

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

1.1 Product identifier: Penosil EasySpray Foam 111 700ml UK

Other means of identification:

Not relevant

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

Relevant uses: Thermal insulation

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

Wolf Group OÜ
Suur-Paala 10
13619 Tallinn - Estonia
Phone: +372 605 9300
sds@wolf-group.com
www.wolf-group.com

1.4 Emergency telephone number: 999; 111; 844 892 0111

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):

Classification of this product has been carried out in accordance with GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567).

Aerosol 1: Flammable aerosols, Category 1, H222

Aerosol 1: Pressurised container: May burst if heated., H229

Aquatic Chronic 4: Hazardous to the aquatic environment, long-term hazard, Category 4, H413

Lact.: Reproductive toxicity, effects on or via lactation, H362

2.2 Label elements:

GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):

Danger



Hazard statements:

H222 - Extremely flammable aerosol.

H229 - Pressurised container: May burst if heated.

H362 - May cause harm to breast-fed children.

H413 - May cause long lasting harmful effects to aquatic life.

Precautionary statements:

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.

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

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

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

P501: Dispose of the contents and/or its container using the separate collection system in your municipality.

Supplementary information:

EUH204: Contains isocyanates. May produce an allergic reaction.

Substances that contribute to the classification

Alkanes, C14-17, chloro

2.3 Other hazards:

Product contains PBT/vPvB substances: Alkanes, C14-17, chloro

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: Mixture composed of organic substances

Components:

In accordance with Annex II of The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020, the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 75-28-5	Isobutane Flam. Gas 1A: H220; Press. Gas (Liq.): H280 - Danger	10 - <20 %
CAS: 115-10-6	Dimethyl ether Flam. Gas 1A: H220; Press. Gas: H280 - Danger	2,5 - <10 %
CAS: 74-98-6	Propane Flam. Gas 1A: H220; Press. Gas: H280 - Danger	2,5 - <10 %
CAS: 85535-85-9	Alkanes, C14-17, chloro Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Lact.: H362; EUH066 - Warning	2,5 - <5 %
CAS: 1244733-77-4	Reaction products of phosphoryl trichloride and 2-methyloxirane Acute Tox. 4: H302; Aquatic Chronic 3: H412 - Warning	2,5 - <5 %
CAS: 26471-62-5	Toluene Diisocyanate Acute Tox. 2: H330; Aquatic Chronic 3: H412; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT SE 3: H335 - Danger	0,01 - <0,1 %
CAS: 556-67-2	Octamethylcyclotetrasiloxane Aquatic Chronic 1: H410; Flam. Liq. 3: H226; Repr. 2: H361f - Warning	0,01 - <0,1 %

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Other information:

Identification	M-factor	
	Octamethylcyclotetrasiloxane CAS: 556-67-2	Acute
	Chronic	10

Identification	Specific concentration limit
Toluene Diisocyanate CAS: 26471-62-5	% (w/w) >=0,1: Resp. Sens. 1 - H334

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acute toxicity		Genus
	Reaction products of phosphoryl trichloride and 2-methyloxirane CAS: 1244733-77-4	LD50 oral	
	LD50 dermal	Not relevant	
	LC50 inhalation	>20 mg/L	

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

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SECTION 4: FIRST AID MEASURES (continued)

Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case removal could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS for the product.

By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Not relevant

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC)

Unsuitable extinguishing media:

Water jet

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...).

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

Avoid the evaporation of the product as it contains flammable substances, which could form flammable vapour/air mixtures in the presence of sources of ignition. Control sources of ignition (mobile phones, sparks,...) and transfer at slow speeds to avoid the creation of electrostatic charges. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities:

A.- Specific storage requirements

Maximum Temp.: 30 °C

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace:

EH40/2005 Workplace exposure limits, fourth edition, published 2020:

Identification	Occupational exposure limits		
	WEL (8h)	400 ppm	766 mg/m ³
Dimethyl ether CAS: 115-10-6	WEL (15 min)	500 ppm	958 mg/m ³

BIOLOGICAL MONITORING GUIDANCE VALUES (BMGVs) - EH40/2005 - Isocyanates (applies to HDI, IPDI, TDI and MDI): 1 µmol isocyanate-derived diamine/mol creatinine in urine. Sampling Time: At the end of the period of exposure.

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	Not relevant	1894 mg/m ³	Not relevant
Alkanes, C14-17, chloro CAS: 85535-85-9 EC: 287-477-0	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	47.9 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	6.7 mg/m ³	Not relevant
Reaction products of phosphoryl trichloride and 2-methyloxirane CAS: 1244733-77-4 EC: 807-935-0	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	2.91 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	8.2 mg/m ³	Not relevant
Toluene Diisocyanate CAS: 26471-62-5 EC: 247-722-4	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	0.14 mg/kg	Not relevant
	Inhalation	Not relevant	0.035 mg/m ³	0.035 mg/m ³	0.14 mg/m ³
Octamethylcyclotetrasiloxane CAS: 556-67-2 EC: 209-136-7	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	Not relevant	73 mg/m ³	73 mg/m ³

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	Not relevant	471 mg/m ³	Not relevant
Alkanes, C14-17, chloro CAS: 85535-85-9 EC: 287-477-0	Oral	Not relevant	Not relevant	0.58 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	28.75 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	2 mg/m ³	Not relevant
Reaction products of phosphoryl trichloride and 2-methyloxirane CAS: 1244733-77-4 EC: 807-935-0	Oral	2 mg/kg	Not relevant	0.52 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	1.04 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	1.45 mg/m ³	Not relevant
Octamethylcyclotetrasiloxane CAS: 556-67-2 EC: 209-136-7	Oral	Not relevant	Not relevant	3.7 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	Not relevant	13 mg/m ³	13 mg/m ³

PNEC:

Identification				
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	STP	160 mg/L	Fresh water	0.155 mg/L
	Soil	0.045 mg/kg	Marine water	0.016 mg/L
	Intermittent	1.549 mg/L	Sediment (Fresh water)	0.681 mg/kg
	Oral	Not relevant	Sediment (Marine water)	0.069 mg/kg
Alkanes, C14-17, chloro CAS: 85535-85-9 EC: 287-477-0	STP	80 mg/L	Fresh water	0.001 mg/L
	Soil	11.9 mg/kg	Marine water	0.0002 mg/L
	Intermittent	Not relevant	Sediment (Fresh water)	13 mg/kg
	Oral	0.01 g/kg	Sediment (Marine water)	2.6 mg/kg
Reaction products of phosphoryl trichloride and 2-methyloxirane CAS: 1244733-77-4 EC: 807-935-0	STP	19.1 mg/L	Fresh water	0.32 mg/L
	Soil	0.34 mg/kg	Marine water	0.032 mg/L
	Intermittent	0.51 mg/L	Sediment (Fresh water)	11.5 mg/kg
	Oral	0.0116 g/kg	Sediment (Marine water)	1.15 mg/kg
Toluene Diisocyanate CAS: 26471-62-5 EC: 247-722-4	STP	1 mg/L	Fresh water	0.013 mg/L
	Soil	1 mg/kg	Marine water	0.001 mg/L
	Intermittent	0.125 mg/L	Sediment (Fresh water)	Not relevant
	Oral	Not relevant	Sediment (Marine water)	Not relevant
Octamethylcyclotetrasiloxane CAS: 556-67-2 EC: 209-136-7	STP	10 mg/L	Fresh water	0.0015 mg/L
	Soil	0.54 mg/kg	Marine water	0.00015 mg/L
	Intermittent	Not relevant	Sediment (Fresh water)	3 mg/kg
	Oral	0.041 g/kg	Sediment (Marine water)	0.3 mg/kg

8.2 Exposure controls:


A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<UKCA marking>> or <<CE marking>>. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

C.- Specific protection for the hands


Pictogram	PPE	Remarks
 Mandatory hand protection	Protective gloves against minor risks	Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN ISO 21420:2020 and EN ISO 374-1:2016+A1:2018

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.



D.- Eye and face protection

Pictogram	PPE	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Remarks
 Mandatory complete body protection	Antistatic and fireproof protective clothing	Limited protection against flames.
 Mandatory foot protection	Safety footwear with antistatic and heat resistant properties	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

The Volatile Organic Compounds in Paints, Varnishes and Vehicle Refinishing Products Regulations 2012:

V.O.C. (Supply):	31.18 % weight
V.O.C. density at 20 °C:	270.31 kg/m ³ (270.31 g/L)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Aerosol
Appearance:	Not available
Colour:	Light yellow
Odour:	Not available
Odour threshold:	Not relevant *

Volatility:

Boiling point at atmospheric pressure:	-12 °C (Propellant)
Vapour pressure at 20 °C:	Not relevant *
Vapour pressure at 50 °C:	<300000 Pa (300 kPa)
Evaporation rate at 20 °C:	Not relevant *

Product description:

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Density at 20 °C:	867 kg/m ³
Relative density at 20 °C:	Not relevant *
Dynamic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 40 °C:	Not relevant *
Concentration:	Not relevant *
pH:	Not relevant *
Vapour density at 20 °C:	Not relevant *
Partition coefficient n-octanol/water 20 °C:	Not relevant *
Solubility in water at 20 °C:	Not relevant *
Solubility properties:	Not relevant *
Decomposition temperature:	Not relevant *
Melting point/freezing point:	Not relevant *
Recipient pressure:	Not relevant *
Flammability:	
Flash Point:	Non-applicable
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	460 °C (Propellant)
Lower flammability limit:	Not relevant *
Upper flammability limit:	Not relevant *
Particle characteristics:	
Median equivalent diameter:	Non-applicable

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Not relevant *
Oxidising properties:	Not relevant *
Corrosive to metals:	Not relevant *
Heat of combustion:	Not relevant *
Aerosols-total percentage (by mass) of flammable components:	Not relevant *

Other safety characteristics:

Surface tension at 20 °C:	Not relevant *
Refraction index:	Not relevant *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7 from Safety Data Sheet.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

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SECTION 10: STABILITY AND REACTIVITY (continued)

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

Contains glycols. It is recommended not to breathe the vapours for prolonged periods of time due to the possibility of effects that are hazardous to the health.

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous with carcinogenic effects. For more information see section 3.
IARC: Toluene Diisocyanate (2B); Alkanes, C14-17, chloro (2B)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: May cause harm to breast-fed children

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous with sensitising effects. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous with sensitising effects. For more information see section 3.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Not relevant

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
Alkanes, C14-17, chloro CAS: 85535-85-9	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>20 mg/L	
Reaction products of phosphoryl trichloride and 2-methyloxirane CAS: 1244733-77-4	LD50 oral	632 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	Rat
	LC50 inhalation	>20 mg/L	
Isobutane CAS: 75-28-5	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>5 mg/L	
Propane CAS: 74-98-6	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>5 mg/L	
Dimethyl ether CAS: 115-10-6	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	308.5 mg/L (4 h)	Rat
Toluene Diisocyanate CAS: 26471-62-5	LD50 oral	3360 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>20 mg/L	
Octamethylcyclotetrasiloxane CAS: 556-67-2	LD50 oral	61440 mg/kg	Rat
	LD50 dermal	10000 mg/kg	Rabbit
	LC50 inhalation	>20 mg/L	

SECTION 12: ECOLOGICAL INFORMATION

May cause long lasting harmful effects to aquatic life.

12.1 Toxicity:

Product-specific aquatic toxicity:

Acute toxicity		Species	Genus
EC50	1000 mg/L (48 h)	Daphnia magna	Crustacean
EC50	1000 mg/L (72 h)	Desmodesmus subspicatus	Algae

Substance-specific aquatic toxicity:

Acute toxicity:

Identification	Concentration		Species	Genus
	LC50	EC50		
Alkanes, C14-17, chloro CAS: 85535-85-9	LC50	>0.1 - 1 mg/L (96 h)		Fish
	EC50	>0.1 - 1 mg/L (48 h)		Crustacean
	EC50	>0.1 - 1 mg/L (72 h)		Algae
Reaction products of phosphoryl trichloride and 2-methyloxirane CAS: 1244733-77-4	LC50	100 mg/L (96 h)	Danio rerio	Fish
	EC50	131 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	82 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae
Toluene Diisocyanate CAS: 26471-62-5	LC50	133 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	12.5 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	4300 mg/L (96 h)	Chlorella vulgaris	Algae

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Concentration		Species	Genus
Octamethylcyclotetrasiloxane CAS: 556-67-2	LC50	>0.1 - 1 mg/L (96 h)		Fish
	EC50	>0.1 - 1 mg/L (48 h)		Crustacean
	EC50	>0.1 - 1 mg/L (72 h)		Algae

Chronic toxicity:

Identification	Concentration		Species	Genus
Reaction products of phosphoryl trichloride and 2-methyloxirane CAS: 1244733-77-4	NOEC	Not relevant		
	NOEC	32 mg/L	Daphnia magna	Crustacean
Toluene Diisocyanate CAS: 26471-62-5	NOEC	Not relevant		
	NOEC	1.1 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
Reaction products of phosphoryl trichloride and 2-methyloxirane CAS: 1244733-77-4	BOD5	Not relevant	Concentration	20 mg/L
	COD	Not relevant	Period	28 days
	BOD5/COD	Not relevant	% Biodegradable	14 %
Octamethylcyclotetrasiloxane CAS: 556-67-2	BOD5	Not relevant	Concentration	10 mg/L
	COD	Not relevant	Period	29 days
	BOD5/COD	Not relevant	% Biodegradable	4 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
Isobutane CAS: 75-28-5	BCF	27
	Pow Log	2.76
	Potential	Low
Propane CAS: 74-98-6	BCF	13
	Pow Log	2.86
	Potential	Low
Reaction products of phosphoryl trichloride and 2-methyloxirane CAS: 1244733-77-4	BCF	8
	Pow Log	3.17
	Potential	Low
Octamethylcyclotetrasiloxane CAS: 556-67-2	BCF	12400
	Pow Log	6.5
	Potential	Very High

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Isobutane CAS: 75-28-5	Koc	35	Henry	120576.75 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	9.84E-3 N/m (25 °C)	Moist soil	Yes
Dimethyl ether CAS: 115-10-6	Koc	Not relevant	Henry	Not relevant
	Conclusion	Not relevant	Dry soil	Not relevant
	Surface tension	1.136E-2 N/m (25 °C)	Moist soil	Not relevant
Propane CAS: 74-98-6	Koc	460	Henry	71636.78 Pa·m ³ /mol
	Conclusion	Moderate	Dry soil	Yes
	Surface tension	7.02E-3 N/m (25 °C)	Moist soil	Yes
Reaction products of phosphoryl trichloride and 2-methyloxirane CAS: 1244733-77-4	Koc	324.2	Henry	6E-3 Pa·m ³ /mol
	Conclusion	Moderate	Dry soil	Not relevant
	Surface tension	Not relevant	Moist soil	Not relevant
Octamethylcyclotetrasiloxane CAS: 556-67-2	Koc	16600	Henry	1200000 Pa·m ³ /mol
	Conclusion	Immobile	Dry soil	Yes
	Surface tension	1.819E-2 N/m (25 °C)	Moist soil	Yes

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SECTION 12: ECOLOGICAL INFORMATION (continued)

12.5 Results of PBT and vPvB assessment:

Product contains PBT/vPvB substances: Alkanes, C14-17, chloro

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class
16 05 04*	gases in pressure containers (including halons) containing hazardous substances	Hazardous

Type of waste:

HP3 Flammable, HP14 Ecotoxic

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance The Waste (England & Wales) Regulations 2011, 2011 No. 988. As under 15 01 of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-hazardous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of UK REACH the provisions related to waste management are stated:

UK legislation: The Waste (England & Wales) Regulations 2011.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2023 and RID 2023:



- 14.1 UN number:** UN1950
- 14.2 UN proper shipping name:** AEROSOLS
- 14.3 Transport hazard class(es):** 2
- Labels:** 2.1
- 14.4 Packing group:** N/A
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
 - Tunnel restriction code: D
 - Physico-Chemical properties: see section 9
 - Limited quantities: 1 L
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Not relevant

Transport of dangerous goods by sea:

With regard to IMDG 41-22:

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SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number:** UN1950
14.2 UN proper shipping name: AEROSOLS
14.3 Transport hazard class(es): 2
 Labels: 2.1
14.4 Packing group: N/A
14.5 Marine pollutant: No
14.6 Special precautions for user
 Special regulations: 63, 959, 190, 277, 327, 344
 EmS Codes: F-D, S-U
 Physico-Chemical properties: see section 9
 Limited quantities: 1 L
 Segregation group: Not relevant
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Not relevant

Transport of dangerous goods by air:

With regard to IATA/ICAO 2024:



- 14.1 UN number:** UN1950
14.2 UN proper shipping name: AEROSOLS
14.3 Transport hazard class(es): 2
 Labels: 2.1
14.4 Packing group: N/A
14.5 Environmental hazards: No
14.6 Special precautions for user
 Physico-Chemical properties: see section 9
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Not relevant

SECTION 15: REGULATORY INFORMATION

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

- Substances listed in UK candidate list of substances of very high concern (SVHCs): *Alkanes, C14-17, chloro (85535-85-9)* ; *Octamethylcyclotetrasiloxane (556-67-2)* ; *Decamethylcyclopentasiloxane (541-02-6)* ; *Dodecamethylcyclohexasiloxane (540-97-6)* ; *Octamethylcyclotetrasiloxane (556-67-2)*
- Substances listed in UK REACH Authorisation List (Annex 14): Not relevant

The Control of Major Accident Hazards Regulations 2015:

Section	Description	Lower-tier requirements	Upper-tier requirements
P3a	FLAMMABLE AEROSOLS	150	500

Restrictions to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII UK REACH, etc):

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example 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.

Contains Octamethylcyclotetrasiloxane, Octamethylcyclotetrasiloxane, Decamethylcyclopentasiloxane. 1. | Shall not be placed on the market in wash-off cosmetic products in a concentration equal to or greater than 0,1 % by weight of either substance, after 31 January 2020. | 2. | For the purposes of this entry, "wash-off cosmetic products" means cosmetic products as defined in Article 2 (1)(a) of Regulation (EC) No 1223/2009 that, under normal conditions of use, are washed off with water after application.'

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.
 The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020.

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SECTION 15: REGULATORY INFORMATION (continued)

Control of Substances Hazardous to Health Regulations 2002 (as amended)
EH40/2005 Workplace exposure limits.
The Aerosol Dispensers Regulations 2009
The Product Safety and Metrology etc. (Amendment etc.) (EU Exit) Regulations 2019: SCHEDULE 13 -Amendment of the Aerosol Dispensers Regulations 2009
The Product Safety and Metrology etc. (Amendment etc.) (UK(NI) Indication) (EU Exit) Regulations 2020

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.

Texts of the legislative phrases mentioned in section 2:

H222: Extremely flammable aerosol.
H362: May cause harm to breast-fed children.
H413: May cause long lasting harmful effects to aquatic life.
H229: Pressurised container: May burst if heated.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):

Acute Tox. 2: H330 - Fatal if inhaled.
Acute Tox. 4: H302 - Harmful if swallowed.
Aquatic Acute 1: H400 - Very toxic to aquatic life.
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.
Carc. 2: H351 - Suspected of causing cancer.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Flam. Gas 1A: H220 - Extremely flammable gas.
Flam. Liq. 3: H226 - Flammable liquid and vapour.
Lact.: H362 - May cause harm to breast-fed children.
Press. Gas (Liq.): H280 - Contains gas under pressure, may explode if heated.
Press. Gas: H280 - Contains gas under pressure, may explode if heated.
Repr. 2: H361f - Suspected of damaging fertility.
Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Irrit. 2: H315 - Causes skin irritation.
Skin Sens. 1: H317 - May cause an allergic skin reaction.
STOT SE 3: H335 - May cause respiratory irritation.

Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://echa.europa.eu>
<http://eur-lex.europa.eu>

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

Other information:

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SECTION 16: OTHER INFORMATION (continued)

Classification procedure:
Aerosol 1: Calculation method
Aerosol 1: Calculation method
Lact.: Calculation method
Aquatic Chronic 4: Test data

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at UK, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -