SAFETY DATA SHEET ACCORDING TO REGULATION (EC) 1907/2006

Product name: Stonder Epoxy Bonding Adhesive (Component A)

Creation date: 19.04.2023, Revision: 16.05.2023, version: 1.1

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

1.1 Product identifier

Product name

Stonder Epoxy Bonding Adhesive (Component A)

Product code

[80907 UFI:E727-A7AW-1002-QKCP]

https://my.chemius.net/p/UVHqbb/en/pd/en

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

Relevant identified uses

Adhesive.

Uses advised against

No information.

1.3 Details of the supplier of the safety data sheet

Supplier

Rags LTD
Džūkstes str.1
LV-1004 Riga, Latvia
+37167808780
rags@rags.lv

1.4 Emergency Telephone Number

Emergency

112

Supplier

+37167808780

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Skin Corr. 1C; H314 Causes severe skin burns and eye damage.
Skin Sens. 1; H317 May cause an allergic skin reaction.
Eye Dam. 1; H318 Causes serious eye damage.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Signal word: DANGER

H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P405 Store locked up.
P501 Dispose of contents/container in accordance with national regulation.

Contains:
3,3'-oxybis(ethyleneoxy)bis(propylamine)
2,4,6-Tris(dimetilaminometil)phenol
2-Ethyl-4-Methylimidazole
2-methylpentane-1,5-diamine

2.3 Other hazards

PBT/vPvB
No information.

Endocrine disrupting properties
No information.

Additional information
No information.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

For mixtures see 3.2.

3.2 Mixtures

Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Concentration Limits	Notes for substances
3,3'-oxybis(ethyleneoxy)bis(propylamine)	4246-51-9 - -	>10-<15	Skin Corr. 1B; H314 Skin Sens. 1; H317 Eye Dam. 1; H318	/	/
2,4,6-Tris(dimetilaminometil)phenol	90-72-2 202-013-9 -	>5-<10	Acute Tox. 4; H302 Skin Corr. 1C; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	/	/
2-Ethyl-4-Methylimidazole	931-36-2 213-234-5 -	>2.5-<3	Acute Tox. 4; H302 Skin Irrit. 2; H315 Skin Sens. 1B; H317 Eye Dam. 1; H318	/	/
Bis[(dimethylamino)methyl]phenol	71074-89-0 275-162-0 - 01-2119560597-27	>1-<2.5	Skin Corr. 1; H314 Eye Dam. 1; H318	/	/

2-methylpentane-1,5-diamine	15520-10-2 239-556-6 - 01-2119976310-41	>1-<2.5	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1A; H314 Eye Dam. 1; H318 Acute Tox. 4; H332 STOT SE 3; H335	/	/
4-methylimidazole	822-36-6 212-497-3 -	>0.1-<0,5	Acute Tox. 4; H302 Acute Tox. 3; H311 Skin Corr. 1; H314 Eye Dam. 1; H318 STOT SE 3; H335 Carc. 2; H351	/	/

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General notes

Never give anything by mouth to an unconscious person. Place patient in recovery position and ensure airway patency. When in doubt or if feeling unwell seek medical assistance. Show the safety data sheet and label to the physician. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. When it is suspected, that there may still be harmful vapours/fumes present in the air, respiratory protection (mask; self contained breathing apparatus) must be used. Wash contaminated clothing with water before removing or use gloves.

Following inhalation

Remove patient to fresh air - move out of dangerous area. In case of unconsciousness bring patient into stable side position and seek medical attention. If breathing is irregular or respiratory arrest occurs provide artificial respiration. Keep at rest in a position comfortable for breathing. Seek medical help immediately.

Following skin contact

Take off all contaminated clothing. Areas of the body that have come into contact with the product must be rinsed with water. Immediately obtain professional medical help!

Following eye contact

Immediately flush eyes with running water, keeping eyelids apart. After 5 minutes of rinsing, remove contact lenses, if present, and continue rinsing. Consult a physician immediately!

Following ingestion

Do not induce vomiting! Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Immediately consult a doctor. Show the physician the safety data sheet or label.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation

Excessive exposure to spray mist, fog, or vapours may cause respiratory irritation.

Following skin contact

Skin burns: Signs/symptoms may include localised redness, swelling, itching, dryness, blistering. May cause sensitisation by skin contact (itching, redness, rashes).

Following eye contact

Redness, pain, burning sensation, tearing, can cause permanent damage to the eyes.

Following ingestion

May cause nausea/vomiting and diarrhea. May cause abdominal discomfort. If ingested, may cause burns of the mouth and throat, as well as perforation of the esophagus and stomach.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide. Dry chemical powder. Water spray. Alcohol resistant foam.

Unsuitable extinguishing media

Full water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

In case of a fire toxic gases can be generated; do not inhale gases/smoke.

5.3 Advice for firefighters

Protective actions

In case of fire or heating do not breathe fumes/vapours. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (BS EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (BS EN 137).

Additional information

Contaminated firefighting water and fire residues must be disposed of in accordance with the local regulations.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment

No information.

Precautionary measures

Ensure adequate ventilation.

Emergency procedures

No action shall be taken involving any personal risk or without suitable training. Prevent access to unprotected personnel. Evacuate the danger zone. Do not breathe vapour or mist. Avoid contact with skin, eyes and clothing.

For emergency responders

Use personal protective equipment.

6.2 Environmental precautions

Do not allow product to reach water/drains/sewage systems or permeable soil. In case of release into the environment, inform the relevant authorities.

6.3 Methods and material for containment and cleaning up

For containment

Stem the spill if this does not pose risks.

For cleaning up

Absorb product (with inert material), collect it in special container and dispose it to a licensed hazardous-waste disposal contractor. Prevent release into the sewer, water, basements or confined areas. Ventilate the premises. Clean contaminated area with plenty of water.

OTHER INFORMATION

No information.

6.4 Reference to other sections

See also sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures

Measures to prevent fire

Ensure adequate ventilation.

Measures to prevent aerosol and dust generation

Use general or local exhaust ventilation to prevent inhaling vapours and aerosols.

Measures to protect the environment

Do not discharge into drains, surface water and soil. After use immediately close container tightly.

Other measures

No information.

Advice on general occupational hygiene

Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Do not breathe vapours/mist. Avoid contact with skin, eyes and clothes. Remove contaminated clothes and wash them before reuse. Wear suitable protective equipment; see Section 8.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep in a cool, dry and well ventilated place. Keep away from food, drink and animal feeding stuffs.

Packaging materials

Store only in original container.

Requirements for storage rooms and vessels

Close opened containers after use. Put the containers upright to prevent from leaking. Do not store in unlabelled containers.

Storage class

No information.

Further information on storage conditions

No information.

7.3 Specific end use(s)

Recommendations

No information.

Industrial sector specific solutions

No information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values

No information.

Information on monitoring procedures

BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values. BS EN 482:2021 Workplace exposure. Procedures for the determination of the concentration of chemical agents. Basic performance requirements.

DNEL/DMEL values

For product

No information.

For components

Name	Type	Exposure route	exp. frequency	Remark	value
3,3'-oxybis(ethyleneoxy)bis(propylamine)	Worker	inhalation	long term systemic effects	/	59 mg/m^3
3,3'-oxybis(ethyleneoxy)bis(propylamine)	Worker	inhalation	short term systemic effects	/	176 mg/m^3
3,3'-oxybis(ethyleneoxy)bis(propylamine)	Worker	inhalation	long term local effects	/	1 mg/m^3
3,3'-oxybis(ethyleneoxy)bis(propylamine)	Worker	inhalation	short term local effects	/	13 mg/m³
3,3'-oxybis(ethyleneoxy)bis(propylamine)	Worker	dermal	long term systemic effects	/	8.3 mg/kg bw/day
3,3'-oxybis(ethyleneoxy)bis(propylamine)	Consumer	inhalation	long term systemic effects	/	17 mg/m³
3,3'-oxybis(ethyleneoxy)bis(propylamine)	Consumer	inhalation	short term systemic effects	/	52 mg/m³
3,3'-oxybis(ethyleneoxy)bis(propylamine)	Consumer	inhalation	long term local effects	/	0.5 mg/m³
3,3'-oxybis(ethyleneoxy)bis(propylamine)	Consumer	inhalation	short term local effects	/	6.5 mg/m³
3,3'-oxybis(ethyleneoxy)bis(propylamine)	Consumer	dermal	long term systemic effects	/	5 mg/kg bw/day
3,3'-oxybis(ethyleneoxy)bis(propylamine)	Consumer	oral	long term systemic effects	/	5 mg/kg bw/day
2-methylpentane-1,5-diamine	Worker	inhalation	long term local effects	/	0.25 mg/m^3
2-methylpentane-1,5-diamine	Worker	inhalation	short term local effects	/	0.5 mg/m^3
2-methylpentane-1,5-diamine	Worker	dermal	long term systemic effects	/	1.5 mg/kg bw/day
2-methylpentane-1,5-diamine	Consumer	inhalation	long term local effects	/	0.125 mg/m^3
2-methylpentane-1,5-diamine	Consumer	inhalation	short term local effects	/	0.25 mg/m^3
2-methylpentane-1,5-diamine	Consumer	dermal	long term systemic effects	/	0.75 mg/kg bw/day
2-methylpentane-1,5-diamine	Consumer	oral	long term systemic effects	/	0.75 mg/kg bw/day

PNEC values

For product

No information.

For components

Name	Exposure route	Remark	value
3,3'-oxybis(ethyleneoxy)bis(propylamine)	fresh water	/	0.22 mg/L
3,3'-oxybis(ethyleneoxy)bis(propylamine)	water, intermittent release	/	2.2 mg/L
3,3'-oxybis(ethyleneoxy)bis(propylamine)	marine water	/	0.022 mg/L

3,3'-oxybis(ethyleneoxy)bis(propylamine)	water treatment plant	/	125 mg/L
3,3'-oxybis(ethyleneoxy)bis(propylamine)	fresh water sediment	dry weight	1.1 mg/kg
3,3'-oxybis(ethyleneoxy)bis(propylamine)	marine water sediment	dry weight	0.11 mg/kg
3,3'-oxybis(ethyleneoxy)bis(propylamine)	soil	dry weight	0.091 mg/kg
2-methylpentane-1,5-diamine	fresh water	/	0.42 mg/L
2-methylpentane-1,5-diamine	water, intermittent release	/	0.42 mg/L
2-methylpentane-1,5-diamine	marine water	/	0.042 mg/L
2-methylpentane-1,5-diamine	water treatment plant	/	1.25 g/L
2-methylpentane-1,5-diamine	fresh water sediment	dry weight	7.58 mg/kg
2-methylpentane-1,5-diamine	marine water sediment	dry weight	0.758 mg/kg
2-methylpentane-1,5-diamine	soil	dry weight	1.27 mg/kg

8.2 Exposure controls

Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Use good personal hygiene practices – wash hands at breaks and when done working with material. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothes. Do not eat, drink or smoke while working. Do not breathe vapours/aerosols.

Structural measures to prevent exposure

No information.

Organisational measures to prevent exposure

Remove all contaminated clothes immediately and wash them before reuse. Keep eyewash bottles or personal eyewash units and emergency showers available.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in areas with increased concentration. Keep away from food, drink and animal feeding stuffs.

Personal protective equipment

Eye and face protection

Wear tight fitting protective goggles and/or face protection (EN 166).

Hand protection

Protective gloves (EN 374). Observe the manufacturer's instructions regarding the use, storage, maintenance and replacement of gloves. In case of damage or at the first signs of wear and tear, change the gloves immediately. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. The penetration time is determined by the protective glove manufacturer and must be observed.

Appropriate materials

Skin protection

Cotton protective clothing and shoes that cover the entire foot (BS EN ISO 20345:2022). At high risk of skin exposure chemical suits (BS EN ISO 6530:2005) and boots may be required (BS EN ISO 20345:2022).

Respiratory protection

In case of insufficient ventilation wear suitable respiratory protection. Wear suitable protective breathing mask (EN 136) with filter A2-P2 (EN 14387). For dust/gas/ vapor concentrations above the applicable filter limit, in case of oxygen concentrations below 17% or in vague conditions, autonomous self-contained breathing apparatus should be used, according to standard BS EN 137, BS EN 138.

Thermal hazards

No information.

Environmental exposure controls

Substance/mixture related measures to prevent exposure

No information.

Instruction measures to prevent exposure

No information.

Organisational measures to prevent exposure
No information.

Technical measures to prevent exposure
Do not allow product to reach drains, sewage systems or ground water.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state
liquid - viscous

Colour
tan

Odour
slight amine like

Important health, safety and environmental information

Odour threshold	No information.
Melting point/Freezing point	No information.
Boiling point or initial boiling point and boiling range	132.5 °C at 1 hPa
Flammability	No information.
Lower and upper explosion limit	No information.
Flash point	> 93.4 °C (Seta closed cup)
Auto-ignition temperature	No information.
Decomposition temperature	No information.
pH	No information.
Viscosity	kinematic: > 10000 mm^2/s at 40 °C
Solubility	Water: insoluble
Partition coefficient	No information.
Vapour pressure	< 10 hPa at 20 °C
Density and/or relative density	Relative density: 1.13 at 25 °C Density: 1.13 g/cm^3 at 20 °C
Relative vapour density	> 1 ((air = 1); estimated value)
Particle characteristics	No information.

9.2 OTHER INFORMATION

Evaporation rate	1 (diethyl ether = 1)
Explosive properties	No information.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
No information.

10.2 Chemical stability
Product is stable under normal conditions of use, recommended handling and storage conditions.

10.3 Possibility of hazardous reactions

No information.

10.4 Conditions to avoid

No information.

10.5 Incompatible materials

No information.

10.6 Hazardous decomposition products

Under normal use conditions no hazardous decomposition products are expected. In case of fire/explosion vapours/gases that pose a health hazard are released.

SECTION 11: TOXICOLOGICAL INFORMATION

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

(a) Acute toxicity

For components

Name	Exposure route	Type	Species	Time	value	Method	Remark
3,3'-oxybis(ethyleneoxy)bis(propylamine)	oral	LD_{50}	rat	/	- 3160 mg/kg	OECD 401	/
3,3'-oxybis(ethyleneoxy)bis(propylamine)	dermal	ATE	/	/	- 2500 mg/kg	/	Expert judgment
3,3'-oxybis(ethyleneoxy)bis(propylamine)	dermal	LD_{50}	rat	/	> - 2150 mg/kg	OECD 402	/
2,4,6-Tris(dimetilaminometil)phenol	dermal	LD_{50}	rat	/	1280 mg/kg	/	/
2,4,6-Tris(dimetilaminometil)phenol	oral	LD_{50}	rat	/	1200 mg/kg	/	/
2-Ethyl-4-Methylimidazole	oral	LD_{50}	rat	/	ca. 731 mg/kg bw	/	/
Bis[(dimethylamino)methyl]phenol	oral	LD_{50}	rat	/	300 - 2000 mg/kg	/	estimated
4-methylimidazole	oral	LD_{50}	rabbit	/	440 mg/kg bw	/	/
4-methylimidazole	oral	LD_{50}	rat	/	173 mg/kg bw	/	/

Additional information

The product is not classified for acute toxicity.

(b) Skin corrosion/irritation

For components

Name	Species	Time	result	Method	Remark
3,3'-oxybis(ethyleneoxy)bis(propylamine)	rabbit	/	Corrosive.	OECD 404	/
2,4,6-Tris(dimetilaminometil)phenol	rat	/	Mild irritating.	/	0,025 mL

2,4,6-Tris(dimetilaminometil)phenol	rabbit	/	Severe irritation.	/	0,25 mL
2,4,6-Tris(dimetilaminometil)phenol	rabbit	24 h	Severe irritation.	/	2 mg
2-Ethyl-4-Methylimidazole	rabbit	/	Irritating to skin.	OECD 404	/
Bis[(dimethylamino)methyl]phenol	/	/	Corrosive.	/	/
2-methylpentane-1,5-diamine	rabbit	/	Corrosive	OECD 404	/

(c) Serious eye damage/irritation

For components

Name	Exposure route	Species	Time	result	Method	Remark
2,4,6-Tris(dimetilaminometil)phenol	/	rabbit	24 h	Severe irritation.	/	50 µg
2-Ethyl-4-Methylimidazole	/	rabbit	/	Severe irritation.	OECD 405	/
Bis[(dimethylamino)methyl]phenol	/	/	/	Corrosive	/	/
2-methylpentane-1,5-diamine	/	rabbit	/	It causes serious eye damage.	/	/

Additional information

Causes serious eye damage.

(d) Respiratory or skin sensitisation

For components

Name	Exposure route	Species	Time	result	Method	Remark
2-Ethyl-4-Methylimidazole	/	mouse	/	May cause sensitisation.	LLNA	/

Additional information

May cause an allergic skin reaction.

(e) (Germ cell) mutagenicity

For components

Name	Type	Species	Time	result	Method	Remark
3,3'-oxybis(ethyleneoxy)bis(propylamine)	in-vitro mutagenicity	Cell: Mammalian-Animal	/	Negative with metabolic activation, negative without metabolic activation.	*Translation required (79412)*	/
3,3'-oxybis(ethyleneoxy)bis(propylamine)	in-vitro mutagenicity	Cell: Mammalian-Animal	/	Negative with metabolic activation, negative without metabolic activation.	OECD 476 (ammalian Cell Gene Mutation Test)	/
3,3'-oxybis(ethyleneoxy)bis(propylamine)	/	Bacteria	/	Negative with metabolic activation, negative without metabolic activation.	OECD 471	Reverse mutation test in bacteria; Ames test
2-methylpentane-1,5-diamine	in-vitro mutagenicity	/	/	Negative.	OECD 471	/
2-methylpentane-1,5-diamine	in-vitro mutagenicity	Cell: Mammalian-Animal	/	Negative with metabolic activation, negative without metabolic activation.	OECD 473	/
2-methylpentane-1,5-diamine	in-vitro mutagenicity	/	/	Negative with metabolic activation, negative without metabolic activation.	OECD 476	/

2-methylpentane-1,5-diamine	in-vivo mutagenicity	/	/	Negative.	OECD 474	/

(f) Carcinogenicity

No information.

(g) Reproductive toxicity

For components

Name	Reproductive toxicity type	Type	Species	Time	value	result	Method	Remark
3,3'-oxybis(ethyleneoxy)bis(propylamine)	Reproductive toxicity	NOAEL	rat (oral)	/	- 600 mg/kg	/	OECD 422 (Combined Repeated Dose and Reproductive / Developmental Toxicity Screening Test)	/
2-methylpentane-1,5-diamine	Maternal toxicity	NOAEL	rat	/	ca. 184 mg/kg bw	No effect	OECD 414	oral

Summary of evaluation of the CMR properties

The product is not classified as carcinogenic, mutagenic or toxic for reproduction.

(h) STOT-single exposure

For components

Name	Exposure route	Type	Species	Time	Exposure	organ	value	result	Method	Remark
2-methylpentane-1,5-diamine	inhalation	-	/	/	/	/	/	Irritating to respiratory system.	/	/

Additional information

STOT SE (single exposure): Not classified.

(i) STOT-repeated exposure

For components

Name	Exposure route	Type	Species	Time	Exposure	organ	value	result	Method	Remark
3,3'-oxybis(ethyleneoxy)bis(propylamine)	oral	NOAEL	rat	59 days	/	/	< - 100 mg/kg	/	*Translation required (79420)*	daily

Additional information

STOT RE (repeated exposure): Not classified.

(j) Aspiration hazard

For components

Name	result	Method	Remark
2-methylpentane-1,5-diamine	ASPIRATION HAZARD	/	/

Additional information

Aspiration hazard: Not classified.

Symptoms related to the physical, chemical and toxicological characteristics

No information.

Interactive effects

No information.

11.2 Information on other hazards

Endocrine disrupting properties

No information.

Other information

No information.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Acute (short-term) toxicity

For components

Name	Type	value	Exposure time	Species	organism	Method	Remark
3,3'-oxybis(ethyleneoxy)bis(propylamine)	LC_{50}	215 - 464 mg/L	96 h	fish	Leiscus idus	DIN 38412-15 DIN 38412-15	/
3,3'-oxybis(ethyleneoxy)bis(propylamine)	EC_{50}	- 218 mg/L	48 h	Daphnia	*Daphnia magna*	*Translation required (79427) Translation required (217492)*	/
3,3'-oxybis(ethyleneoxy)bis(propylamine)	EC_{50}	- 666 mg/L	72 h	algae	*Scenedesmus subspicatus*	DIN 38412-09 DIN 38412-09	/
3,3'-oxybis(ethyleneoxy)bis(propylamine)	NOEC	- 15.6 mg/L	72 h	algae	*Scenedesmus subspicatus*	DIN 38412-09	/
3,3'-oxybis(ethyleneoxy)bis(propylamine)	EC10	- 152.5 mg/L	17 h	bacteria	*Pseudomonas putida*	*Translation required (79422) Translation required (217493)*	/
2-methylpentane-1,5-diamine	LC_{50}	1825 mg/L	96 h	fish	*Pimephales promelas*	OECD 203	static system
2-methylpentane-1,5-diamine	EC_{50}	23.4 mg/L	48 h	crustacea	*Daphnia magna*	OECD 202 OECD 202	fresh water
2-methylpentane-1,5-diamine	ErC_{50}	> 100 mg/L	72 h	algae	*Selenastrum capricornutum*	OECD 201	static system
4-methylimidazole	EC_{50}	2 mg/L	72 h	algae	*Desmodesmus subspicatus*	/	/
4-methylimidazole	EC_{50}	180 mg/L	48 h	crustacea	*Daphnia magna*	/	/
4-methylimidazole	EC50	34 mg/L	96 h	fish	*Leuciscus idus*	/	/

Chronic (long-term) toxicity

For components

Name	Type	value	Exposure time	Species	organism	Method	Remark
2-methylpentane-1,5-diamine	NOEC	4.16 mg/l	21 days	crustacea	*Daphnia magna*	OECD 211	semi-static, fresh water

12.2 Persistence and degradability

Abiotic degradation, physical- and photo-chemical elimination

No information.

Biodegradation

For components

Name	Type	Rate	Time	Evaluation	Method	Remark

3,3'-oxybis(ethyleneoxy)bis(propylamine)	aerobic	< - 20 %	/	inherently biodegradable	OECD 302B: Zahn-Wellens/EMPA-Test	/
3,3'-oxybis(ethyleneoxy)bis(propylamine)	aerobic	- 0 %	/	not readily biodegradable	OECD 301 B-CO_2 Evolution Test	/
2-Ethyl-4-Methylimidazole	biodegradability	90 %	28 days	readily biodegradable	/	/
Bis[(dimethylamino)methyl]phenol	BOD	20 %	28 days	/	OECD 301 C	estimated
2-methylpentane-1,5-diamine	aerobic	/	28 days	readily biodegradable	OECD 301 D	activated sludge; 1,1 mg/l
4-methylimidazole	/	/	/	readily biodegradable	/	/

12.3 Bioaccumulative potential

Partition coefficient

For components

Name	Media	value	Temperature °C	pH	Concentration	Method
3,3'-oxybis(ethyleneoxy)bis(propylamine)	Log Pow	- -1.25	25	/	/	OECD 107 (Partition Coefficient (noctanol / water), Shake Flask Method)
2-Ethyl-4-Methylimidazole	Log Pow	1.13	/	/	/	/
Bis[(dimethylamino)methyl]phenol	octanol-water (log Kow)	-2.34	/	/	/	Estimated value
2-methylpentane-1,5-diamine	Log Pow	≤ 1	25	9	/	/
4-methylimidazole	Log Pow	0.23	/	/	/	/

Bioconcentration factor (BCF)

For components

Name	Species	organism	value	Duration	Evaluation	Method	Remark
2-methylpentane-1,5-diamine	BCF	/	3	/	/	/	/
2-methylpentane-1,5-diamine	bioaccumulation	/	/	/	Bioaccumulation is not expected.	/	/
4-methylimidazole	bioaccumulation	/	/	/	Potentially bioaccumulative.	/	/

12.4 Mobility in soil

Known or predicted distribution to environmental compartments

No information.

Surface tension

No information.

Adsorption/Desorption

No information.

12.5 Results of PBT and vPvB assessment

No evaluation.

12.6 Endocrine disrupting properties

No information.

12.7 Other adverse effects

No information.

12.8 Additional information

For product

Product is not classified as dangerous for environment. Do not allow to reach ground water, water courses or sewage system.

For components

3,3'-oxybis(ethyleneoxy)bis(propylamine)

This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / Packaging disposal

Waste chemical

Do not allow product to reach drains/sewage systems. Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste.

Waste codes / waste designations according to LoW

No information.

Packaging

Deliver completely emptied containers to approved waste disposal authorities. Uncleaned containers are classified as hazardous waste - they should be handled in the same manner as the contents.

Waste codes / waste designations according to LoW

No information.

Waste treatment-relevant information

No information.

Sewage disposal-relevant information

No information.

Other disposal recommendations

No information.

SECTION 14: TRANSPORT INFORMATION

ADR/RID	IMDG	IATA	ADN
14.1 UN number or ID number			
UN 3267	UN 3267	UN 3267	UN 3267
14.2 UN proper shipping name			
CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (2,4,6-Tris(dimetilaminometil)phenol)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (2,4,6-Tris(dimetilaminometil)phenol)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (2,4,6-Tris(dimetilaminometil)phenol)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (2,4,6-Tris(dimetilaminometil)phenol)
14.3 Transport hazard class(es)			
8	8	8	8

			
14.4 Packing group			
III	III	III	III
14.5 Environmental hazards			
NO	NO	NO	NO
14.6 Special precautions for user			
Limited quantities 5 L Special provisions 274 Packing Instructions P001, IBC03, LP01, R001 Transport category 3 Tunnel restriction code (E)	Limited quantities 5 L EmS F-A, S-B Flash point 93.4 °C	Limited Quantity, Packing Instructions (Ltd Qty, Pkg Inst) Y841 Limited Quantity, Maximum Net Quantity/Package (Ltd Qty, Max Net Qty/Pkg) 1 L Packing Instructions (Pkg Inst) 852 Maximum Net Quantity/Package (Max Net Qty/Pkg) 5 L Cargo Aircraft Only, Packing Instructions (CAO, Pkg Inst) 856 Cargo Aircraft Only, Maximum Net Quantity/Package (CAO, Max Net Qty/Pkg) 60 L Excepted quantities E1 ERG code 8L	Limited quantities 5 L
14.7 Maritime transport in bulk according to IMO instruments			
	Goods may not be carried in bulk in bulk containers, containers or vehicles.		

SECTION 15: REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2020/878)

- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)

not applicable

Ingredients according to Regulation (EC) No 648/2004 on detergents

No information.

Special instructions

Observe the regulations on employment and protection against dangerous substances for young people, pregnant women and nursing mothers.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION

Indication of changes

No information.

Key literature references and sources for data

No information.

Abbreviations and acronyms

ATE - Acute Toxicity Estimate
ADR - Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CEN - European Committee for Standardisation
C&L - Classification and Labelling
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
CAS# - Chemical Abstracts Service number
CMR - Carcinogen, Mutagen, or Reproductive Toxicant
CSA - Chemical Safety Assessment
CSR - Chemical Safety Report
DMEL - Derived Minimal Effect Level
DNEL - Derived No Effect Level
DPD - Dangerous Preparations Directive 1999/45/EC
DSD - Dangerous Substances Directive 67/548/EEC
DU - Downstream User
EC - European Community
ECHA - European Chemicals Agency
EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)
EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)
EEC - European Economic Community
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
EN - European Standard
EQS - Environmental Quality Standard
EU - European Union
Euphrac - European Phrase Catalogue
EWC - European Waste Catalogue (replaced by LoW – see below)
GES - Generic Exposure Scenario
GHS - Globally Harmonized System
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
IMSBC - International Maritime Solid Bulk Cargoes
IT - Information Technology
IUCLID - International Uniform Chemical Information Database
IUPAC - International Union for Pure Applied Chemistry
JRC - Joint Research Centre
Kow - octanol-water partition coefficient
LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
LE - Legal Entity
LoW - List of Wastes (see http://ec.europa.eu/environment/waste/framework/list.htm)
LR - Lead Registrant
M/I - Manufacturer / Importer
MS - Member States
MSDS - Material Safety Data Sheet
OC - Operational Conditions
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OJ - Official Journal

OR - Only Representative
OSHA - European Agency for Safety and Health at work
PBT - Persistent, Bioaccumulative and Toxic substance
PEC - Predicted Effect Concentration
PNEC(s) - Predicted No Effect Concentration(s)
PPE - Personal Protection Equipment
(Q)SAR - Qualitative Structure Activity Relationship
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
RIP - REACH Implementation Project
RMM - Risk Management Measure
SCBA - Self-Contained Breathing Apparatus
SDS - Safety data sheet
SIEF - Substance Information Exchange Forum
SME - Small and Medium sized Enterprises
STOT - Specific Target Organ Toxicity
(STOT) RE - Repeated Exposure
(STOT) SE - Single Exposure
SVHC - Substances of Very High Concern
UN - United Nations
vPvB - Very Persistent and Very Bioaccumulative

List of relevant H phrases

H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H412 Harmful to aquatic life with long lasting effects.