

**SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006

**EPROPOX HC 120 B +**

Version 1.0 [2.0 SDB GB]

Revision Date 04.11.2014

Print Date 05.11.2014

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

**1.1 Product identifier**

Trade name : EPROPOX HC 120 B +

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

Use of the Sub-  
stance/Mixture : Epoxy Hardener

**1.3 Details of the supplier of the safety data sheet**

Company	Trelleborg Pipe Seals Duisburg GmbH Dr.-Alfred-Herrhausen-Allee 36 47228 Duisburg Germany
Telephone	+49 (0) 2065 999-0
Telefax	+49 (0) 2065 999-111
E-mail address	technic.epros@trelleborg.com

**1.4 Emergency telephone number** +49 (0) 2065 999-150

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification (REGULATION (EC) No 1272/2008)**

Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 4	H312: Harmful in contact with skin.
Skin corrosion, Category 1B	H314: Causes severe skin burns and eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Chronic aquatic toxicity, Category 2	H411: Toxic to aquatic life with long lasting effects.

**Classification (67/548/EEC, 1999/45/EC)**

Corrosive	R34: Causes burns.
Harmful	R21/22: Harmful in contact with skin and if swallowed.
Sensitising	R43: May cause sensitisation by skin contact.
Dangerous for the environment	R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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**2.2 Label elements**

**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



Signal word :

Danger

Hazard statements :

H302 + H312  
H314  
H317  
H411

Harmful if swallowed or in contact with skin  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
Toxic to aquatic life with long lasting effects.

Precautionary statements :

**Prevention:**  
P261

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P273

Avoid release to the environment.

P280

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

**Response:**

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310

Immediately call a POISON CENTER or doctor/ physician.

Hazardous components which must be listed on the label:

Trimethylolpropane poly(oxypropylene)triamine

Polyamide polymer

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Amines, polyethylenepoly-, triethylenetetramine fraction

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane

3,6-diazaoctanethylenediamin

Aziridine, homopolymer

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**2.3 Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures**

Chemical nature : Heterocyclic and aliphatic amine based mixture

**Hazardous components**

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
Trimethylolpropane poly(oxypropylene)triamine	39423-51-3	Xn; R21/22 Xi; R41 N; R51/53	Acute Tox. 4; H302 Acute Tox. 4; H312 Eye Dam. 1; H318 Aquatic Chronic 2; H411	>= 20 - < 25
Polyamide polymer	68082-29-1	Xi; R41 Xi; R38 Xi; R43 N; R51/53	Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Chronic 2; H411	>= 20 - < 25
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2 220-666-8 01- 2119514687-32	C; R34 Xn; R21/22 R43 R52-R53	Acute Tox. 4; H312 Acute Tox. 4; H302 Skin Corr. 1B; H314 Skin Sens. 1; H317 Aquatic Chronic 3; H412	>= 12,5 - < 20
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-	9046-10-0	C; R34 Xi; R41 R52/53	Skin Corr. 1C; H314 Eye Dam. 1; H318 Aquatic Chronic 2; H411	>= 10 - < 12,5
Amines, polyethylene-poly-, triethylenetetramine fraction	90640-67-8 292-588-2 01- 2119487919-13	Xn; R21 C; R34 Xi; R43 R52/53	Acute Tox. 4; H312 Skin Corr. 1B; H314 Skin Sens. 1; H317 Aquatic Chronic 3; H412	>= 10 - < 12,5
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane	38294-69-8	C; R34 Xn; R21/22 R43 R52/53	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1B; H314 Skin Sens. 1; H317 Aquatic Chronic 3; H412	>= 5 - < 7
cyclohex-1,2-ylenediamine	694-83-7 211-776-7 01- 2119976312-37	C; R35 Xn; R20/21/22 Xi; R37 Xi; R41	Acute Tox. 4; H302 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Corr. 1A;	>= 3 - < 5

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			H314 Eye Dam. 1; H318 STOT SE 3; H335	
3,6-diazaoctanethylenediamin	112-24-3 203-950-6 01- 2119487919-13	C; R34 Xn; R21/22 R43 R52/53	Acute Tox. 4; H312 Skin Corr. 1B; H314 Skin Sens. 1; H317 Aquatic Chronic 3; H412 Acute Tox. 4; H302 Eye Dam. 1; H318	>= 1 - < 2,5
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2 202-013-9 01- 2119560597-27	Xn; R22 Xi; R36/38	Acute Tox. 4; H302 Eye Irrit. 2; H319 Skin Irrit. 2; H315	>= 1 - < 3
Aziridine, homopolymer	9002-98-6	Xn; R22 N; R51/53 Xi; R43	Acute Tox. 4; H302 Eye Irrit. 2; H319 Aquatic Chronic 2; H411 Skin Sens. 1; H317	>= 1 - < 2,5

For explanation of abbreviations see section 16.

**SECTION 4: First aid measures**
**4.1 Description of first aid measures**

- General advice : Show this safety data sheet to the doctor in attendance.  
Keep warm and in a quiet place.  
Take off all contaminated clothing immediately.
- If inhaled : Move to fresh air.  
Keep patient warm and at rest.  
If unconscious place in recovery position and seek medical advice.  
If symptoms persist, call a physician.  
If breathing is irregular or stopped, administer artificial respiration.
- In case of skin contact : Wash off immediately with soap and plenty of water.  
Do NOT use solvents or thinners.  
If on clothes, remove clothes.  
Burns must be treated by a physician.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
If eye irritation persists, consult a specialist.  
If easy to do, remove contact lens, if worn.
- If swallowed : Do NOT induce vomiting.  
If a person vomits when lying on his back, place him in the recovery position.  
Call a physician immediately.  
Give small amounts of water to drink.

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**4.2 Most important symptoms and effects, both acute and delayed**Symptoms : corrosive effects  
Burn**4.3 Indication of any immediate medical attention and special treatment needed**

Treatment : No information available.

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**SECTION 5: Firefighting measures****5.1 Extinguishing media**Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Foam  
Dry powder  
Water mist

Unsuitable extinguishing media : None known.

**5.2 Special hazards arising from the substance or mixture**Specific hazards during fire-fighting : The pressure in sealed containers can increase under the influence of heat.  
Cool closed containers exposed to fire with water spray.  
Hazardous decomposition products formed under fire conditions.**5.3 Advice for firefighters**Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.Further information : In the event of fire and/or explosion do not breathe fumes.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Immediately evacuate personnel to safe areas.  
Prevent fire extinguishing water from contaminating surface water or the ground water system.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**Personal precautions : Refer to protective measures listed in sections 7 and 8.  
Evacuate personnel to safe areas.  
Use personal protective equipment.  
Ensure adequate ventilation.  
Inform the responsible authorities in case of gas leakage, or of entry into waterways, soil or drains.

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**6.2 Environmental precautions**

- Environmental precautions : Do not allow uncontrolled discharge of product into the environment.  
Try to prevent the material from entering drains or water courses.  
Local authorities should be advised if significant spillages cannot be contained.

**6.3 Methods and material for containment and cleaning up**

- Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).  
Pick up and transfer to properly labelled containers.

**6.4 Reference to other sections**

- For personal protection see section 8.

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**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

- Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.  
Do not breathe vapours or spray mist.  
Avoid inhalation, ingestion and contact with skin and eyes.  
Wear personal protective equipment.  
Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
- Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition.
- Hygiene measures : Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.

**7.2 Conditions for safe storage, including any incompatibilities**

- Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labelled containers. To maintain product quality, do not store in heat or direct sunlight.
- Further information on storage conditions : Protect from moisture.
- Advice on common storage : Keep away from isocyanates.  
Do not store near acids.  
Keep away from oxidizing agents.
- Other data : Stable at normal ambient temperature and pressure.

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### 7.3 Specific end use(s)

Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

#### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Trimethylolpropane poly(oxypropylene)triamine	: End Use: Workers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 1,6 mg/kg End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 14 mg/m <sup>3</sup> End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 3,48 mg/m <sup>3</sup> End Use: Consumers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 0,8 mg/kg
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-	: End Use: Workers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 2,5 mg/kg End Use: Workers Exposure routes: Skin contact Potential health effects: Long-term local effects Value: 0,623 mg/cm <sup>2</sup> End Use: Consumers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 1,25 mg/kg End Use: Consumers Exposure routes: Skin contact Potential health effects: Long-term local effects Value: 0,311 mg/cm <sup>2</sup> End Use: Consumers Exposure routes: Ingestion Potential health effects: Long-term systemic effects Value: 0,04 mg/kg
Amines, polyethylenepoly-, triethylenetetramine fraction	: End Use: Workers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 0,57 mg/kg End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects

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	Value: 1 mg/m <sup>3</sup>
	End Use: Consumer use
	Exposure routes: Skin contact
	Potential health effects: Long-term systemic effects
	Value: 0,25 mg/kg
	End Use: Consumers
	Exposure routes: Inhalation
	Potential health effects: Long-term systemic effects
	Value: 0,29 mg/m <sup>3</sup>
cyclohex-1,2-ylenediamine	: End Use: Workers
	Exposure routes: Skin contact
	Potential health effects: Long-term exposure
	Value: 1,5 mg/kg
	End Use: Workers
	Exposure routes: Inhalation
	Potential health effects: Short-term exposure
	Value: 0,5 mg/m <sup>3</sup>
	End Use: Workers
	Exposure routes: Inhalation
	Potential health effects: Long-term exposure
	Value: 0,25 mg/m <sup>3</sup>
3,6-diazaoctanethylenediamin	: End Use: Workers
	Exposure routes: Inhalation
	Potential health effects: Short-term exposure, Systemic effects
	Value: 5380 mg/m <sup>3</sup>
	End Use: Workers
	Exposure routes: Skin contact
	Potential health effects: Long-term systemic effects
	Value: 0,57 mg/kg
	End Use: Workers
	Exposure routes: Inhalation
	Potential health effects: Long-term systemic effects
	Value: 1 mg/m <sup>3</sup>
	End Use: Workers
	Exposure routes: Skin contact
	Potential health effects: Long-term local effects
	Value: 0,028 mg/cm <sup>2</sup>
	End Use: Consumers
	Exposure routes: Skin contact
	Potential health effects: Short-term exposure, Systemic effects
	Value: 8 mg/kg
	End Use: Consumers
	Exposure routes: Inhalation
	Potential health effects: Short-term exposure, Systemic effects
	Value: 1600 mg/m <sup>3</sup>
	End Use: Consumers
	Exposure routes: Ingestion
	Potential health effects: Short-term exposure, Systemic effects
	Value: 20 mg/kg
	End Use: Consumers
	Exposure routes: Skin contact
	Potential health effects: Local effects, Short-term exposure
	Value: 1 mg/cm <sup>2</sup>
	End Use: Consumers
	Exposure routes: Skin contact
	Potential health effects: Long-term systemic effects



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Value: 0,25 mg/kg  
 End Use: Consumers  
 Exposure routes: Inhalation  
 Potential health effects: Long-term systemic effects  
 Value: 0,29 mg/m<sup>3</sup>  
 End Use: Consumers  
 Exposure routes: Ingestion  
 Potential health effects: Long-term systemic effects  
 Value: 0,41 mg/kg  
 End Use: Consumers  
 Exposure routes: Skin contact  
 Potential health effects: Long-term local effects  
 Value: 0,43 mg/cm<sup>2</sup>

### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Trimethylolpropane poly(oxypropylene)triamine	:	Fresh water Value: 0,0044 mg/l Marine water Value: 0,00044 mg/l Intermittent releases Value: 0,044 mg/l Fresh water sediment Value: 0,02 mg/kg Marine sediment Value: 0,002 mg/kg Soil Value: 0,002 mg/kg Sewage treatment plant Value: 10 mg/l
3-aminomethyl-3,5,5-trimethylcyclohexylamine	:	Fresh water Value: 0,06 mg/l Marine water Value: 0,006 mg/l Intermittent releases Value: 0,23 mg/l Fresh water sediment Value: 5,784 mg/kg Marine sediment Value: 0,578 mg/kg Sewage treatment plant Value: 3,18 mg/l Soil Value: 1,121 mg/kg
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-	:	Fresh water Value: 0,015 mg/l  Marine water Value: 0,0143 mg/l Fresh water sediment Value: 0,132 mg/kg Marine sediment Value: 0,125 mg/kg Soil Value: 0,0176 mg/kg Intermittent releases

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	Value: 0,15 mg/l Sewage treatment plant
	Value: 7,5 mg/l
Amines, polyethylenepoly-, triethylenetetramine fraction	: Sewage treatment plant Value: 4,25 mg/l Fresh water Value: 0,135 mg/l Fresh water sediment Value: 2,08 mg/kg Marine water Value: 0,0027 mg/l Marine sediment Value: 0,123 mg/kg Soil Value: 1,67 mg/kg
cyclohex-1,2-ylenediamine	: Fresh water Value: 0,42 mg/l Marine water Value: 0,042 mg/l Intermittent releases Value: 0,42 mg/l
3,6-diazaoctanethylenediamin	: Fresh water Value: 0,19 mg/l Marine water Value: 0,038 mg/l Fresh water sediment Value: 95,9 mg/kg Marine sediment Value: 19,2 mg/kg Soil Value: 19,1 mg/kg Sewage treatment plant Value: 4,25 mg/l

**8.2 Exposure controls**
**Engineering measures**

 Effective exhaust ventilation system  
 effective ventilation in all processing areas

**Personal protective equipment**

Eye protection	: Safety glasses with side-shields conforming to EN166 Do not wear contact lenses. Ensure that eyewash stations and safety showers are close to the workstation location.
Hand protection Material	: Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.
Skin and body protection	: Protective suit
Respiratory protection	: Use respirator when performing operations involving potential exposure to vapour of the product. The filter class for the respirator must be suitable for the maximum expected contaminant concentration

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(gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.  
Respirator with a vapour filter (EN 141)

Protective measures : Avoid contact with skin.  
Wear suitable protective equipment.

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**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

Appearance : liquid

Colour : blue

Odour : ammoniacal

Odour Threshold : not determined

pH : not determined

Melting point/freezing point : Not applicable

Boiling point/boiling range : > 150 °C

Flash point : 100 °C

Evaporation rate : not determined

Upper explosion limit : Not applicable

Lower explosion limit : Not applicable

Vapour pressure : Not applicable

Relative vapour density : not determined

Density : 0,98 g/cm<sup>3</sup> (25 °C)

Bulk density : not determined

Solubility(ies)  
Solubility in other solvents : not determined

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : Not applicable

Thermal decomposition : Method: No data available

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Viscosity  
Viscosity, dynamic : 200 - 350 mPa.s (25 °C)

Viscosity, kinematic : not determined

Explosive properties : Not applicable

Oxidizing properties : Not applicable

**9.2 Other information**

Surface tension : not determined

Sublimation point : Not applicable

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**SECTION 10: Stability and reactivity****10.1 Reactivity**

Stable under recommended storage conditions.

**10.2 Chemical stability**

No decomposition if stored and applied as directed.

**10.3 Possibility of hazardous reactions**

Hazardous reactions : Reacts with the following substances:  
Acids  
Strong oxidizing agents

**10.4 Conditions to avoid**

Conditions to avoid : No decomposition if used as directed.

**10.5 Incompatible materials**

Materials to avoid : Strong acids  
Strong oxidizing agents

**10.6 Hazardous decomposition products**

Hazardous decomposition products : This product may release the following:  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide  
Carbon dioxide (CO<sub>2</sub>)

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**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

**Acute toxicity**

**Product:**

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- Acute oral toxicity : Acute toxicity estimate : 1.018 mg/kg  
Method: Calculation method
- Acute inhalation toxicity : Acute toxicity estimate : > 5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method
- Acute dermal toxicity : Acute toxicity estimate : 1.874 mg/kg  
Method: Calculation method

**Components:****Trimethylolpropane poly(oxypropylene)triamine:**

- Acute oral toxicity : LD50 (Rat, female): 550 mg/kg  
Method: OECD Test Guideline 425  
GLP: yes
- Acute dermal toxicity : LD50 (Rat, male and female): > 1.000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes

**3-aminomethyl-3,5,5-trimethylcyclohexylamine:**

- Acute oral toxicity : Acute toxicity estimate : 500 mg/kg  
Method: Converted acute toxicity point estimate
- Acute dermal toxicity : Acute toxicity estimate : 1.100 mg/kg  
Method: Converted acute toxicity point estimate

**Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-:**

- Acute oral toxicity : LD50 (Rat, male and female): 2.885,3 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes
- Acute dermal toxicity : LD50 (Rabbit, male and female): 2.979,7 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes

**Amines, polyethylenepoly-, triethylenetetramine fraction:**

- Acute oral toxicity : LD50 (Rat, male and female): 1.716 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes
- Acute dermal toxicity : LD50 (Rabbit, male and female): 1.465 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes

**3,6-diazaoctanethylenediamin:**

- Acute oral toxicity : LD50 (Rat, male): 1.716 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes
- Acute dermal toxicity : LD50 (Rabbit): 1.465 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes

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**Skin corrosion/irritation****Product:**

Remarks: Acute dermal irritation/corrosion

**Components:****Trimethylolpropane poly(oxypropylene)triamine:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: Mild skin irritation

GLP: yes

**Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: Corrosive

**Amines, polyethylenepoly-, triethylenetetramine fraction:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: Corrosive

GLP: yes

**3,6-diazaoctanethylenediamin:**

Method: OECD Test Guideline 435

Result: Corrosive

**Serious eye damage/eye irritation****Product:**

Remarks: Severe eye irritation

**Components:****Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-:**

Method: OECD Test Guideline 405

Result: Risk of serious damage to eyes.

**Amines, polyethylenepoly-, triethylenetetramine fraction:**

Species: Rabbit

Method: OECD Test Guideline 405

Result: Risk of serious damage to eyes.

GLP: yes

**3,6-diazaoctanethylenediamin:**

Species: Rabbit

Method: OECD Test Guideline 405

Result: Risk of serious damage to eyes.

GLP: yes

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#### Respiratory or skin sensitisation

##### Product:

Remarks: No data available

##### Components:

###### **Trimethylolpropane poly(oxypropylene)triamine:**

Test Type: Buehler Test

Exposure routes: Dermal

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Does not cause skin sensitisation.

GLP: yes

###### **Amines, polyethylenepoly-, triethylenetetramine fraction:**

Test Type: Buehler Test

Species: Guinea pig

Method: OECD Test Guideline 406

Result: May cause sensitisation by skin contact.

GLP: yes

###### **3,6-diazaoctanethylenediamin:**

Test Type: Buehler Test

Exposure routes: Dermal

Species: Guinea pig

Method: OECD Test Guideline 406

Result: May cause sensitisation by skin contact.

GLP: yes

#### Germ cell mutagenicity

#### Carcinogenicity

#### Reproductive toxicity

#### STOT - single exposure

#### STOT - repeated exposure

#### Repeated dose toxicity

##### Product:

Remarks: No data available

#### Aspiration toxicity

##### Components:

###### **3-aminomethyl-3,5,5-trimethylcyclohexylamine:**

No aspiration toxicity classification

#### Further information

##### Product:

Remarks: No data available

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**SECTION 12: Ecological information****12.1 Toxicity****Product:**

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

**Components:****Trimethylolpropane poly(oxypropylene)triamine:**Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203  
GLP: yesToxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 13 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202  
GLP: yesToxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 4,4 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201  
GLP: yesNOEC (Pseudokirchneriella subcapitata (green algae)): 1 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201  
GLP: yes**3-aminomethyl-3,5,5-trimethylcyclohexylamine:**Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 110 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Method: Directive 67/548/EEC, Annex V, C.1.  
GLP: yesToxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 23 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202  
GLP: yes

Toxicity to algae : ErC50 (Scenedesmus capricornutum (fresh water algae)): &gt;



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50 mg/l  
 Exposure time: 72 h  
 Test Type: static test  
 Method: Directive 67/548/EEC, Annex V, C.3.  
 GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 3 mg/l  
 Exposure time: 21 d  
 Species: Daphnia magna (Water flea)  
 Test Type: semi-static test  
 GLP: yes

### **Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 15 mg/l  
 Exposure time: 96 h  
 Test Type: semi-static test  
 Method: OECD Test Guideline 203  
 GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 80 mg/l  
 Exposure time: 48 h  
 Test Type: static test  
 Method: OECD Test Guideline 202  
 GLP: yes

Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (green algae)): 0,32 mg/l  
 Exposure time: 72 h  
 Test Type: static test  
 Method: OECD Test Guideline 201  
 GLP: yes

### **Amines, polyethylenepoly-, triethylenetetramine fraction:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 31,1 mg/l  
 Exposure time: 48 h  
 Test Type: static test  
 Method: Directive 67/548/EEC, Annex V, C.2.  
 GLP: yes

Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): 20 mg/l  
 Exposure time: 72 h  
 Test Type: semi-static test  
 Method: OECD Test Guideline 201  
 GLP: yes

### **3,6-diazaoctanethylenediamin:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 31,1 mg/l  
 Exposure time: 48 h  
 Test Type: static test  
 GLP: yes

Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): Exposure time: 72 h  
 Test Type: semi-static test

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Method: OECD Test Guideline 201

GLP: yes

**12.2 Persistence and degradability****Product:**

Biodegradability : Remarks: No data available

**Components:****Trimethylolpropane poly(oxypropylene)triamine:**Biodegradability : Test Type: aerobic  
Result: Not readily biodegradable.  
Method: OECD Test Guideline 301F  
GLP: yes**3-aminomethyl-3,5,5-trimethylcyclohexylamine:**Biodegradability : Test Type: aerobic  
Result: Not readily biodegradable.  
Method: Directive 67/548/EEC Annex V, C.4.A.  
GLP: yes**Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-:**Biodegradability : Test Type: aerobic  
Result: Not readily biodegradable.  
Method: OECD Test Guideline 301B  
GLP: yes**cyclohex-1,2-ylenediamine:**Biodegradability : Test Type: aerobic  
Result: Readily biodegradable.  
Method: OECD Test Guideline 301D  
GLP: yes**3,6-diazaoctanethylenediamin:**Biodegradability : Test Type: aerobic  
Result: Not readily biodegradable.  
Method: OECD Test Guideline 301D  
GLP: yes**12.3 Bioaccumulative potential****Product:**

Bioaccumulation : Remarks: No data available

**Components:****Trimethylolpropane poly(oxypropylene)triamine:**Partition coefficient: n- : log Pow: -1,13 (20 °C)  
octanol/water pH: 12,7  
GLP: yes**3-aminomethyl-3,5,5-trimethylcyclohexylamine:**

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Partition coefficient: n-octanol/water : log Pow: 0,99  
Method: OECD Test Guideline 107  
GLP: yes

**Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-:**

Partition coefficient: n-octanol/water : log Pow: 1,34 (25 °C)  
Method: OECD Test Guideline 117  
GLP: yes

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment****Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

**12.6 Other adverse effects****Product:**

Additional ecological information : Remarks: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

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**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

Product : In accordance with local and national regulations.  
Container hazardous when empty.  
Do not dispose of with domestic refuse.  
Do not mix waste streams during collection.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

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**SECTION 14: Transport information****14.1 UN number**

ADR/RID : UN 2735  
IMDG : UN 2735  
IATA : UN 2735

**14.2 UN proper shipping name**

ADR/RID : AMINES, LIQUID, CORROSIVE, N.O.S.  
(Trimethylolpropane poly(oxypropylene)triamine, Polyamide

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	polymer)
<b>IMDG</b>	: AMINES, LIQUID, CORROSIVE, N.O.S. (Trimethylolpropane poly(oxypropylene)triamine, Polyamide polymer)
<b>IATA</b>	: Amines, liquid, corrosive, n.o.s. (Trimethylolpropane poly(oxypropylene)triamine, Polyamide polymer)

### 14.3 Transport hazard class(es)

<b>ADR/RID</b>	: 8
<b>IMDG</b>	: 8
<b>IATA</b>	: 8

### 14.4 Packing group

<b>ADR/RID</b>	
Packing group	: III
Classification Code	: C7
Hazard Identification Number	: 80
Labels	: 8
<b>IMDG</b>	
Packing group	: III
Labels	: 8
EmS Code	: F-A, S-B
<b>IATA</b>	
Packing instruction (cargo aircraft)	: 856
Packing instruction (passenger aircraft)	: 852
Packing group	: III
Labels	: 8

### 14.5 Environmental hazards

<b>ADR/RID</b>	
Environmentally hazardous	: yes
<b>IMDG</b>	
Marine pollutant	: yes

### 14.6 Special precautions for user

Not applicable

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

## SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

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REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

		Quantity 1	Quantity 2
9b	Dangerous for the environment	200 t	500 t

### 15.2 Chemical Safety Assessment

Not applicable

## SECTION 16: Other information

### Full text of R-Phrases

R20/21/22 : Harmful by inhalation, in contact with skin and if swallowed.

R21 : Harmful in contact with skin.

R21/22 : Harmful in contact with skin and if swallowed.

R22 : Harmful if swallowed.

R34 : Causes burns.

R35 : Causes severe burns.

R36/38 : Irritating to eyes and skin.

R37 : Irritating to respiratory system.

R38 : Irritating to skin.

R41 : Risk of serious damage to eyes.

R43 : May cause sensitisation by skin contact.

R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52 : Harmful to aquatic organisms.

R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R53 : May cause long-term adverse effects in the aquatic environment.

### Full text of H-Statements

H302 : Harmful if swallowed.

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.

H319 : Causes serious eye irritation.

H332 : Harmful if inhaled.

H335 : May cause respiratory irritation.

H411 : Toxic to aquatic life with long lasting effects.

H412 : Harmful to aquatic life with long lasting effects.

### Full text of other abbreviations

Acute Tox. : Acute toxicity

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Aquatic Chronic	: Chronic aquatic toxicity
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Skin Corr.	: Skin corrosion
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation
STOT SE	: Specific target organ toxicity - single exposure

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.