

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

1.1 Product identifier: A6036 Penosil Window & Door Gunfoam 55 156 750ml UK

Other means of identification:

Non-applicable

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

Relevant uses: Foam

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:

Classification of this product has been carried out in accordance with GB CLP Regulation.

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

Carc. 2: Carcinogenicity, Category 2, H351

Eye Irrit. 2: Eye irritation, Category 2, H319

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

Resp. Sens. 1: Sensitisation, respiratory, Category 1, H334

Skin Irrit. 2: Skin irritation, Category 2, H315

Skin Sens. 1: Sensitisation, skin, Category 1, H317

STOT RE 2: Specific target organ toxicity, repeated exposure, Category 2, H373

STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

2.2 Label elements:

GB CLP Regulation:

Danger



Hazard statements:

H222 - Extremely flammable aerosol.

H229 - Pressurised container: May burst if heated.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 - May cause respiratory irritation.

H351 - Suspected of causing cancer.

H362 - May cause harm to breast-fed children.

H373 - May cause damage to organs through prolonged or repeated exposure.

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

Precautionary statements:

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SECTION 2: HAZARDS IDENTIFICATION (continued)

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/face protection/protective clothing/respiratory protection/protective footwear.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
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

4,4'-methylenediphenyl diisocyanate, isomers and homologues; Alkanes, C14-17, chloro

2.3 Other hazards:

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

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: 9016-87-9	4,4'-methylenediphenyl diisocyanate, isomers and homologues Acute Tox. 4: H332; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 2: H373; STOT SE 3: H335 - Danger	30 - <50 %
CAS: 85535-85-9	Alkanes, C14-17, chloro Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Lact.: H362; EUH066 - Warning	10 - <20 %
CAS: 115-10-6	Dimethyl ether Flam. Gas 1A: H220; Press. Gas: H280 - Danger	2,5 - <10 %
CAS: 75-28-5	Isobutane 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: 25322-69-4	Propane-1,2-diol, propoxylated Acute Tox. 4: H302 - Warning	2,5 - <5 %
CAS: 25791-96-2	Glycerol, propoxylated Acute Tox. 4: H302 - Warning	1 - <2,5 %
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.

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:

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SECTION 4: FIRST AID MEASURES (continued)

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

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:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of 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:

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO₂).

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

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 spilled 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.

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

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.

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. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

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.- Technical measures for storage

Store in a cool, dry, well-ventilated location

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
4,4'-methylenediphenyl diisocyanate, isomers and homologues CAS: 9016-87-9 EC: 618-498-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	0.1 mg/m ³	Non-applicable	0.05 mg/m ³
Alkanes, C14-17, chloro CAS: 85535-85-9 EC: 287-477-0	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	47.9 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	6.7 mg/m ³	Non-applicable

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1894 mg/m ³	Non-applicable
Propane-1,2-diol, propoxylated CAS: 25322-69-4 EC: 500-039-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	84 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	10 mg/m ³
Glycerol, propoxylated CAS: 25791-96-2 EC: 500-044-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	13.9 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	98 mg/m ³	Non-applicable
Octamethylcyclotetrasiloxane CAS: 556-67-2 EC: 209-136-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	73 mg/m ³	73 mg/m ³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
4,4'-methylenediphenyl diisocyanate, isomers and homologues CAS: 9016-87-9 EC: 618-498-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	0.05 mg/m ³	Non-applicable	0.025 mg/m ³
Alkanes, C14-17, chloro CAS: 85535-85-9 EC: 287-477-0	Oral	Non-applicable	Non-applicable	0.58 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	28.75 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	2 mg/m ³	Non-applicable
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	471 mg/m ³	Non-applicable
Propane-1,2-diol, propoxylated CAS: 25322-69-4 EC: 500-039-8	Oral	Non-applicable	Non-applicable	24 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	51 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	10 mg/m ³
Glycerol, propoxylated CAS: 25791-96-2 EC: 500-044-5	Oral	Non-applicable	Non-applicable	8.3 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	8.3 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	29 mg/m ³	Non-applicable
Octamethylcyclotetrasiloxane CAS: 556-67-2 EC: 209-136-7	Oral	Non-applicable	Non-applicable	3.7 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	13 mg/m ³	13 mg/m ³

PNEC:

Identification				
4,4'-methylenediphenyl diisocyanate, isomers and homologues CAS: 9016-87-9 EC: 618-498-9	STP	1 mg/L	Fresh water	1 mg/L
	Soil	1 mg/kg	Marine water	0.1 mg/L
	Intermittent	10 mg/L	Sediment (Fresh water)	Non-applicable
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable
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	Non-applicable	Sediment (Fresh water)	13 mg/kg
	Oral	0.01 g/kg	Sediment (Marine water)	2.6 mg/kg
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	Non-applicable	Sediment (Marine water)	0.069 mg/kg

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification				
Propane-1,2-diol, propoxylated CAS: 25322-69-4 EC: 500-039-8	STP	100 mg/L	Fresh water	0.1 mg/L
	Soil	0.109 mg/kg	Marine water	0.01 mg/L
	Intermittent	1 mg/L	Sediment (Fresh water)	0.765 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.0765 mg/kg
Glycerol, propoxylated CAS: 25791-96-2 EC: 500-044-5	STP	1000 mg/L	Fresh water	0.2 mg/L
	Soil	0.067 mg/kg	Marine water	0.02 mg/L
	Intermittent	1 mg/L	Sediment (Fresh water)	0.52 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.052 mg/kg
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	Non-applicable	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


In accordance with the order of importance to control professional exposure it is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding the occupational exposure limits. In case of using personal protective equipment it should have UKCA marking. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional 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


Pictogram	PPE	Remarks
 Mandatory respiratory tract protection	Filter mask for gases, vapours and particles	Replace when an increase in resistance to breathing is observed and/or a smell or taste of the contaminant is detected.

C.- Specific protection for the hands


Pictogram	PPE	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

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	Face shield	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	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties	For professional use only. Clean periodically according to the manufacturer's instructions.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Pictogram	PPE	Remarks
 Mandatory foot protection	Safety footwear for protection against chemical risk, 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):	20.18 % weight
V.O.C. density at 20 °C:	198.8 kg/m ³ (198.8 g/L)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:

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

Volatility:

Boiling point at atmospheric pressure:	-12 °C (Propellant)
Vapour pressure at 20 °C:	Non-applicable *
Vapour pressure at 50 °C:	<300000 Pa (300 kPa)
Evaporation rate at 20 °C:	Non-applicable *

Product description:

Density at 20 °C:	985 kg/m ³
Relative density at 20 °C:	Non-applicable *
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *

*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)

Recipient pressure: Non-applicable *

Flammability:

Flash Point: Non-applicable

Flammability (solid, gas): Non-applicable *

Autoignition temperature: 460 °C (Propellant)

Lower flammability limit: Non-applicable *

Upper flammability limit: Non-applicable *

Particle characteristics:

Median equivalent diameter: Non-applicable

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties: Non-applicable *

Oxidising properties: Non-applicable *

Corrosive to metals: Non-applicable *

Heat of combustion: Non-applicable *

Aerosols-total percentage (by mass) of flammable components: Non-applicable *

Other safety characteristics:

Surface tension at 20 °C: Non-applicable *

Refraction index: Non-applicable *

*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.

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:

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.

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

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: Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

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

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

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

- Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.
IARC: 4,4'-methylenediphenyl diisocyanate, isomers and homologues (3); 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: Prolonged exposure can result in specific respiratory hypersensitivity.
- Skin: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

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

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

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

- Specific target organ toxicity (STOT)-repeated exposure: Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- Skin: 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.

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:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
4,4'-methylenediphenyl diisocyanate, isomers and homologues CAS: 9016-87-9	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	11 mg/L (ATEi)	
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

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
Glycerol, propoxylated CAS: 25791-96-2	500 mg/kg (ATEi)	>5000 mg/kg	
Propane-1,2-diol, propoxylated CAS: 25322-69-4	LD50 oral	1000 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>20 mg/L	
Alkanes, C14-17, chloro CAS: 85535-85-9	LD50 oral	>5000 mg/kg	
	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

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
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
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
Octamethylcyclotetrasiloxane CAS: 556-67-2	NOEC 0.0044 mg/L	Oncorhynchus mykiss	Fish
	NOEC 0.015 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
	BOD5	COD	Concentration	Period
Octamethylcyclotetrasiloxane CAS: 556-67-2	Non-applicable	Non-applicable	10 mg/L	29 days
	Non-applicable	Non-applicable	% Biodegradable	4 %
	Non-applicable	Non-applicable		

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

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Bioaccumulation potential	
Octamethylcyclotetrasiloxane CAS: 556-67-2	BCF	12400
	Pow Log	6.5
	Potential	Very High

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Dimethyl ether CAS: 115-10-6	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	1.136E-2 N/m (25 °C)	Moist soil	Non-applicable
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
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
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

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	Dangerous

Type of waste:

HP3 Flammable, HP14 Ecotoxic, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP6 Acute Toxicity, HP7 Carcinogenic, HP13 Sensitising, HP4 Irritant — skin irritation and eye damage

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance The Waste 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-dangerous 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 Regulations 2011.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2021 and RID 2021:

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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 **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:** Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 40-20:



- 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: Non-applicable
- 14.7 **Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 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**
Physico-Chemical properties: see section 9
- 14.7 **Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

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)*
- Substances listed in UK REACH Authorisation List (Annex 14): Non-applicable

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):

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SECTION 15: REGULATORY INFORMATION (continued)

Contains more than 0.1 % of 4,4'-methylenediphenyl diisocyanate, isomers and homologues by weight. 1. Shall not be used as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 August 2023, unless:

(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or (b) the employer or self-employed ensures that industrial or professional user(s) have successfully completed training on the safe use of diisocyanates prior to the use of the substance(s) or mixture(s).

2. Shall not be placed on the market as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 February 2022, unless:

(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or (b) the supplier ensures that the recipient of the substance(s) or mixture(s) is provided with information on the requirements referred to in point (b) of paragraph 1 and the following statement is placed on the packaging, in a manner that is visibly distinct from the rest of the label information: "As from 24 August 2023 adequate training is required before industrial or professional use".

3. For the purpose of this entry "industrial and professional user(s)" means any worker or self-employed worker handling diisocyanates on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) or supervising these tasks.

4. The training referred to in point (b) of paragraph 1 shall include the instructions for the control of dermal and inhalation exposure to diisocyanates at the workplace without prejudice to any national occupational exposure limit value or other appropriate risk management measures at national level. Such training shall be conducted by an expert on occupational safety and health with competence acquired by relevant vocational training. That training shall cover as a minimum:

(a) the training elements in point (a) of paragraph 5 for all industrial and professional use(s).

(b) the training elements in points (a) and (b) of paragraph 5 for the following uses:

- handling open mixtures at ambient temperature (including foam tunnels)
- spraying in a ventilated booth
- application by roller
- application by brush
- application by dipping and pouring
- mechanical post treatment (e.g. cutting) of not fully cured articles which are not warm anymore
- cleaning and waste
- any other uses with similar exposure through the dermal and/or inhalation route

(c) the training elements in points (a), (b) and (c) of paragraph 5 for the following uses:

- handling incompletely cured articles (e.g. freshly cured, still warm)
- foundry applications
- maintenance and repair that needs access to equipment
- open handling of warm or hot formulations (> 45 °C)
- spraying in open air, with limited or only natural ventilation (includes large industry working halls) and spraying with high energy (e.g. foams, elastomers)
- and any other uses with similar exposure through the dermal and/or inhalation route.

5. Training elements:

(a) general training, including on-line training, on:

- chemistry of diisocyanates
- toxicity hazards (including acute toxicity)
- exposure to diisocyanates
- occupational exposure limit values
- how sensitisation can develop
- odour as indication of hazard
- importance of volatility for risk
- viscosity, temperature, and molecular weight of diisocyanates
- personal hygiene
- personal protective equipment needed, including practical instructions for its correct use and its limitations
- risk of dermal contact and inhalation exposure
- risk in relation to application process used
- skin and inhalation protection scheme
- ventilation
- cleaning, leakages, maintenance
- discarding empty packaging
- protection of bystanders
- identification of critical handling stages
- specific national code systems (if applicable)
- behaviour-based safety
- certification or documented proof that training has been successfully completed

(b) intermediate level training, including on-line training, on:

- additional behaviour-based aspects
- maintenance
- management of change
- evaluation of existing safety instructions
- risk in relation to application process used

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SECTION 15: REGULATORY INFORMATION (continued)

- certification or documented proof that training has been successfully completed
 - (c) advanced training, including on-line training, on:
 - any additional certification needed for the specific uses covered
 - spraying outside a spraying booth
 - open handling of hot or warm formulations (> 45 °C)
 - certification or documented proof that training has been successfully completed
6. The training shall comply with the provisions set by the Member State in which the industrial or professional user(s) operate. Member States may implement or continue to apply their own national requirements for the use of the substance(s) or mixture(s), as long as the minimum requirements set out in paragraphs 4 and 5 are met.
7. The supplier referred to in point (b) of paragraph 2 shall ensure that the recipient is provided with training material and courses pursuant to paragraphs 4 and 5 in the official language(s) of the Member State(s) where the substance(s) or mixture(s) are supplied. The training shall take into consideration the specificity of the products supplied, including composition, packaging, and design.
8. The employer or self-employed shall document the successful completion of the training referred to in paragraphs 4 and 5. The training shall be renewed at least every five years.
9. Member States shall include in their reports pursuant to Article 117(1) the following information:
- (a) any established training requirements and other risk management measures related to the industrial and professional uses of diisocyanates foreseen in national law
 - (b) the number of cases of reported and recognised occupational asthma and occupational respiratory and dermal diseases in relation to diisocyanates
 - (c) national exposure limits for diisocyanates, if there are any
 - (d) information about enforcement activities related to this restriction.
10. This restriction shall apply without prejudice to other Union legislation on the protection of safety and health of workers at the workplace.

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, 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.'

Contains more than 0.1 % of 4,4'-methylenediphenyl diisocyanate, isomers and homologues by weight. This product may not be distributed in its present form for first-time sale to the general public after 27th December 2010 unless the packaging contains protective gloves meeting the provisions of Regulation (EU) 2016/425.

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.
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:

- CONTINUED ON NEXT PAGE -

SECTION 16: OTHER INFORMATION (continued)

H222: Extremely flammable aerosol.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317: May cause an allergic skin reaction.
H351: Suspected of causing cancer.
H362: May cause harm to breast-fed children.
H335: May cause respiratory irritation.
H373: May cause damage to organs through prolonged or repeated exposure.
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:

Acute Tox. 4: H302 - Harmful if swallowed.
Acute Tox. 4: H332 - Harmful if inhaled.
Aquatic Acute 1: H400 - Very toxic to aquatic life.
Aquatic Chronic 1: H410 - Very toxic 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: 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 RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.
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:

Classification procedure:
Aerosol 1: Calculation method
Aerosol 1: Calculation method
Carc. 2: Calculation method
Eye Irrit. 2: Calculation method
Lact.: Calculation method
Resp. Sens. 1: Calculation method
Skin Irrit. 2: Calculation method
Skin Sens. 1: Calculation method
STOT RE 2: Calculation method
STOT SE 3: Calculation method
Aquatic Chronic 4: Test data

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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 -