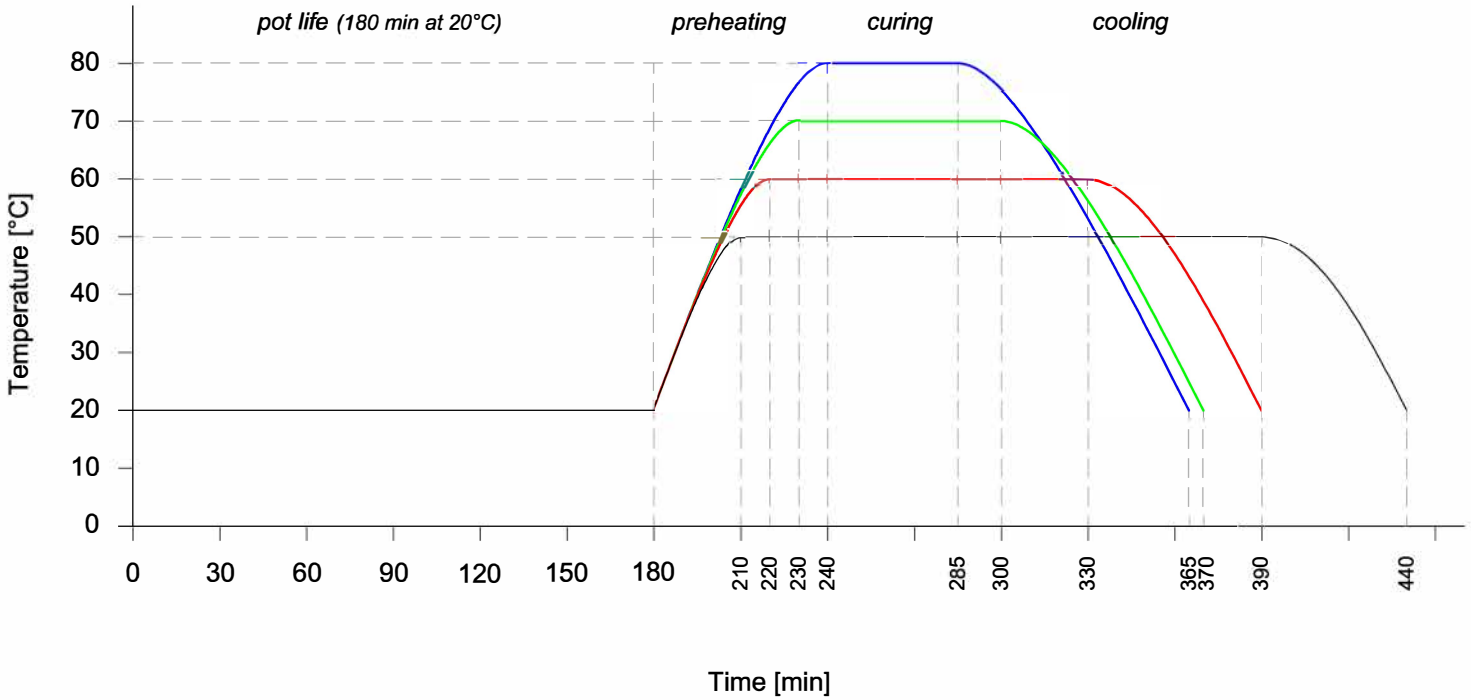
Recommended Polymerization Curve for BX180 Epoxy System at 50°,60°, 70° and 80°C

Mix Ratio 100:20



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

1.1. Product identifier

chemius.net/CnQbd

Product name

EX4-2

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

Relevant identified uses

Hardener

Uses advised against

No information.

1.3. Details of the supplier of the safety data sheet

Supplier

SANIKOM D.O.O.
Address: Vrtna ulica 39, 4294 Križe, Slovenia
Phone: 051-354-081
Fax: 0599-50-636
E-mail: gregor.janc@sanikom.si
Point of contact for safety info: Gregor Janc

1.4. Emergency telephone number

Emergency

112

Supplier

051-354-081

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Acute Tox. 4; H302 Harmful if swallowed.
Acute Tox. 4; H312 Harmful in contact with skin.
Skin Corr. 1A; 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.
STOT SE 3; H335 May cause respiratory irritation.
Aquatic Chronic 3; H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

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

Signal word: **Danger**

H302 + H312 Harmful if swallowed or in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.
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.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
P501 Dispose of contents/container in accordance with national regulation.

2.2.2. Contains:

3-aminomethyl-3,5,5-trimethylcyclohexylamine (CAS: 2855-13-2, EC: 220-666-8, Index: 612-067-00-9)
2-methylpentane-1,5-diamine (CAS: 15520-10-2, EC: 239-556-6)

2.2.3. Special provisions

Special hazards are not known or expected.

2.3. Other hazards

The substances in the mixture are not classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

For mixtures see 3.2.

3.2. Mixtures

Name	CAS EC Index	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Conc. Limits	REACH Registration No.
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2 220-666-8 612-067-00-9	60-100	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1B; H314 Skin Sens. 1; H317 Aquatic Chronic 3; H412		01-2119514687-32
2-methylpentane-1,5-diamine	15520-10-2 239-556-6 -	13-30	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1A; H314 Eye Dam. 1; H318 Acute Tox. 4; H332 STOT SE 3; H335		01-2119976310-41

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. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
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.

Following inhalation

Remove patient to fresh air - move out of dangerous area. Victim should rest in a warm place. If symptoms develop and persist, seek medical attention.

Following skin contact

Immediately remove contaminated clothing. Areas of the body that have come into contact with the product must be rinsed with water. Immediately obtain professional medical help! Wash contaminated clothes and shoes before reuse.

Following eye contact

Immediately flush eyes with running water, keeping eyelids apart. Consult a physician immediately! Small amounts splashed into eyes can cause irreversible tissue damage and blindness. Continue rinsing during transport. If the patient is wearing contact lenses, remove them immediately.

Following ingestion

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

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

Inhalation

Inhalation of mist can cause irritation of the respiratory tract (sneezing, coughing, burning sensation in the nose and throat).

Skin contact

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

Eye contact

Causes burns: signs/symptoms include corneal damage, burns, pain, lacrimation, corrosive effects, partial or complete lost of sight.

Ingestion

Harmful to health.
If ingested, causes severe burns of the mouth and throat, as well as perforation of the esophagus and stomach.
May cause nausea/vomiting and diarrhea.

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. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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. Cool containers at risk with water spray. If possible remove containers from endangered area.

Special protective equipment for firefighters

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

Additional information

Contaminated firefighting water must be disposed of in accordance with the regulations; do not allow to reach the sewage system.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment

Use personal protective equipment (Section 8). Refer to protective measures listed in Sections 7 and 8.

Emergency procedures

Ensure adequate ventilation. Prevent access to unprotected personnel. Do not breathe vapour or mist. Avoid contact with skin, eyes and clothing. Avoid contact with spilled product or contaminated surfaces.

6.1.2. For emergency responders

During intervention, use personal protective equipment (Section 8).

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

6.3.1. For containment

Stem the spill if this does not pose risks.

6.3.2. For cleaning up

Absorb product (with inert material), collect it in special container and dispose it to a licensed hazardous-waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Clean contaminated area with plenty of water.

6.3.3. Other information

See Section 1 for contact information in case of emergency.

6.4. Reference to other sections

See also Sections 8 and 13.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

7.1.1. Protective measures

Measures to prevent fire

Ensure adequate ventilation. The usual measures for preventive fire protection.

Measures to prevent aerosol and dust generation

-

Measures to protect the environment

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

7.1.2. 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. Avoid contact with skin, eyes and clothes. Product is not for eating – do not ingest! Do not breathe vapours/mist. Wear suitable protective equipment; see Section 8. Remove contaminated clothes and wash them before reuse. Obtain special instructions before use. To avoid spills during handling keep bottle on a metal tray.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1. Technical measures and storage conditions

Keep in a cool, dry and well ventilated place. Keep away from food, drink and animal feeding stuffs. Keep in tightly closed container. Store between: 2 - 40 °C Keep away from incompatible products (see section 10).

7.2.2. Packaging materials

The original container of producer.

7.2.3. Requirements for storage rooms and vessels

Close opened containers after use. Put the containers upright to prevent from leaking. The floor of the storage room must be impermeable and chemicals resistant (base, acid). Do not store in unlabelled containers.

7.2.4. Storage class

-

7.2.5. Further information on storage conditions

-

7.3. Specific end use(s)

Recommendations

See identified uses in Section 1.2.

Industrial sector specific solutions

-

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. Occupational exposure limit values

No information.

8.1.2. 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 482:2012+A1:2015 Workplace exposure. General requirements for the performance of procedures for the measurement of chemical agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values.

8.1.3. DNEL/DMEL values

For components

Name	Type	Exposure route	Exposure frequency	Value	Remark
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	Consumer	oral	long term (systemic effects)	0,526 mg/kg bw/day	
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	Worker	inhalation	long term (local effects)	0,073 mg/m³	
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	Worker	inhalation	short term (local effects)	0,073 mg/m³	
2-methylpentane-1,5-diamine (15520-10-2)	Worker	inhalation	long term (local effects)	0,25 mg/m^3	
2-methylpentane-1,5-diamine (15520-10-2)	Worker	inhalation	short term (local effects)	0,5 mg/m^3	
2-methylpentane-1,5-diamine (15520-10-2)	Worker	dermal	long term (systemic effects)	1,5 mg/kg bw/day	
2-methylpentane-1,5-diamine (15520-10-2)	Consumer	inhalation	long term (local effects)	0,125 mg/m^3	
2-methylpentane-1,5-diamine (15520-10-2)	Consumer	inhalation	short term (local effects)	0,25 mg/m^3	
2-methylpentane-1,5-diamine (15520-10-2)	Consumer	dermal	long term (systemic effects)	0,75 mg/kg bw/day	
2-methylpentane-1,5-diamine (15520-10-2)	Consumer	oral	long term (systemic effects)	0,75 mg/kg bw/day	

8.1.4. PNEC values

For components

Name	Exposure route	Value	Remark
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	fresh water	0,06 mg/L	
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	marine water	0,006 mg/L	
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	water treatment plant	3,18 mg/L	
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	fresh water sediment	5,784 mg/kg	
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	marine water sediment	0,578 mg/kg	
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	soil	1,121 mg/kg dw	
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	water, intermittent release	0,23 mg/L	
2-methylpentane-1,5-diamine (15520-10-2)	fresh water	0,42 mg/L	
2-methylpentane-1,5-diamine (15520-10-2)	water, intermittent release	0,42 mg/L	
2-methylpentane-1,5-diamine (15520-10-2)	marine water	0,042 mg/L	
2-methylpentane-1,5-diamine (15520-10-2)	water treatment plant	1,25 g/L	
2-methylpentane-1,5-diamine (15520-10-2)	fresh water sediment	7,58 mg/kg	dry weight
2-methylpentane-1,5-diamine (15520-10-2)	marine water sediment	0,758 mg/kg	dry weight
2-methylpentane-1,5-diamine (15520-10-2)	soil	1,27 mg/kg	dry weight

8.2. Exposure controls

8.2.1. 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. Avoid contact with eyes and skin. Do not breathe vapours/aerosols. Do not eat, drink or smoke while working. Handle in accordance with good industrial hygiene and safety practice.

Organisational measures to prevent exposure

Remove all contaminated clothes immediately and wash them before reuse. Appropriate techniques should be used to remove potentially contaminated clothing. 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.

8.2.2. Personal protective equipment

Eye and face protection

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

Hand protection

Protective gloves (EN 374). 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. 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.

Appropriate materials

Material	Thickness	Penetration Time	Remark
Butyl rubber		> 480 min	EN 374
nitrile rubber		< 480 min	EN 374

Skin protection

Cotton protective clothing and shoes that cover the entire foot (EN ISO 20345). At high risk of skin exposure chemical suits (EN ISO 6530:2005) and boots may be required (EN ISO 20345:2012).

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 EN 137, EN 138.

Thermal hazards

-

8.2.3. Environmental exposure controls

Substance/mixture related measures to prevent exposure

Implement measures to protect the environment. Avoid discharge into drains and surface waters.

Technical measures to prevent exposure

Prevent exposure in the environment.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

-	**Physical state:**	liquid
-	**Colour:**	yellow, clear
-	**Odour:**	amine like

Important health, safety and environmental information

-	**pH**	ca. 13 at 20 °C, conc. 500 g/l
-	**Melting point/freezing point**	No information.
-	**Initial boiling point/boiling range**	171 °C
-	**Flash point**	108 °C (Closed cup [Pensky-Martens])
-	**Evaporation rate**	No information.
-	**Flammability (solid, gas)**	No information.
-	**Explosion limits (vol%)**	No information.
-	**Vapour pressure**	No information.
-	**Vapour density**	No information.
-	**Density**	**Density**: 0,91 – 0,92 g/cm^3 at 25 °C
-	**Solubility**	**Water**: Partially soluble
-	**Partition coefficient**	No information.
-	**Auto-ignition temperature**	No information.
-	**Decomposition temperature**	> 200 °C
-	**Viscosity**	**Dynamic**: 5 – 25 mPas at 25 °C
-	**Explosive properties**	No information.
-	**Oxidising properties**	No information.

9.2. Other information

-	**Remarks:**	

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

Stable under recommended transport or storage conditions.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

The product is stable under recommended storage and handling conditions.

10.4. Conditions to avoid

No special precautions required. Consider the directions for use and storage.

10.5. Incompatible materials

Strong oxidising agents.
Strong acids.
Strong bases.

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. Carbon dioxide; Carbon monoxide.
Nitrogen oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

(a) Acute toxicity

Name	Exposure route	Type	Species	Time	Value	Method	Remark
For product	oral	LD_{50}	rat		ca. 1200 mg/kg		
For product	inhalation (dusts/mists)	ATE		4 h	> 5 mg/l		calculated value
For product	dermal	ATE			1212 mg/kg		calculated value
Additional information: Harmful in contact with skin. Harmful if swallowed.							

(b) Skin corrosion/irritation

Name	Species	Time	Result	Method	Remark
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	rabbit		Corrosive.		
2-methylpentane-1,5-diamine (15520-10-2)	rabbit		Corrosive	OECD 404	
Additional information: Causes severe skin burns.					

(c) Serious eye damage/irritation

Name	Species	Time	Result	Method	Remark
2-methylpentane-1,5-diamine (15520-10-2)	rabbit		It causes serious eye damage.		
Additional information: Causes serious eye damage.					

(d) Respiratory or skin sensitisation

Name	Exposure route	Species	Time	Result	Method	Remark
For product	dermal	guinea pig		Sensitizing.		
Additional information: May cause an allergic skin reaction.						

(e) (Germ cell) mutagenicity

Name	Type	Species	Time	Result	Method	Remark
2-methylpentane-1,5-diamine (15520-10-2)	in-vitro mutagenicity			Negative.	OECD 471	
2-methylpentane-1,5-diamine (15520-10-2)	in-vitro mutagenicity	Cell: Mammalian-Animal		Negative with metabolic activation, negative without metabolic activation.	OECD 473	
2-methylpentane-1,5-diamine (15520-10-2)	in-vitro mutagenicity			Negative with metabolic activation, negative without metabolic activation.	OECD 476	
2-methylpentane-1,5-diamine (15520-10-2)	in-vivo mutagenicity			Negative.	OECD 474	

(f) Carcinogenicity

No information.

(g) Reproductive toxicity

Name	Reproductive toxicity type	Type	Species	Time	Value	Result	Method	Remark
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	Teratogenicity	NOEL	rat (female)		50 mg/kg bw		OECD 414	oral
2-methylpentane-1,5-diamine (15520-10-2)	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

Name	Exposure route	Type	Species	Time	Organ	Value	Result	Method	Remark
2-methylpentane-1,5-diamine (15520-10-2)	inhalation	-					Irritating to respiratory system.		
Additional information: May cause respiratory irritation.									

(i) STOT-repeated exposure

Name	Exposure route	Type	Species	Time	Organ	Value	Result	Method	Remark
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	oral	NOAEL	rat	216 h		60 mg/kg bw/day			
Additional information: STOT RE (repeated exposure): Not classified.									

(j) Aspiration hazard

Name	Result	Method	Remark
2-methylpentane-1,5-diamine (15520-10-2)	ASPIRATION HAZARD		
Additional information: Aspiration hazard: Not classified.			

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.1. Acute (short-term) toxicity

For components

Substance (CAS Nr.)	Type	Value	Exposure time	Species	Organism	Method	Remark
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	LC_{50}	110 mg/L	96 h	fish	*Leuciscus idus*	Directive 67/548/EEC, Annex V, C.1.	Semi-static system
	EC_{50}	23 mg/L	48 h	crustacea	*Daphnia magna*	OECD 202	static system
	EC_{50}	37 mg/L	48 h	crustacea	*Daphnia magna*	Directive 67/548 / EEC, Annex V, C.2.	Static system, Fresh water
	EC_{10}	1120 mg/L	18 h	bacteria	*Pseudomonas putida*		Static system, Fresh water
2-methylpentane-1,5-diamine (15520-10-2)	LC_{50}	1825 mg/L	96 h	fish	*Pimephales promelas*	OECD 203	static system
	EC_{50}	23,4 mg/L	48 h	crustacea	*Daphnia magna*	OECD 202	fresh water
	ErC_{50}	> 100 mg/L	72 h	algae	*Selenastrum capricornutum*	OECD 201	static system

12.1.2. Chronic (long-term) toxicity

For components

Substance (CAS Nr.)	Type	Value	Exposure time	Species	Organism	Method	Remark
2-methylpentane-1,5-diamine (15520-10-2)	NOEC	4,16 mg/l	21 days	crustacea	*Daphnia magna*	OECD 211	semi-static, fresh water

12.2. Persistence and degradability

12.2.1. Abiotic degradation, physical- and photo-chemical elimination

No information.

12.2.2. Biodegradation

For components

Substance (CAS Nr.)	Type	Rate	Time	Evaluation	Method	Remark
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	aerobic	8 %	28 days	Not readily biodegradable.	67/548/EEC Anex V, C.4.A	activated sludge
2-methylpentane-1,5-diamine (15520-10-2)	aerobic		28 days	readily biodegradable	OECD 301 D	activated sludge; 1,1 mg/l

12.3. Bioaccumulative potential

12.3.1. Partition coefficient

For components

Substance (CAS Nr.)	Media	Value	Temperature	pH	Concentration	Method
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	Log Pow	0,99	23 °C	6,34		OECD 107
2-methylpentane-1,5-diamine (15520-10-2)	Log Pow	≤ 1	25 °C	9		

12.3.2. Bioconcentration factor (BCF)

For components

Substance (CAS Nr.)	species	Organism	Value	Duration	Evaluation	Method	Remark
2-methylpentane-1,5-diamine (15520-10-2)	BCF		3				
2-methylpentane-1,5-diamine (15520-10-2)	bioaccumulation				Bioaccumulation is not expected.		

12.4. Mobility in soil

12.4.1. Known or predicted distribution to environmental compartments

No information.

12.4.2. Surface tension

No information.

12.4.3. Adsorption/Desorption

For components

Substance (CAS Nr.)	Type	Criterion	Value	Evaluation	Method	Remark
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	Soil		928			Koc

12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Other adverse effects

No information.

12.7. Additional information

For product

Harmful to aquatic organisms. May cause long term adverse effects in the aquatic environment.
Do not allow to reach ground water, water courses or sewage system.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

13.1.1. Product / Packaging disposal

Waste chemical

Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste. Do not allow product to reach drains/sewage systems. Reuse or recycle, if possible. Waste should be handled in accordance with local or national regulations.

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. Empty container is not suitable for reuse. Dispose of in accordance with applicable waste disposal regulation.

13.1.2. Waste treatment-relevant information

-

13.1.3. Sewage disposal-relevant information

-

13.1.4. Other disposal recommendations

-

SECTION 14. TRANSPORT INFORMATION

14.1. UN number

UN 2735

14.2. UN proper shipping name

POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-methylpentane-1,5-diamine, 3-aminomethyl-3,5,5-trimethylcyclohexylamine)

14.3. Transport hazard class(es)

8

14.4. Packing group

II

14.5. Environmental hazards

NO.

14.6. Special precautions for user

Limited quantities

1 L

Tunnel restriction code

(E)

IMDG flashpoint

108 °C, c.c.

IMDG EmS

F-A, S-B

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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) 2015/830)

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

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

Not applicable.

15.1.2. Special instructions

SVHC (substance of very high concern) Candidate list: The product does not contain substances on the SVHC candidate list. 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

-

Abbreviations and acronyms

ATE - Acute Toxicity Estimate
ADR - European 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
LC_{50} - Lethal Concentration to 50 % of a test population
LD_{50} - 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

Key literature references and sources for data

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List of relevant H phrases

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

- ☑ Provided correct labelling of the product
- ☑ Compliance with the local legislation
- ☑ Provided correct classification of the product
- ☑ Provided adequate transport data

The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under Section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.