Kingdom (UK), 1/2020) STEL 15 minutes: 958 mg/m ³ . STEL 15 minutes: 500 ppm. TWA 8 hours: 400 ppm. TWA 8 hours: 766 mg/m ³ .
methyl acetate	EH40/2005 WELs (United Kingdom (UK), 1/2020) STEL 15 minutes: 770 mg/m ³ . STEL 15 minutes: 250 ppm. TWA 8 hours: 616 mg/m ³ . TWA 8 hours: 200 ppm.
butan-1-ol	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed through skin. STEL 15 minutes: 154 mg/m ³ . STEL 15 minutes: 50 ppm.
1-methoxypropan-2-ol	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed through skin. STEL 15 minutes: 560 mg/m ³ . STEL 15 minutes: 150 ppm. TWA 8 hours: 375 mg/m ³ . TWA 8 hours: 100 ppm.
cyclohexane	EH40/2005 WELs (United Kingdom (UK), 1/2020) STEL 15 minutes: 1050 mg/m ³ . STEL 15 minutes: 300 ppm. TWA 8 hours: 100 ppm. TWA 8 hours: 350 mg/m ³ .
2-methylpropan-1-ol	EH40/2005 WELs (United Kingdom (UK), 1/2020) STEL 15 minutes: 231 mg/m ³ .

SECTION 8: Exposure controls/personal protection

STEL 15 minutes: 75 ppm.
TWA 8 hours: 154 mg/m³.
TWA 8 hours: 50 ppm.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS 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	Result
dimethyl ether	DNEL - General population - Long term - Inhalation 471 mg/m³ <u>Effects</u> : Systemic DNEL - Workers - Long term - Inhalation 1894 mg/m³ <u>Effects</u> : Systemic
methyl acetate	DNEL - General population - Long term - Oral 21.5 mg/kg bw/day <u>Effects</u> : Systemic DNEL - General population - Long term - Dermal 21.5 mg/kg bw/day <u>Effects</u> : Systemic DNEL - Workers - Long term - Dermal 43 mg/kg bw/day <u>Effects</u> : Systemic DNEL - General population - Long term - Inhalation 64 mg/m³ <u>Effects</u> : Systemic DNEL - General population - Long term - Inhalation 133 mg/m³ <u>Effects</u> : Local DNEL - General population - Short term - Oral 203 mg/kg bw/day <u>Effects</u> : Systemic DNEL - General population - Short term - Dermal 203 mg/kg bw/day <u>Effects</u> : Systemic DNEL - Workers - Long term - Inhalation 300 mg/m³ <u>Effects</u> : Systemic DNEL - Workers - Long term - Inhalation 620 mg/m³ <u>Effects</u> : Local DNEL - General population - Short term - Inhalation

SECTION 8: Exposure controls/personal protection

	<div>3777 mg/m³</div> <div>Effects: Systemic</div>
	<div>DNEL - Workers - Short term - Inhalation</div> <div>3777 mg/m³</div> <div>Effects: Systemic</div>
butan-1-ol	<div>DNEL - General population - Long term - Oral</div> <div>1.5625 mg/kg bw/day</div> <div>Effects: Systemic</div> <div>DNEL - General population - Long term - Dermal</div> <div>3.125 mg/kg bw/day</div> <div>Effects: Systemic</div> <div>DNEL - General population - Long term - Inhalation</div> <div>55.357 mg/m³</div> <div>Effects: Systemic</div> <div>DNEL - General population - Long term - Inhalation</div> <div>155 mg/m³</div> <div>Effects: Local</div> <div>DNEL - Workers - Long term - Inhalation</div> <div>310 mg/m³</div> <div>Effects: Local</div>
1-methoxypropan-2-ol	<div>DNEL - General population - Long term - Oral</div> <div>33 mg/kg bw/day</div> <div>Effects: Systemic</div> <div>DNEL - General population - Long term - Inhalation</div> <div>43.9 mg/m³</div> <div>Effects: Systemic</div> <div>DNEL - General population - Long term - Dermal</div> <div>78 mg/kg bw/day</div> <div>Effects: Systemic</div> <div>DNEL - Workers - Long term - Dermal</div> <div>183 mg/kg bw/day</div> <div>Effects: Systemic</div> <div>DNEL - Workers - Long term - Inhalation</div> <div>369 mg/m³</div> <div>Effects: Systemic</div> <div>DNEL - Workers - Short term - Inhalation</div> <div>553.5 mg/m³</div> <div>Effects: Local</div> <div>DNEL - Workers - Short term - Inhalation</div> <div>553.5 mg/m³</div> <div>Effects: Systemic</div>
cyclohexane	<div>DNEL - General population - Long term - Oral</div> <div>59.4 mg/kg bw/day</div> <div>Effects: Systemic</div> <div>DNEL - General population - Long term - Inhalation</div> <div>206 mg/m³</div> <div>Effects: Local</div> <div>DNEL - General population - Long term - Inhalation</div>

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SECTION 8: Exposure controls/personal protection

206 mg/m³
Effects: Systemic

DNEL - General population - Short term - Inhalation
412 mg/m³
Effects: Local

DNEL - General population - Short term - Inhalation
412 mg/m³
Effects: Systemic

DNEL - Workers - Long term - Inhalation
700 mg/m³
Effects: Local

DNEL - Workers - Long term - Inhalation
700 mg/m³
Effects: Systemic

DNEL - General population - Long term - Dermal
1186 mg/kg bw/day
Effects: Systemic

DNEL - Workers - Short term - Inhalation
1400 mg/m³
Effects: Local

DNEL - Workers - Short term - Inhalation
1400 mg/m³
Effects: Systemic

DNEL - Workers - Long term - Dermal
2016 mg/kg bw/day
Effects: Systemic

DNEL - Workers - Long term - Inhalation
310 mg/m³
Effects: Local

DNEL - General population - Long term - Inhalation
55 mg/m³
Effects: Local

2-methylpropan-1-ol

PNECs

Product/ingredient name
butan-1-ol

Result

Fresh water
0.082 mg/l

Marine water
0.0082 mg/l

Fresh water sediment
0.324 mg/kg dwt

Marine water sediment
0.0324 mg/kg dwt

Soil
0.017 mg/kg dwt

Sewage Treatment Plant
2476 mg/l

SECTION 8: Exposure controls/personal protection

1-methoxypropan-2-ol	Marine water
	1 mg/l
	Fresh water
	10 mg/l
	Fresh water sediment
	52.3 mg/kg
	Marine water sediment
	5.2 mg/kg
	Sewage Treatment Plant
	100 mg/l
	Soil
	4.59 mg/kg
2-methylpropan-1-ol	Marine water
	0.04 mg/l
	Fresh water
	0.4 mg/l
	Fresh water sediment
	1.56 mg/l
	Marine water sediment
	0.156 mg/kg
	Soil
	0.076 mg/kg
	Sewage Treatment Plant
	10 mg/l

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. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

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 : Use safety eyewear designed to protect against splash of liquids.

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

SECTION 8: Exposure controls/personal protection

occurred.

Gloves

- : Duration / breakthrough time: <1 hour,
Glove material: NBR, nitrile rubber, material thickness as splash protection: at least 0.2 mm, (EN374)
Glove material: NBR, nitrile rubber Material thickness for short-term contact: at least 0.5 mm, (EN374)
- The recommendation for the type or types of glove to use when handling this product is based on information from the following source:
Expert judgment
- 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

- : Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.

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

- : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flatting should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

Environmental exposure controls

- : Do not allow to enter drains or watercourses.

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

: Grey.

Odour

: Not available.

Odour threshold

: Not available.

Melting point/freezing point

: Technically not possible to measure

Initial boiling point and boiling range

: Not applicable.

Flammability (solid, gas)

: Not available.

Upper/lower flammability or explosive limits

: Lower: 1.4%
Upper: 26.2%
Not available.

Flash point

: Closed cup: -41°C (-41.8°F)

Auto-ignition temperature

: 260°C (500°F)

Decomposition temperature

: Not applicable.

pH

: Not applicable.

Viscosity

: Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C): Not available.

Solubility in water

: Not available.

Miscible with water

: Yes.

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SECTION 9: Physical and chemical properties

Partition coefficient: n-octanol/ water	: Not applicable.	
Vapour pressure	: 250.7 kPa (1880.1 mm Hg)	
Relative density	: Not available.	
Density	: 0.83 g/cm³	
Vapour density	: Not available.	
Explosive properties	: Not available.	
Oxidising properties	: Not available.	
Weight volatiles	: 83.4 % (w/w)	
VOC content	: 83.3 % (w/w)	(2010/75/EU)

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Heat of combustion : 24.91 kJ/g

Aerosol product

Type of aerosol : Spray
Further information Not available.

9.2.2 Other safety characteristics

Miscible with water : Yes.
Further information Not available.

room temperature (=20°C)

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	: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
Date of issue/Date of revision : 19 June 2025	Date of previous issue : 19 June 2025
Version : 1.01	12/22

SECTION 11: Toxicological information

dimethyl ether	<p>Rat - Oral - LD50 >99999 mg/kg</p> <p>Rat - Dermal - LD50 >99999 mg/kg</p> <p>Rat - Inhalation - LC50 Vapour 309 g/m³ [4 hours]</p> <p>Rat - Inhalation - LC50 Gas. 164000 ppm [4 hours] <u>Toxic effects:</u> Behavioral - Ataxia Behavioral - Coma</p>
methyl acetate	<p>Rat - Oral - LD50 >5 g/kg</p> <p>Rabbit - Dermal - LD50 >5 g/kg</p>
butan-1-ol	<p>Rat - Oral - LD50 790 mg/kg <u>Toxic effects:</u> Liver - Fatty liver degeneration Kidney, Ureter, and Bladder - Other changes Blood - Other changes</p> <p>Rabbit - Dermal - LD50 3400 mg/kg</p> <p>Rat - Inhalation - LC50 Vapour 24000 mg/m³ [4 hours]</p>
1-methoxypropan-2-ol	<p>Rabbit - Dermal - LD50 13 g/kg</p> <p>Rat - Oral - LD50 6600 mg/kg <u>Toxic effects:</u> Brain and Coverings - Other degenerative changes Behavioral - General anesthetic Lung, Thorax, or Respiration - Dyspnea</p>
cyclohexane	<p>Rat - Oral - LD50 6240 mg/kg <u>Toxic effects:</u> Behavioral - Somnolence (general depressed activity) Gastrointestinal - Changes in structure or function of salivary glands Gastrointestinal - Hypermotility, diarrhea</p>
2-methylpropan-1-ol	<p>Rat - Oral - LD50 2460 mg/kg</p> <p>Rabbit - Dermal - LD50 3400 mg/kg</p>

Conclusion/Summary [Product] : Not available.

Acute toxicity estimates

SECTION 11: Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
mixture	9104.0	N/A	N/A	N/A	N/A
dimethyl ether	N/A	N/A	164000	309	N/A
butan-1-ol	790	3400	N/A	24	N/A
1-methoxypropan-2-ol	6600	13000	N/A	N/A	N/A
cyclohexane	6240	N/A	N/A	N/A	N/A
2-methylpropan-1-ol	2460	3400	N/A	N/A	N/A

Skin corrosion/irritation**Product/ingredient name**

methyl acetate

Result**Rabbit - Skin - Mild irritant**Duration of treatment/exposure: 24 hoursAmount/concentration applied: 500 mg**Rabbit - Skin - Moderate irritant**Duration of treatment/exposure: 24 hoursAmount/concentration applied: 20 mg

butan-1-ol

Rabbit - Skin - Moderate irritantDuration of treatment/exposure: 24 hoursAmount/concentration applied: 20 mg

1-methoxypropan-2-ol

Rabbit - Skin - Mild irritantAmount/concentration applied: 500 mg**Conclusion/Summary [Product]** : Not available.**Serious eye damage/eye irritation****Product/ingredient name**

methyl acetate

Result**Rabbit - Eyes - Moderate irritant**Duration of treatment/exposure: 24 hoursAmount/concentration applied: 100 mg

butan-1-ol

Rabbit - Eyes - Severe irritantDuration of treatment/exposure: 24 hoursAmount/concentration applied: 2 mg**Rabbit - Eyes - Severe irritant**Amount/concentration applied: 0.005 MI**Rabbit - Eyes - Severe irritant**Amount/concentration applied: 1.62 mg**Rabbit - Eyes - Cornea opacity**

OECD [Acute Eye Irritation/Corrosion]

Observation period: 7 daysIrritation score: 2.11

Not reversible

cyclohexane

Rabbit - Eyes - Severe irritantAmount/concentration applied: 0.1 MI**Conclusion/Summary [Product]** : Not available.**Respiratory corrosion/irritation**

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
methyl acetate	STOT SE 3, H336 (Narcotic effects)
butan-1-ol	STOT SE 3, H335 (Respiratory tract irritation)
	STOT SE 3, H336 (Narcotic effects)
1-methoxypropan-2-ol	STOT SE 3, H336 (Narcotic effects)
cyclohexane	STOT SE 3, H336 (Narcotic effects)
2-methylpropan-1-ol	STOT SE 3, H335 (Respiratory tract irritation)
	STOT SE 3, H336 (Narcotic effects)

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
cyclohexane	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure

Not available.

Potential acute health effects

Eye contact	: Causes serious eye damage.
Inhalation	: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

SECTION 11: Toxicological information

Skin contact	: Causes skin irritation.
Ingestion	: Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: pain watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion	: Adverse symptoms may include the following: stomach pains

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 [Product] : 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.

Other information

Not available.

SECTION 12: Ecological information**12.1 Toxicity****Product/ingredient name**

methyl acetate

Result**Acute - LC50 - Fresh water**

Fish - Fathead minnow - *Pimephales promelas*
Age: 28 to 32 days; Size: 17.5 mm; Weight: 0.087 g
 320 mg/l [96 hours]
Effect: Mortality

butan-1-ol

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*
Age: 33 days; Size: 20.6 mm; Weight: 0.119 g

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	1730 mg/l [96 hours] <u>Effect</u> : Mortality
	Acute - EC50 - Fresh water Daphnia - Water flea - <i>Daphnia magna</i> <u>Age</u> : 6 to 24 hours 1983 mg/l [48 hours] <u>Effect</u> : Intoxication
1-methoxypropan-2-ol	Acute - LC50 OECD 203 Fish - Trout ≥1000 mg/l [96 hours] Acute - LC50 OECD 202 Daphnia - Daphnia >21100 mg/l [48 hours]
cyclohexane	Acute - LC50 - Fresh water Fish - Fathead minnow - <i>Pimephales promelas</i> <u>Age</u> : 30 days; <u>Size</u> : 20.5 mm; <u>Weight</u> : 0.119 g 4530 µg/l [96 hours] <u>Effect</u> : Mortality
2-methylpropan-1-ol	Acute - LC50 - Fresh water Fish - Rainbow trout,donaldson trout - <i>Oncorhynchus mykiss</i> <u>Weight</u> : 1.67 g 1330 mg/l [96 hours] <u>Effect</u> : Mortality Acute - LC50 - Marine water Crustaceans - Brine shrimp - <i>Artemia salina</i> 600 mg/l [48 hours] <u>Effect</u> : Mortality Chronic - NOEC - Fresh water Daphnia - Water flea - <i>Daphnia magna</i> <u>Age</u> : ≤24 hours 4 mg/l [21 days] <u>Effect</u> : Reproduction

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Product/ingredient name	Result
1-methoxypropan-2-ol	OECD 301E 96% [28 days]

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
1-methoxypropan-2-ol	-	-	Readily

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
dimethyl ether	0.07	-	Low
methyl acetate	0.18	-	Low
butan-1-ol	1	-	Low
1-methoxypropan-2-ol	<1	-	Low
trizinc bis(orthophosphate)	-	60960	High
cyclohexane	3.44	167	Low
2-methylpropan-1-ol	1	-	Low

12.4 Mobility in soil

Soil/water partition coefficient : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
dimethyl ether	No	N/A	N/A	No	N/A	N/A	N/A
methyl acetate	No	N/A	N/A	No	N/A	N/A	N/A
butan-1-ol	No	N/A	N/A	No	N/A	N/A	N/A
1-methoxypropan-2-ol	No	N/A	N/A	No	N/A	N/A	N/A
trizinc bis(orthophosphate)	No	No	No	No	No	No	No
cyclohexane	No	N/A	No	No	No	N/A	No
2-methylpropan-1-ol	No	N/A	N/A	No	N/A	N/A	N/A

12.6 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

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.

Type of packaging	Waste catalogue
	15 01 10* packaging containing residues of or contaminated by hazardous substances

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	UN1950	UN1950	UN1950	UN1950
14.2 UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	Aerosols, flammable
14.3 Transport hazard class(es)	2  	2  	2.1  	2.1 
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information**ADR/RID**

: The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Tunnel code (D)**ADN**

: The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

IMDG

: The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

IATA

: The environmentally hazardous substance mark may appear if required by other transportation regulations.

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 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****UK (GB)/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.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

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SECTION 15: Regulatory information

Category
P3a
E2

National regulations

Product/ingredient name	List name	Name on list	Classification	Notes

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.


Stockholm Convention on Persistent Organic Pollutants

Not listed.

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

: 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
GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = GB CLP-specific Hazard statement
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
N/A = Not available
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
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
Aerosol 1, H222, H229 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336 Aquatic Chronic 2, H411	On basis of test data Calculation method Calculation method Calculation method Calculation method

Full text of abbreviated H statements

SECTION 16: Other information

H220	Extremely flammable gas.
H222, H229	Extremely flammable aerosol. Pressurised container: may burst if heated.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
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.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aerosol 1	AEROSOLS - Category 1
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
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. Gas 1A	FLAMMABLE GASES - Category 1A
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Press. Gas (Comp.)	GASES UNDER PRESSURE - Compressed gas
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Notice to reader

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SECTION 16: Other information