



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: REACH Regulation (EC) No 1907/2006, as retained in UK law by (SI 2019/758 as amended)

**SIROFLEX GUN GRADE PU FOAM**  
Supersedes Date: 10-Apr-2024

Revision date 10-Apr-2024  
Revision Number 1

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

### 1.1. Product identifier

Product Name SIROFLEX GUN GRADE PU FOAM

Pure substance/mixture Mixture

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

Recommended use Insulation foams

Uses advised against None known

### 1.3. Details of the supplier of the safety data sheet

#### Company Name

Bostik Limited  
Common Rd  
ST16 3EH  
Stafford UK  
Tel: +44 (1785) 27 26 25  
Fax: +44 (1785) 25 72 36

E-mail address SDS.box-EU@bostik.com

### 1.4. Emergency telephone number

United Kingdom Bostik: +44 (1785) 272650 (9am to 5pm Mon-Fri)  
NHS: 111

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

GB CLP (SI 2020/1567 as amended)

Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Respiratory sensitisation	Category 1 - (H334)
Skin sensitisation	Category 1 - (H317)
Carcinogenicity	Category 2 - (H351)
Effects on or via lactation	Yes - (H362)
Specific target organ toxicity — single exposure	Category 3 - (H335)
Category 3 Respiratory irritation	
Specific target organ toxicity — repeated exposure	Category 2 - (H373)
Chronic aquatic toxicity	Category 4 - (H413)
Aerosols	Category 1 - (H222, H229)

### 2.2. Label elements

Contains Diphenylmethane-diisocyanate, isomers and homologues; Alkanes, C14-17, chloro

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**Signal word**  
Danger

## Hazard statements

H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H332 - Harmful if inhaled.  
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.  
H222 - Extremely flammable aerosol.  
H229 - Pressurised container: May burst if heated.

## EU Specific Hazard Statements

EUH204 - Contains isocyanates. May produce an allergic reaction  
EUH066 - Repeated exposure may cause skin dryness or cracking

## Precautionary Statements - EU (§28, 1272/2008)

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  
P260 - Do not breathe mist/vapours/spray  
P263 - Avoid contact during pregnancy and while nursing  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment  
P280 - Wear protective gloves and eye/face protection  
P302 + P352 - IF ON SKIN: Wash with plenty of water and soap  
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  
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor  
P405 - Store locked up  
P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F  
P501 - Dispose of contents/ container to an approved waste disposal plant

## Special provisions concerning the labelling of certain mixtures

Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used. As from 24 August 2023 adequate training is required before industrial or professional use.

## Additional information

This product requires tactile warnings if supplied to the general public.

## 2.3. Other hazards

In case of insufficient ventilation and/or through use, the formation of a explosive/highly flammable mixture is possible. During transportation by car the cans should stand upright in the cargo space. When foaming the propellants are highly flammable. The mentioned hazards are valid for the non-reacted content of the can or of the fresh foam.

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## PBT & vPvB

This mixture contains substances considered to be persistent, bio-accumulating and toxic (PBT). This mixture contains substances considered to be very persistent and very bioaccumulating (vPvB).

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not applicable

### 3.2 Mixtures

Chemical name	EC No (EU Index No)	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	REACH registration number
Diphenylmethane-diisocyanate, isomers and homologues	618-498-9	9016-87-9	40 - <80	STOT SE 3 (H335) STOT RE 2 (H373) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Carc. 2 (H351) Acute Tox. 4 (H332)	STOT SE 3 :: C>=5% Skin Irrit. 2 :: C>=5% Eye Irrit. 2 :: C>=5% Resp. Sens. 1 :: C>=0.1%	[7]
Alkanes, C14-17, chloro	287-477-0 (602-095-00-X)	85535-85-9	20 - 25	Lact. (H362) (EUH066) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) [H]	-	01-2119519269-33-XXXX
Dimethyl ether	204-065-8 (603-019-00-8)	115-10-6	5 - <10	Flam. Gas 1 (H220) Press. Gas (H280)	-	01-2119472128-37-XXXX
Isobutane	200-857-2 (601-004-00-0)	75-28-5	5 - <10	Flam. Gas 1 (H220) Press. Gas (H280)	-	01-2119485395-27-XXXX
Butane	203-448-7 (601-004-00-0)	106-97-8	0.1 - <0.3	Flam. Gas 1 (H220) Press. Gas (H280)	-	01-2119474691-32-XXXX

NOTE [7] - No registration number is given for this substance because it is a polymer exempted from registration according to the provisions of Article 2(9) of REACH. All monomers or other substances within the polymer are registered or exempt from registration

Classification according to Regulation (EC) No. 1272/2008 [CLP] - Notes  
[H] - Substance has endocrine disrupting properties

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

This product contains one or more candidate substance(s) of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Chemical name	EC No (EU Index No)	CAS No.	SVHC candidates
Alkanes, C14-17, chloro	287-477-0 (602-095-00-X)	85535-85-9	X

## Notes

See section 16 for more information

Chemical name	Notes
Dimethyl ether - 115-10-6	U
Isobutane - 75-28-5	C,U
Butane - 106-97-8	C,U

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
<b>Inhalation</b>	Remove to fresh air. May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical attention.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor. Wash off immediately with soap and plenty of water for at least 15 minutes. Do not use solvents or thinners to dissolve the material.
<b>Ingestion</b>	May produce an allergic reaction. Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.
<b>Self-protection of the first aider</b>	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information. Avoid breathing vapours or mists.

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

<b>Symptoms</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/or wheezing. Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation. Difficulty in breathing.
<b>Effects of Exposure</b>	May cause damage to organs through prolonged or repeated exposure.

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

<b>Note to doctors</b>	May cause sensitisation in susceptible persons. Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable Extinguishing Media** Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray.

**Unsuitable extinguishing media** Full water jet. DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

### 5.2. Special hazards arising from the substance or mixture

**Specific hazards arising from the chemical** Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Cylinders may rupture under extreme heat. Damaged cylinders should be handled only by specialists. Containers may explode when heated. Product is or contains a sensitiser. May cause sensitisation by inhalation. May cause sensitisation by skin contact.

**Hazardous combustion products** Carbon oxides. Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Hydrogen chloride. Nitrogen oxides (NO<sub>x</sub>). Hydrogen cyanide. Isocyanates.

### 5.3. Advice for firefighters

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions** Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid breathing vapours or mists.

**Other information** Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

**Environmental precautions** Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

### 6.3. Methods and material for containment and cleaning up

**Methods for containment** Stop leak if you can do it without risk. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Flood with water to complete polymerization and scrape off floor.

**Methods for cleaning up** Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

### 6.4. Reference to other sections

**Reference to other sections** See section 8 for more information. See section 13 for more information.

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use spark-proof tools and explosion-proof equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Keep in an area equipped with sprinklers. Do not puncture or incinerate cans. Contents under pressure. In case of rupture. Avoid breathing vapours or mists. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Remove contaminated clothing and shoes.

#### General hygiene considerations

Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Storage Conditions

Protect from sunlight. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store in a cool, dry area away from potential sources of heat, open flames, sunlight or other chemicals. Store locked up. Keep out of the reach of children. Keep from freezing. Keep/store only in original container. Store in a dry place. Store in a closed container.

#### Recommended storage temperature

Do not freeze.

### 7.3. Specific end use(s)

**Specific use(s)**  
Insulation foams.

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

**Other information** Observe technical data sheet.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure Limits

Chemical name	European Union	United Kingdom
Diphenylmethane-diisocyanate, isomers and homologues 9016-87-9	-	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.07 mg/m <sup>3</sup> SEN; as -NCO
Dimethyl ether 115-10-6	TWA: 1000 ppm TWA: 1920 mg/m <sup>3</sup>	TWA: 400 ppm TWA: 766 mg/m <sup>3</sup> STEL: 500 ppm STEL: 958 mg/m <sup>3</sup>
4,4'-Methylenediphenyl diisocyanate	-	TWA: 0.02 mg/m <sup>3</sup>

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101-68-8		STEL: 0.07 mg/m <sup>3</sup> Sen+
Glycerin 56-81-5	-	TWA: 10 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup>
Butane 106-97-8	-	TWA: 600 ppm TWA: 1450 mg/m <sup>3</sup> STEL: 750 ppm STEL: 1810 mg/m <sup>3</sup>

Chemical name	European Union	Ireland	United Kingdom
4,4'-Methylenediphenyl diisocyanate 101-68-8	-	1 µmol/mol Creatinine (urine - urinary Diamine post task)	-

**Derived No Effect Level (DNEL)** No information available

Derived No Effect Level (DNEL)			
Alkanes, C14-17, chloro (85535-85-9)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Systemic health effects	Inhalation	6.7 mg/m <sup>3</sup>	
worker Systemic health effects Long term	Dermal	47.9 mg/kg bw/d	

Dimethyl ether (115-10-6)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Systemic health effects	Inhalation	1894 mg/m <sup>3</sup>	

Derived No Effect Level (DNEL)			
Alkanes, C14-17, chloro (85535-85-9)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Inhalation	2 mg/m <sup>3</sup>	
Consumer Long term Systemic health effects	Dermal	28.75 mg/kg bw/d	
Consumer Long term Systemic health effects	Oral	0.58 mg/kg bw/d	

Dimethyl ether (115-10-6)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Inhalation	471 mg/m <sup>3</sup>	

**Predicted No Effect Concentration (PNEC)**

Predicted No Effect Concentration (PNEC)

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Alkanes, C14-17, chloro (85535-85-9)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	1 µg/l
Marine water	0.2 µg/l
Microorganisms in sewage treatment	80 mg/l
Freshwater sediment	13 mg/kg dry weight
Marine sediment	2.6 mg/kg dry weight
Soil	11.9 mg/kg dry weight

Dimethyl ether (115-10-6)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.155 mg/l
Marine water	0.016 mg/l
Microorganisms in sewage treatment	160 mg/l
Freshwater sediment	0.681 mg/kg dry weight
Soil	0.45 mg/kg dry weight

## 8.2. Exposure controls

<b>Engineering controls</b>	Ensure adequate ventilation, especially in confined areas. Vapours/aerosols must be exhausted directly at the point of origin.
<b>Personal protective equipment</b>	
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles). Eye protection must conform to standard EN 166.
<b>Hand protection</b>	Wear suitable gloves. Glove thickness > 0.7mm. Butyl rubber. Nitrile rubber. The breakthrough time for the mentioned glove material is in general greater than 480 min. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374
<b>Skin and body protection</b>	Wear appropriate personal protective clothing to prevent skin contact.
<b>Respiratory protection</b>	Ensure adequate respiratory protection during spray applications. In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Recommended filter type:</b>	Organic gases and vapours filter conforming to EN 14387. Wear a respirator conforming to EN 140 with Type A filter or better.

**Environmental exposure controls** Do not allow into any sewer, on the ground or into any body of water.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	Aerosol Foam
<b>Colour</b>	Yellow
<b>Odour</b>	Characteristic. Slight.

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Melting point / freezing point</b>	No data available	No data available
<b>Initial boiling point and boiling range</b>	Not applicable, Aerosol	Not applicable, Aerosol
<b>Flammability</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	18.6 Vol%	
<b>Lower flammability or explosive limits</b>	1.7 Vol%	
<b>Flash point</b>	Not applicable, Aerosol	Not applicable, Aerosol
<b>Autoignition temperature</b>	.	No data available
<b>Decomposition temperature</b>		No data available
<b>pH</b>	No data available	Not applicable. Insoluble in water.
<b>pH (as aqueous solution)</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	No data available

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Dynamic viscosity	No data available	No data available
Water solubility	Immiscible in water.	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	No data available
Vapour pressure	6 - 7	bar @ 23 °C
Relative density	No data available	None known
Bulk Density	No data available	
Density	0.98 g/cm <sup>3</sup>	
Relative vapour density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

## 9.2. Other information

Solid content (%)	No information available	
VOC content		191.2 g/L

9.2.1. Information with regards to physical hazard classes  
Not applicable

9.2.2. Other safety characteristics  
No information available

  Minimum Ignition Temperature 235 Not applicable .  
(°C)

## **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

Reactivity No information available.

### 10.2. Chemical stability

Stability Stable under normal conditions.

### Explosion data

  Sensitivity to mechanical impact None.  
  Sensitivity to static discharge Yes.

### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Heating causes rise in pressure with risk of bursting.

### 10.4. Conditions to avoid

Conditions to avoid Product cures with moisture. Heat, flames and sparks. Excessive heat. Do not freeze. Protect from moisture. Keep away from open flames, hot surfaces and sources of ignition. Extremes of temperature and direct sunlight.

### 10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidising agents. Water. Alcohols. Amines. Incompatible with oxidising agents.

### 10.6. Hazardous decomposition products

Hazardous decomposition products None under normal use conditions.

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## SECTION 11: Toxicological information

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

#### Information on likely routes of exposure

##### Product Information

<b>Inhalation</b>	Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Specific test data for the substance or mixture is not available. May cause sensitisation in susceptible persons. (based on components). May cause irritation of respiratory tract. Harmful by inhalation.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May cause sensitisation by skin contact. Causes skin irritation.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. May cause additional affects as listed under "Inhalation". Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

#### Symptoms related to the physical, chemical and toxicological characteristics

<b>Symptoms</b>	Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing. Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes.
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#### Acute toxicity

##### Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	>5000 mg/kg
ATEmix (dermal)	>5000 mg/kg
ATEmix (inhalation-gas)	>20000 ppm
ATEmix (inhalation-dust/mist)	2.93 mg/l
ATEmix (inhalation-vapour)	>20 mg/l

##### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Diphenylmethane-diisocyanate, isomers and homologues	LD50 > 10000 mg/kg (Rattus)	LD 50 > 9400 mg/kg (Oryctolagus cuniculus)	1.5 mg/L (Rattus) 4 h
Alkanes, C14-17, chloro	>4000 mg/kg (Rattus)	> 2000 mg/kg (Rattus)	-
Dimethyl ether	-	-	=164000 ppm (Rattus) 4 h
Isobutane	-	-	=658 mg/L (Rattus) 4 h
Butane	-	-	=658 g/m <sup>3</sup> (Rattus) 4 h

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Causes skin irritation.
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Diphenylmethane-diisocyanate, isomers and homologues (9016-87-9)					
Method	Species	Exposure route	Effective dose	Exposure time	Results

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OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit				Mild skin irritant
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**Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes serious eye irritation.

**Respiratory or skin sensitisation** May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

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

**Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

Component Information  
Diphenylmethane-diisocyanate, isomers and homologues (9016-87-9)

Method	Species	Results
OECD Test No. 453: Combined Chronic Toxicity/Carcinogenicity Studies	Rat	Carcinogenic

**Reproductive toxicity** Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May cause harm to breast-fed children.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

Chemical name	European Union
Alkanes, C14-17, chloro	Lact.

**STOT - single exposure** May cause respiratory irritation.

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

H373 - May cause damage to the following organs through prolonged or repeated exposure if inhaled: lungs;inhalation.

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

## 11.2. Information on other hazards

### 11.2.1. Endocrine disrupting properties

Endocrine disrupting properties

### 11.2.2. Other information

**Other adverse effects** No information available.

## **SECTION 12: Ecological information**

### 12.1. Toxicity

**Ecotoxicity** May cause long lasting harmful effects to aquatic life. Cured foam has no C14-C17 chloroalkanes leaching in water for a maximum 20% C14-C17 chloroalkanes in mixture. Study: "Pulverized PU Foam HM23. Leaching study, Limit test" by Dr. Christine Jahns and sponsored by FEICA AISBL, 09.12.2014.

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Product Information					
Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test	Daphnia magna	EC50	1000 mg/L	48 hours	Harmless to aquatic organisms up to the tested concentration

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea	M-Factor	M-Factor (long-term)
Diphenylmethane-diisocyanate, isomers and homologues 9016-87-9	ErC50 (72h) >1640 mg/L Algae (scenedesmus subspicatus) (OECD 201)	CL50 (96h) >1000 mg/L Danio rerio	-	EC50 (24H) >1000 mg/L Daphnia magna		
Alkanes, C14-17, chloro 85535-85-9	-	LC50: >500mg/L (48h, Leuciscus idus)	-	EC50 (48h) = 0.007 mg/l (Daphnia magna) OECD 202	100	10
Dimethyl ether 115-10-6	-	LC50: >4.1g/L (96h, Poecilia reticulata)	-	> 4400 mg/L (Daphnia) (NEN 6501)		

## 12.2. Persistence and degradability

**Persistence and degradability** No information available.

Diphenylmethane-diisocyanate, isomers and homologues (9016-87-9)

Method	Exposure time	Value	Results
OECD Test No. 302C: Inherent Biodegradability: Modified MITI Test (II)	28 days	0% biodegradation	Not readily biodegradable

## 12.3. Bioaccumulative potential

### Bioaccumulation

#### Component Information

Chemical name	Partition coefficient
Alkanes, C14-17, chloro	7
Dimethyl ether	-0.18
Isobutane	2.8
Butane	2.31

## 12.4. Mobility in soil

**Mobility in soil** No information available.

## 12.5. Results of PBT and vPvB assessment

**PBT and vPvB assessment** The product contains substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
Alkanes, C14-17, chloro	PBT & vPvB
Dimethyl ether	The substance is not PBT / vPvB
Isobutane	The substance is not PBT / vPvB
Butane	The substance is not PBT / vPvB

## 12.6. Endocrine disrupting properties

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**Endocrine disrupting properties** No information available.

## 12.7. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

<b>Waste from residues/unused products</b>	Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.
<b>Waste codes / waste designations according to EWC</b>	Waste codes should be assigned by the user based on the application for which the product was used.
<b>European Waste Catalogue</b>	08 05 01* waste isocyanates 16 05 04* gases in pressure containers (including halons) containing dangerous substances 17 06 04 insulation materials other than those mentioned in 17 06 01 and 17 06 03
<b>Other information</b>	Waste codes should be assigned by the user based on the application for which the product was used.

## SECTION 14: Transport information

**Note:** Keep from freezing.

### Land transport (ADR/RID)

<b>14.1 UN number or ID number</b>	UN1950
<b>14.2 UN proper shipping name</b>	Aerosols
<b>14.3 Transport hazard class(es)</b>	2
<b>Labels</b>	2.1
<b>14.4 Packing group</b>	Not regulated
<b>Description</b>	UN1950, Aerosols, 2, (D)
<b>14.5 Environmental hazards</b>	No
<b>14.6 Special precautions for user</b>	
<b>Special Provisions</b>	190, 327, 344, 625
<b>Classification code</b>	5F
<b>Tunnel restriction code</b>	(D)
<b>Limited quantity (LQ)</b>	1 L

### IMDG

<b>14.1 UN number or ID number</b>	UN1950
<b>14.2 UN proper shipping name</b>	Aerosols
<b>14.3 Transport hazard class(es)</b>	2.1
<b>14.4 Packing group</b>	Not regulated
<b>Description</b>	UN1950, Aerosols, 2.1, (0°C c.c.)
<b>14.5 Marine pollutant</b>	NP
<b>14.6 Special precautions for user</b>	
<b>Special Provisions</b>	63,190, 277, 327, 344, 381, 959
<b>Limited Quantity (LQ)</b>	See SP277
<b>EmS-No.</b>	F-D, S-U

### 14.7 Maritime transport in bulk according to IMO instruments

**Transport in bulk according to Annex II of MARPOL and the IBC Code** Not applicable

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## Air transport (ICAO-TI / IATA-DGR)

14.1 UN number or ID number	UN1950
14.2 UN proper shipping name	Aerosols, flammable
14.3 Transport hazard class(es)	2.1
14.4 Packing group	Not regulated
Description	UN1950, Aerosols, flammable, 2.1
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	A145, A167, A802
Limited quantity (LQ)	30 kg G
ERG Code	10L

## **Section 15: REGULATORY INFORMATION**

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

#### European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Check whether measures in accordance with Directive 94/33/EC for the protection of young people at work must be taken.

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

#### Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

##### **SVHC: Substances of Very High Concern for Authorisation:**

This product contains one or more candidate substance(s) of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 59)  $\geq 0.1\%$

Chemical name	CAS No.
Alkanes, C14-17, chloro	85535-85-9

#### **EU-REACH (1907/2006) - Annex XVII - Substances subject to Restriction**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Chemical name	CAS No.	Restricted substance per REACH Annex XVII
Diphenylmethane-diisocyanate, isomers and homologues	9016-87-9	56 74.
Diisocyanates	--	74

**56** . If product supplied to the general public with substance  $\geq 0.1\%$ , then gloves must be provided with the product. **74** If product supplied to the industrial or professional users with total monomeric diisocyanates  $\geq 0.1\%$ , then its packaging must mention "As from 24 August 2023 adequate training is required before industrial or professional use".

#### **Substance subject to authorisation per REACH Annex XIV**

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

#### **Dangerous substance category per Seveso Directive (2012/18/EU)**

P3a - FLAMMABLE AEROSOLS  
P3b - FLAMMABLE AEROSOLS

#### **Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

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Not applicable

## Persistent Organic Pollutants

Not applicable

## REGULATION (EU) 2019/1148 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 June 2019 on the marketing and use of explosives precursors

Not applicable

## National regulations

### 15.2. Chemical safety assessment

Chemical Safety Assessments have been carried out by the Reach registrants for substances registered at >10 tpa. No Chemical Safety Assessment has been carried out for this mixture

## **SECTION 16: Other information**

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### Full text of H-Statements referred to under section 3

H220 - Extremely flammable gas

H280 - Contains gas under pressure; may explode if heated

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

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

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

#### **Notes relating to the identification, classification and labelling of substances**

**Note C:** Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers

**Note U (Table 3):** When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned:

Press. Gas (Comp.)

Press. Gas (Liq.)

Press. Gas (Ref. Liq.)

Press. Gas (Diss.)

Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2)

#### **Legend**

TWA

TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling

Ceiling Limit Value

Sk\*

Skin designation

SVHC

Substance(s) of Very High Concern

PBT

Persistent, Bioaccumulative, and Toxic (PBT) Chemicals

vPvB

Very Persistent and very Bioaccumulative (vPvB) Chemicals

STOT RE

Specific target organ toxicity - Repeated exposure

STOT SE

Specific target organ toxicity - Single exposure

EWC

European Waste Catalogue

ADR

European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG

International Maritime Dangerous Goods (IMDG)

IATA

International Air Transport Association (IATA)

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RID Regulations concerning the International Transport of Dangerous Goods by Rail

## Key literature references and sources for data

No information available

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**Revision date** 10-Apr-2024

## Indication of changes

**Revision note** SDS sections updated, 3.  
**Training Advice** AS FROM 24 AUGUST 2023 ADEQUATE TRAINING IS REQUIRED BEFORE INDUSTRIAL OR PROFESSIONAL USE For further information, please contact: <https://www.safeusediisocyanates.eu/>  
**Further information** No information available

**This SDS complies with the requirements of UK REACH Regulations SI 2019/758 (as amended)**

## Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**