

Version 3.0

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

1.1. Product identifier

MDS Thermo, 50 Seconds Foaming Glue

UFI: UC00-Y0NS-J00P-FASP

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

Relevant identified uses:

Polyurethane adhesive for foamed polystyrene designed for fixing white or graphite expanded polystyrene (EPS) panels - expanded polystyrene and extruded polystyrene (XPS) panels for insulating external walls of buildings, installation of window sills, filling gaps in thermal insulation. The adhesive can also be used to attach XPS boards to the underground surfaces of buildings and structures, when performing perimeter heat installations and to wooden surfaces when performing other construction works. It shows excellent adhesion to materials such as concrete, plaster, brick, wood, metal and foam.

Uses advised against:

Not specified.

1.3. Details of the supplier of the safety data sheet

|| Producer\ supplier:

MEDOS Paweł Buławka spółka komandytowa
Poland; PL 86-200 Chełmno;
ul. Magazynowa 3 Street
NIP 875 10 02 162 ; tel. 56 691 20 79

E-mail address of the person responsible for the SDS: medos@medos.pl

1.4. Emergency telephone number

112 (emergency call)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to 1272/2008/EC:

Physical hazards:

Flam. Aerosol 1

H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated.

Hazards to human health:

Skin Irrit. 2

H315 Causes skin irritation.

Skin Sens. 1

H317 May cause an allergic skin reaction.

Eye Irrit. 2

H319 Causes serious eye irritation.

Acute Tox. 4

H332 Harmful if inhaled.

Resp. Sens. 1

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

STOT SE 3

H335 May cause respiratory irritation.

Carc. 2

H351 Suspected of causing cancer.

Lact.

H362 May cause harm to breast-fed children.

STOT RE 2

H373 May cause damage to the respiratory system through prolonged or repeated exposure.

Hazards to environment:

Does not meet the criteria of classification as dangerous for the environment.

2.2. Label elements

Label accordance with Regulation 1272/2008/EC

Pictograms:



Signal words: 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.

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 the respiratory system through prolonged or repeated exposure.

Supplemental hazard information:

EUH204 Contains isocyanates. May produce an allergic reaction.

Precautionary statements:

General

P102 Keep out of reach of children.

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P261 Avoid breathing gas/mist/vapours/spray.

P263 Avoid contact during pregnancy and while nursing.

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

Response

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P362+P364 Take off contaminated clothing and wash it before reuse.

Storage

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

The names of hazardous ingredients on the label:

diphenylmethanediisocyanate, isomere and homologe, 4,4'-methylenediphenyl diisocyanate (specific isomer), akanes, C14-17, chloro.

2.3. Other hazards

Contains isocyanates. Please refer to the instructions provided by the manufacturer. Use of this product may cause allergic reactions in people who are allergic to diisocyanates. People with asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. The product should not be used in case of poor ventilation, unless a protective mask with an appropriate gas filter (e.g. type A1 according to EN 14387) is used.

People with respiratory hypersensitivity (e.g. asthma, chronic bronchitis) should avoid contact with the product. Symptoms of excessive respiratory tract exposure to the product may persist for several hours. Dust, vapors and aerosols are a major danger to the respiratory tract.

The product does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation 1907/2006 (REACH).

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

Chemical name	Identifier	Classification CLP		Content [wt %]
		Hazard Class and Category Code(s)	Hazard statement Code(s)	
diphenylmethanediisocyanate, isomere and homologe**	CAS: 9016-87-9 EC: - Indeks: - REACH: Not delivered in the supply chain	Resp. Sens. 1	H334	>40
		Carc. 2	H351	
		STOT RE 2	H373	
		Acute Tox. 4	H332	
		Skin Irrit. 2	H315	
		Eye Irrit. 2	H319	
		Skin Sens. 1	H317	
		STOT SE 3	H335	
		Specific Conc. Limits:		
		Skin Irrit. 2; H315: C ≥ 5 %		
		Eye Irrit. 2; H319: C ≥ 5 %		

		Resp. Sens. 1; H334: C ≥ 0.1 % STOT SE 3; H335: C ≥ 5 %		
4,4'-methylenediphenyl diisocyanate (specific isomer)	CAS: 101-68-8 EC: 202-966-0 Indeks: 615-005-00-9 REACH: 01-2119457014-47-XXXX	Resp. Sens. 1 Carc. 2 STOT RE 2 Acute Tox. 4 Skin Irrit. 2 Eye Irrit. 2 Skin Sens. 1 STOT SE 3 Notes C, 2	H334 H351 H373 H332 H315 H319 H317 H335	<30
		Specific Concentration limits (CLP): Eye Irrit. 2; H319: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0.1 % STOT SE 3; H335: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 %		
Reaction products of phosphoryl trichloride and 2-methyloxirane**	CAS: 1244733-77-4 EC: 807-935-0 Indeks: - REACH: 01-2119486772-26-XXXX	Acute Tox. 4	H302	<10
Petroleum gases, liquefied*	CAS: 68476-85-7 EC: 270-704-2 Indeks: 649-202-00-6 REACH: Released from the registration obligation pursuant to Art. 2 clause 7 (b) (Annex V of regulation 1907/2006 (REACH))	Press. Gas Flam. Gas 1 Carc. 1A Muta. 1B Notes K, S, U	H280 H220 H350 H340	<10
Dimethyl ether	CAS: 115-10-6 EC: 204-065-8 Indeks: 603-019-00-8 REACH: 01-2119472128-0001	Flam. Gas 1 Press. Gas Note U	H220 H280	>5
Alkanes, C14-17, chloro***	CAS: 85535-85-9 EC: 287-477-0 Indeks: 602-095-00-X REACH: 01-2119519269-33-0003	Aquatic Acute 1 Aquatic Chronic 1 Lact. EUH066	H400 (M=100) H410 (M=10) H362	<5
2,2'-dimorpholinyl diethyl ether**	CAS: 6425-39-4 EC: 229-194-7 Indeks: - REACH: 01-2119969278-20-XXXX	Eye Irrit. 2	H319	>1

*The substance contains less than 0.1 % w/w 1,3-butadiene (Einecs No 203-450-8).

**Substance is not classified in Annex VI, Table 3.1 of Regulation 1272/2008. Classification of the manufacturer.

***The mixture/hardened foam was tested and no negative effects on aquatic organisms (daphnia/fish) were found. On this basis, there is no classification in the category of hazards to the aquatic environment.

In section 16 stated the importance of H-phrases and symbols.

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 K: The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0.1 % w/w 1,3-butadiene (EINECS No 203-450-8). If the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102-)P210-P403 should apply. This note applies only to certain complex oil-derived substances in Part 3.

Note S: This substance may not require a label according to Article 17 (see Section 1.3 of Annex I) (Table 3).

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.

Note 2: The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture.

SECTION 4: First aid measures

4.1. Description of first aid measures

Route of exposure: Inhalation, ingestion, skin contact, eye contact.

Symptoms of poisoning may not appear until several hours, therefore medical supervision is necessary for at least 48 hours after the accident.

In case of skin contact:

- Remove contaminated clothing and shoes. Flush contaminated skin with a plenty of water and then wash with mild soap and water.
- If skin irritation or rash occurs: Get medical advice/attention.

In case of eye contact:

- Remove any contact lenses. Flush eyes with a plenty of water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 15 minutes. Cover the eyes with a compress.
- If eye irritation persists: Get medical advice/attention.

If inhaled:

- Move the affected person to fresh air. Arrange in a comfortable position. Keep warm and quiet.
- In case of unconsciousness, place the victim in the recovery position.
- If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

If swallowed:

- IF exposed or concerned: Get medical advice/attention.

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

Suspected of causing cancer. May cause harm to breast-fed children.

Inhalation: Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause damage to the respiratory system through prolonged or repeated exposure. May cause coughing and shortness of breath.

Ingestion: May cause pain and redness of the mouth and throat.
Skin contact: Causes skin irritation. May cause an allergic skin reaction.
Eye contact: Causes serious eye irritation.

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

In the workplace should be available measures to allow immediate first aid. First aiders should wear medical gloves. The decision about the procedure is made by the doctor after assessing the victim's condition.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Carbon dioxide CO₂, extinguishing powder or water spray. Fight larger fires with alcohol-resistant foam. Match the extinguishing agents to the surrounding products.

Unsuitable extinguishing media:

Not specified.

5.2. Special hazards arising from the substance or mixture

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

Combustion products:

In case of fire hazardous products may be formed: carbon oxide and carbon dioxide (CO_x), nitrogen oxides (NO_x), hydrogen cyanide (HCN).

5.3. Advice for firefighters

- Use standard chemical firefighting methods.
- Containers exposed to fire or high temperature cool with water and if possible remove from the danger zone.
- Do not allow extinguishing media to get into sewage system and watercourses.

Fire brigade protective equipment:

- Wear full protective equipment.
- Self-contained breathing apparatus (self-contained breathing apparatus (SCBA) with a full-face mask under positive pressure). Wear PVC boots, gloves, a helmet and protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- Wear appropriate personal protective equipment.
- Access of non-emergency personnel to the area of accident should be restricted until the completion of the disposal of the product.
- Provide adequate ventilation.

6.2. Environmental precautions

- Prevent contamination of environment.
- Secure the gullies.
- In the event of any serious pollution of the environment, notify the appropriate administrative authority, control and rescue services.

6.3. Methods and material for containment and cleaning up

- Remove all potential sources of ignition.
- Do not eat, drink, smoke or take drugs at work.
- Secure damaged packaging.
- Ventilate the contaminated area and avoid breathing vapors.
- Collect the product with inert absorbent materials (e.g. sand, diatomaceous earth, acid binding material, universal binding material, sawdust).
- Collected product put in a substitute container and direct to the destruction.

6.4. Reference to other sections

Disposal - see Section 13. Personal protective equipment - see Section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Recommendations when working with a mixture:

- Avoid direct contact with mixture.
- Avoid contact with skin and eyes.
- Avoid breathing gas/vapours/aerosols.
- Prevent penetration into the sewage system.
- Pressurised container: Protect from sunlight. Do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.
- Do not spray on an open flame or other ignition source.
- Keep away from sources of ignition - No smoking.
- Prevent fire. Do not allow fire to spread.
- Use in a well-ventilated area.
- Store locked up.
- Protect against moisture.
- Mandatory general regulations on occupational health:
 - ✓ Do not eat, drink, smoke or take drugs at work.
 - ✓ Remove contaminated clothing.
 - ✓ Wash your hands thoroughly after use.
 - ✓ Wash contaminated clothing before reuse.
 - ✓ Wash hands and face before break and after working with the product.

7.2. Conditions for safe storage, including any incompatibilities

- Use adequate efficient ventilation at the workplace and in the warehouse.

- Do not store together with materials containing active hydrogen groups, strong oxidants, water, alcohol, amines, bases and acids.
- Protect against moisture.
- Store only in the original container.
- Keep container tightly closed.
- Store in dry and cool place.
- Keep away from food, drink and animal feeding stuffs.
- Protect from direct sunlight and sources of heat.
- Observe regulations on storage of pressurized containers.

Advice on protection against fire and explosion:

- Do not use near open flame.
- Use only non-sparking tools.
- Take action to prevent static discharges.
- Read the content of the safety data sheet.
- Do not use until all safety precautions have been read and understood.

7.3. Specific end use(s)

Fast universal glue (SECTION 1, 1.2).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ordinance on maximum permissible concentration and intensity of harmful factors in the work environment in accordance with national limit values.

EH40/2005 Workplace exposure limits, fourth edition, published 2020, ISBN 978 0 7176 6733 8.

Substance name	Identifier	TWA [mg/m ³]	STEL [mg/m ³]	BLV
Liquefied petroleum gas	CAS: 68476-85-7	1750 (UK)	2180 (UK)	not established
Dimethyl ether	CAS: 115-10-6	766 (UK) 1920 (UE)	958 (UK)	not established

Monitoring procedures: Use methods described in European Standards.

Name of the substance (Identifier)	Group / type of exposure	DNEL value
4,4'-methylenediphenyl diisocyanate (CAS: 101-68-8)	Industrial workers - oral; short-term systemic effects	20 mg / kg / day
	Industrial workers - skin; short-term systemic effects	50 mg / kg / day
	Consumers - skin; short-term systemic effects	25 mg / kg / day
	Industrial workers - inhalation; short-term local effects	28.7 mg / cm ³

	Consumers - inhalation; short-term local effect	17.2 mg / cm ²
	Industrial workers - inhalation; short-term systemic effects	0.1 mg / m ³
	Consumers - inhalation; short-term systemic effects	0.05 mg / m ³
2,2'-dimorpholinyl-diethyl ether (CAS: 6425-39-4)	Consumers - oral; short-term systemic effects	0.5 mg / kg / day
	Industrial workers - skin; short-term systemic effects	1 mg / kg / day
	Consumers - skin; short-term systemic effects	0.5 mg / kg / day
	Consumers - inhalation; long-term systemic effects	7.28 mg / m ³
Dimethyl ether (CAS: 115-10-6)	Industrial workers - inhalation; short-term systemic effects	1.894 mg / m ³
	Consumers - inhalation; short-term systemic effects	471 mg / m ³
Reaction products of phosphoryl trichloride and 2-methyloxirane (CAS: 1244733-77-4)	Consumers - oral	0.52 mg / kg / day
	Consumers - skin - long-term systemic effects	1,04 mg / kg / day
	Consumers - skin - short-term systemic effects	4 mg / kg / day
	Industrial workers - skin; long-term systemic effects	8 mg / kg / day
	Industrial workers - skin; short-term systemic effects	2.08 mg / kg / day
	Consumers - inhalation - long-term systemic effects	1.46 mg / m ³
	Consumers - inhalation - short-term systemic effects	11.2 mg / m ³
	Industrial workers - inhalation - short-term systemic effects	22.4 mg / m ³
Alkanes, C14-17, chloro (CAS: 85535-85-9)	Industrial workers - skin; long-term systemic effects	47.9 mg / kg / day
	Industrial workers - inhalation; long-term systemic effects	6.7 mg / m ³

Name of the substance (Identifier)	Environmental medium	PNEC value
4,4'-methylenediphenyl diisocyanate	fresh water	1 mg / l

(CAS: 101-68-8)	marine water	0.1 mg / l
	sporadic release	10 mg / l
	soil	1 mg / kg
	sewage treatment plant	1 mg / kg
Dimethyl ether (CAS: 115-10-6)	fresh water	0.155 mg / l
	marine water	0.016 mg / l
	sporadic release	1.549 mg / l
	soil	0.045 mg / kg
	sewage treatment plant	160 mg / l
	fresh water, sediments	0.069 mg / kg
	marine water, sediments	0.681 mg / kg
Alkanes, C14-17, chloro (CAS: 85535-85-9)	fresh water	0.1 mg / l
	marine water	0.2 mg / l
	mammals (oral)	10 mg / l
	soil	11.9 mg / l
	sewage treatment plant	80 mg / kg
	fresh water, sediments	2.6 mg / kg
	marine water, sediments	13 mg / kg
2,2'-dimorpholinyl-diethyl ether (CAS: 6425-39-4)	fresh water	0.1 mg / l
	marine water	0.01 mg / l
	sporadic release	1 mg / l
	soil	1.58 mg / l

	sewage treatment plant	100 mg / kg
	fresh water, sediments	0.82 mg / kg
	marine water, sediments	8.2 mg / kg
Reaction products of phosphoryl trichloride and 2-methyloxirane (CAS: 1244733-77-4)	fresh water	0.64 mg / l
	marine water	0.064 mg / l
	soil	1.7 mg / kg
	sewage treatment plant	7.84 mg / l
	fresh water, sediments	1.34 mg / kg
	marine water, sediments	13.4 mg / kg

8.2. Exposure controls

Appropriate engineering controls:

Storage rooms and work stations must be efficiently ventilated to keep the concentration of vapors in the air below their permissible values.

MDI can be felt only when the limit of professional impact is significantly exceeded. Medical supervision is recommended for all workers who transfer or come into contact with respiratory allergens. Workers with a history of asthmatic disease, bronchitis or skin sensitization should not work with MDI-based products.

For professional use: effective local exhaust ventilation of the room and general ventilation of the room is necessary to reduce the degree of worker exposure. The workplace should be monitored to ensure adequate ventilation. If exhaust ventilation is insufficient, wear suitable respiratory protection.

Individual protection measures

Eye/face protection:



Avoid contact with eyes when handling the product.

Use suitable tightly closed protective glasses (in accordance with EN 166).

Skin Protection:



Hands protection:

Avoid contact with skin. When using the product in a professional activity, assuming frequent or long-term exposure, use hand protection selected according to the working conditions. For this purpose, chemical resistant protective gloves should be used in accordance with EN 374. Due to the lack of testing, no recommendation can be given regarding material for protective gloves. Information on the breakthrough time should be obtained from the glove manufacturer. Glove material should be selected considering breakthrough time, permeation rate and degradation. It is recommended to regularly change gloves and immediately replace them if there are any signs of wear, damage (tearing, perforation) or changes in appearance (color, elasticity, shape). Apply protective cream to exposed parts of the body.

Respiratory protection:



Avoid breathing vapors of the product. In the case of short or low exposure use a respiratory filter device; in case of intensive or prolonged exposure use a respiratory protective with independent air circulation.

General safety and hygiene tips:

Mandatory general regulations on occupational health. Keep away from food, beverages and food. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with eyes, skin and clothing.

Thermal Hazards:

Avoid sources of heat, direct sunlight, the accumulation of electrostatic charges.

Biological monitoring:

Not specified.

Environmental exposure controls

Do not allowed into sewage or groundwater.

No obligation to perform regular measurements of the amount of emissions into the environment. It is recommended to follow the basic principles of using machines and devices. To reduce emissions to an acceptable level, in some cases, will be needed scrubbers to remove fumes, filters or structural modifications to process equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Cream
Odour:	Specific
Melting point/freezing point:	Not specified
Boiling point or initial boiling point and boiling range:	>34 °C
Flammability:	Not applicable
Lower and upper explosion limit:	Not specified

Flash point:	Not applicable
Auto-ignition temperature:	The product is not self-igniting
Decomposition temperature:	Not specified
pH:	Not applicable
Kinematic viscosity:	Not specified
Solubility:	It does not mixable with water
Partition coefficient n-octanol/water (log value):	Not specified
Vapour pressure:	Not specified
Density and/or relative density:	Not specified
Relative vapour density:	Not specified
Particle characteristics:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Not specified.

9.2.2. Other safety characteristics

Not specified.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts exothermically with materials containing active hydrogen groups. Carbon dioxide gas is released on contact with water. May react with strong oxidants, water, alcohols, amines, bases and acids.

10.2. Chemical stability

Stable under normal conditions of storage and use.

10.3. Possibility of hazardous reactions

Reacts exothermically with materials containing active hydrogen groups. Avoid reaction with water (moisture) - produces carbon dioxide gas.

10.4. Conditions to avoid

Avoid ignition sources, high temperatures, and prevent the accumulation of electrostatic charges. Avoid moisture.

10.5. Incompatible materials

Strong oxidizing substances, water, alcohol, amines, bases and acids.

10.6. Hazardous decomposition products

None under normal conditions of use and storage.

SECTION 11: Toxicological information

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

Acute toxicity: Harmful if inhaled.

Identified estimate acute toxicity of a mixture (ATE):

LC₅₀ (inhalation) - 4.27 mg/l/4 h

LD₅₀ (oral) - 7.046 mg/kg

Acute toxicity							
Substance	CAS Number:	Type of exposure	Parameter	Value	Exposure time	Species	Determining the value
<i>diphenylmethanediisocyanate, isomere and homologue</i>	9016-87-9	<i>Oral</i>	<i>LD₅₀</i>	<i>>9400 mg/kg b.w.</i>		<i>Rabbit</i>	<i>Literature/Supplier</i>
		<i>Oral</i>	<i>LD₅₀</i>	<i>>10000 mg/kg b.w.</i>		<i>Rat</i>	<i>Literature/Supplier</i>
		<i>Inhalation (gas/vapours)</i>	<i>LC₅₀</i>	<i>>11 mg/dm³</i>	<i>4 h</i>		<i>Literature/Supplier</i>
<i>4,4'-methylenediphenyl diisocyanate</i>	101-68-8	<i>Oral</i>	<i>LD₅₀</i>	<i>2200 mg/kg b.w.</i>		<i>Mouse</i>	<i>Literature/Supplier</i>
		<i>Inhalation (gas/vapours)</i>	<i>LC₅₀</i>	<i>1.5 mg/dm³</i>	<i>4 h</i>	<i>Rat</i>	<i>Literature/Supplier</i>
<i>Dimethyl ether</i>	115-10-6	<i>Inhalation (gas/vapours)</i>	<i>LC₅₀</i>	<i>308 mg/sm³</i>	<i>4 h</i>	<i>Rat</i>	<i>Literature/Supplier</i>
<i>2,2'-dimorpholinyl diethyl ether</i>	6425-39-4	<i>Oral</i>	<i>LD₅₀</i>	<i>2025 mg/kg b.w</i>		<i>Rat</i>	<i>Literature/Supplier</i>
		<i>Skin</i>	<i>LD₅₀</i>	<i>3038 mg/kg b.w.</i>		<i>Rabbit</i>	<i>Literature/Supplier</i>
<i>Alkanes, C14-17, chloro</i>	85535-85-9	<i>Oral</i>	<i>LD₅₀</i>	<i>4000 mg/kg b.w</i>		<i>Rat</i>	<i>Literature/Supplier</i>
<i>Reaction products of phosphoryl trichloride and 2-methyloxirane</i>	1244733-77-4	<i>Oral</i>	<i>LD₅₀</i>	<i>>2000 mg/kg b.w.</i>		<i>Rat</i>	<i>Literature/Supplier</i>
		<i>Oral</i>	<i>LD₅₀</i>	<i>632 mg/kg b.w.</i>		<i>Rat</i>	<i>Literature/Supplier</i>

Skin corrosion/irritation:

Causes skin irritation.

Serious eye damage/irritation:

Causes serious eye irritation.

Respiratory or skin sensitization:

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

Germ cell mutagenicity:

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

Carcinogenicity:

Suspected of causing cancer.

Reproductive toxicity:

May cause harm to breast-fed children.

STOT-single exposure:

May cause respiratory irritation.

STOT-repeated exposure:

May cause damage to the respiratory system through prolonged or repeated exposure.

Aspiration hazard:

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

Route of exposure:

Inhalation, ingestion, skin contact, eye contact.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Not specified.

11.2.2. Other information

Suspected of causing cancer. May cause harm to breast-fed children.

Inhalation: Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause damage to the respiratory system through prolonged or repeated exposure. May cause coughing and shortness of breath.

Ingestion: May cause pain and redness of the mouth and throat.

Skin contact: Causes skin irritation. May cause an allergic skin reaction.

Eye contact: Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

The mixture / hardened foam was tested and no negative effects on aquatic organisms (daphnia / fish) were found. On this basis, there is no classification in the category of hazards to the aquatic environment.

Aquatic toxicity:	
Diphenylmethanediisocyanate, isomere and homologue (CAS: 9016-87-9)	
LC ₀ /96h	>1000 mg/l (fish)
EC ₅₀ /24h (static)	>1000 mg/l (Daphnia) (OECD 202 Daphnia sp. Acute Immobilisation Test)
EC ₅₀ /72h (static)	>1640 mg/l (algae) (OECD 201 Growth Inhibition Test)
LC ₅₀ /96h (static)	>1000 mg/l (fish) (OECD 203 Acute Toxicity Test)
EC ₅₀ /3h (static)	>100 mg/l (bacteria) (OECD 209 Respiration Inhibition Test)
NOEC/21d (static)	>10 mg/l (Daphnia) (OECD 211 Reproduction Test)
NOECr/72h (static)	1640 mg/l (algae) (OECD 201 Growth Inhibition Test)
4,4'-methylenediphenyl diisocyanate (CAS: 101-68-8)	
LC ₀ /96h	>1000 mg/l (fish)
EC ₅₀ /24h (static)	>1000 mg/l (Daphnia) (OECD 202 Daphnia sp. Acute Immobilisation Test)
EC ₅₀ /72h (static)	>1640 mg/l (algae) (OECD 201 Growth Inhibition Test)
LC ₅₀ /96h (static)	>1000 mg/l (fish) (OECD 203 Acute Toxicity Test)
EC ₅₀ /3h (static)	>100 mg/l (bacteria) (OECD 209 Respiration Inhibition Test)
NOEC/21d (static)	>10 mg/l (Daphnia) (OECD 211 Reproduction Test)
NOECr/72h (static)	1640 mg/l (algae) (OECD 201 Growth Inhibition Test)
Petroleum gases, liquefied (CAS: 68476-85-7)	
EC ₅₀ /48h	>14.22 mg/l (Daphnia)
EC ₅₀ /72h	>7.71 mg/l (algae)
LC ₅₀ /96h	>24.11 mg/l (fish)

Dimethyl ether (CAS: 115-10-6)	
EC ₅₀ /96h	154.9 mg/l (algae)
LC ₅₀ /96h	>4100 mg/l (fish)
Alkanes, C14-17, chloro (CAS: 85535-85-9)	
NOEC/72h	0.1 mg/l (algae) (OECD 201 Growth Inhibition Test)
EC ₅₀ /72h	>3.2 mg/l (algae) (OECD 201 Growth Inhibition Test)
EC ₅₀ /96h	>3.2 mg/l (algae) (OECD 201 Growth Inhibition Test)
LC ₅₀ /96h	>5000 mg/l (fish) (OECD 203 Acute Toxicity Test)
NOEC/96h	0.1 mg/l (algae) (OECD 201 Growth Inhibition Test)
NOEC/60d	4.5 mg/l (fish)
NOEC/20d	1600 mg/l (fish) (OECD 212)
NOEC/14d	>125 mg/l (fish) (OECD 204)
NOEC/28d	130 mg/kg (aquatic plants) (OECD 218)
WE ₅₀ /48h	0.0059 mg/l (Daphnia) (OECD 202 Daphnia sp. Acute Immobilisation Test)
WE ₅₀ /24h	>0.1 mg/l (Daphnia) (OECD 202 Daphnia sp. Acute Immobilisation Test)
LOEC/21d	0.018 mg/l (Daphnia) (OECD 202 Daphnia sp. Acute Immobilisation Test)
LOEC/72h	0.18 mg/l (algae) (OECD 201 Growth Inhibition Test)
LOEC/96h	0.18 mg/l (algae) (OECD 201 Growth Inhibition Test)
NOEC/21d	0.01 mg/l (invertebrates) (OECD 202 Daphnia sp. Acute Immobilisation Test)
2,2'-dimorpholinyldiethyl ether (CAS: 6425-39-4)	
EC ₅₀ /48h	>100 mg/l (Daphnia)
EC ₅₀ /96h	>100 mg/l (algae)
LC ₅₀ /96h	>2150 mg/l (fish)
Reaction products of phosphoryl trichloride and 2-methyloxirane (CAS: 1244733-77-4)	
EC ₅₀ /48h	131 mg/l (daphnia) (OECD 202 Daphnia sp. Acute Immobilisation Test)
EC ₅₀ /72h	82 mg/l (algae) (OECD 201 Growth Inhibition Test)
LC ₅₀ /96h	LC ₅₀ /96h 51 mg/l (fish) (OECD 203 Acute Toxicity Test)

12.2. Persistence and degradability

Diphenylmethanediisocyanate, isomere and homologue – is not readily biodegradable (sediments).

12.3. Bioaccumulative potential

Diphenylmethanediisocyanate, isomere and homologue - log Pow 8.56 (sediments), BCF - 200.

Reaction products of phosphoryl trichloride and 2-methyloxirane, BCF - 8-14 (fish)

12.4. Mobility in soil

Not specified.

12.5. Results of PBT and vPvB assessment

Does not meet the criteria.

12.6. Endocrine disrupting properties

Not specified.

12.7. Other adverse effects

Not specified.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

During removal of waste comply with the regional/national laws.

Community legislation:

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives as amended.

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste as amended.

Disposal methods

- Do not store with municipal waste.
- The waste should be disposed by delivering to eligible organizations.
- Used aerosol cans may contain residual propane / butane gas and pose a fire or explosion hazard.
- Do not pierce or crush under uncontrolled conditions.
- The product and packaging should be disposed of as hazardous waste.
- Store the remains in original containers.
- Disposal in accordance with the local/national legislation.
- Empty containers give for appropriate rubbish dump or for disposal in accordance with the local/national legislation.

Waste code:




07 02 13* Waste plastic.

Packaging waste code:

15 01 11* Metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers.

16 05 04* Gases in pressure containers (including halons) containing hazardous substances.

SECTION 14: Transport information

		ADR/RID/ADN	IMGD	IATA
14.1.	UN number or ID number	1950	1950	1950
14.2.	UN proper shipping name	AEROSOLS, flammable		
14.3.	Transport hazard class(es)	2	2	2
	Warning sticker number 2			
	Classification code	5F	5F	5F
14.4.	Packing group	none	none	none
14.5.	Environmental hazards	no		Not specified
14.6.	Special precautions for user	Note: gases EmS: F-D. S-U SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity above 1 litre: Category A. For AEROSOLS with a capacity above 1 litre:		Not specified

		<p>Category B. For WASTE AEROSOLS: Category C, Clear of living quarters SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.</p>	
14.7.	Maritime transport in bulk according to IMO instruments	Not applicable	

SECTION 15: Regulatory information

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

The safety data sheet has been prepared on the basis of:

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

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

Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives as amended.

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste as amended.

Commission directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Commission directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC.

Commission directive 2009/161/EU of 17 December 2009 establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC.

Commission directive (EU) 2017/164 of 31 January 2017 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU.

|| Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal

protective equipment and repealing Council Directive 89/686/EEC.

Commission directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC.

15.2. Chemical safety assessment

The Chemical Safety Assessment has been performed for the substance.

SECTION 16: Other information

The full text of statements H under Sections 2 and 3:

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H224	Extremely flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
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.
H411	Toxic to aquatic life with long lasting effects.
Acute Tox. 4	Acute toxicity (inhal.), Hazard Category 4.
Flam. Aerosol 1	Aerosols, Hazard Category 1.
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1.
Aquatic Chronic 1, 2	Hazardous to the aquatic environment - Chronic Hazard, Category 1, 2.
Carc. 2	Carcinogenicity, Hazard Category 2.
Eye Irrit. 2	Serious eye damage/eye irritation, Hazard Category 2.
Flam. Gas. 1	Flammable gases, Hazard Category 1.
Flam. Liq. 1	Flammable liquids, Hazard Category 1.
Lact.	Reproductive toxicity, Additional category, Effects on or via lactation.

Press. Gas	Gases under pressure
Resp. Sens. 1	Sensitisation — Respiratory, hazard category 1.
Skin Irrit. 2	Skin corrosion/irritation, Hazard Category 2.
Skin Sens. 1	Sensitisation — Skin, hazard category 1.
STOT SE 3	Specific target organ toxicity — Single exposure, Hazard Category 3, Respiratory tract irritation.
STOT RE 2	Specific target organ toxicity — Repeated exposure, Hazard Category 2.

Key to abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor.
BLV	Biological Limit Value.
CAS	Unique identifier of chemical substances (<i>Chemical Abstracts Service</i>).
EC	(<i>Effect Concentration</i>), toxicant concentration causing any change in test organisms.
EC number	EC number means one of the three numbers listed below: <ul style="list-style-type: none"> • the number assigned to the substance in the European List of Existing Commercial Substance Substances (EINECS), • the number assigned to the substance in the European List of Notified Substances (ELINCS), • number in the list of chemicals listed in the European Commission's publication "No-longer polymers" (NLP).
IATA	International Air Transport Association.
LC	Lethal dose of a substance present in air or water followed by the death of a given percentage of the population.
LC ₀	Toxic concentration limit.
LC ₅₀	Median lethal concentration.
LD	(<i>Lethal Dose</i>) - lethal dose of a substance applied by a specific route followed by the death of a given percentage of the population.
LD ₅₀	Median lethal dose.
LogPow	Logarithms octanol/water partition coefficient.
NOEC	No Observed Effect Concentration.
PBT	Substance persistent, toxic and bioaccumulative.
RID	The Regulation concerning the International Carriage of Dangerous Goods by Rail.
STEL	Short-Term Exposure Limit.
TWA	Time Weighted Average.
UN number	Material identification number (ONZ number, UN number).
vPvB	Very persistent and very bioaccumulative substance.

Classification according to Regulation 1272/2008/EC:

Classification

Flam. Aerosol 1; H222; H229

Classification procedure:

Bridging principles „Aerosols“

Skin Irrit. 2; H315	Calculation method
Skin Sens. 1; H317	Calculation method
Eye Irrit. 2; H319	Calculation method
Acute Tox. 4; H332	Calculation method
Resp.Sens. 1; H334	Calculation method
STOT SE 3; H335	Calculation method
Carc. 2; H351	Calculation method
Lact.; H362	Calculation method
STOT RE 2; H373	Calculation method

Other information:

The product described in the safety data sheet should be stored and used in accordance with good industrial practice and in accordance with all legal regulations.

The information above is based on a current available data concerning the product, but also on the experience and knowledge in this field of the producer.

They are neither a quality description of the product nor a guarantee of particular features. They are also treated as aid to safety in transport, storage and usage of the product. This does not free the user from the responsibility of improper usage of the information above also of improper compliance with the law norms in the field.

The user is responsible for creating conditions for the safe use of the product and it is the user who takes responsibility for the consequences of incorrect use of this product.

Training:

Before working with the product, it is mandatory to subject employees to health and safety training due to the presence of chemical agents in the work environment. Conduct, document and familiarize employees with the results of occupational risk assessment in the workplace related to the occurrence of chemical agents.

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SDS from 25.03.2021 (Version 2.0) has been revised in sections 1.3, 15.1. Changes have been underlined.

This SDS replaces and annuls all the previous versions.