

SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830



POXYCON B

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

1.1. Product identifier

Product name : POXYCON B
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Hardener

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

Novatio*
Industrielaan 5B
B-2250 Olen
☎ +32 14 25 76 40
☎ +32 14 22 02 66
info@novatio.be
*NOVATIO is a registered trademark of Novatech International N.V.

Manufacturer of the product

Novatech International N.V.
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
☎ +32 14 85 97 38
info@tec7.be

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch):
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Skin Sens.	category 1	H317: May cause an allergic skin reaction.
Acute Tox.	category 4	H332: Harmful if inhaled.
Acute Tox.	category 4	H302: Harmful if swallowed.
Skin Corr.	category 1B	H314: Causes severe skin burns and eye damage.
Aquatic Chronic	category 3	H412: Harmful to aquatic life with long lasting effects.

2.2. Label elements



Contains: benzyl alcohol; 3-aminomethyl-3,5,5-trimethylcyclohexylamine; tetraethylenepentamine; 2-methylpentane-1,5-diamine.

Signal word Danger

H-statements

H317 May cause an allergic skin reaction.
H302 + H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H412 Harmful to aquatic life with long lasting effects.

P-statements

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

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P260	Do not breathe vapours/mist.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or 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/doctor.

2.3. Other hazards

No other hazards known

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
benzyl alcohol 01-2119492630-38	100-51-6 202-859-9	20%<C<40%	Acute Tox. 4; H332 Acute Tox. 4; H302 Eye Irrit. 2; H319	(1)(2)(10)	Constituent
3-aminomethyl-3,5,5-trimethylcyclohexylamine 01-2119514687-32	2855-13-2 220-666-8	20%<C<40%	Skin Sens. 1; H317 Acute Tox. 4; H312 Acute Tox. 4; H302 Skin Corr. 1B; H314 Aquatic Chronic 3; H412	(1)(10)	Constituent
tetraethylenepentamine	112-57-2 203-986-2	20%<C<40%	Acute Tox. 3; H311 Skin Sens. 1; H317 Acute Tox. 4; H302 Skin Corr. 1B; H314 Aquatic Chronic 2; H411	(1)(10)	Constituent
2-methylpentane-1,5-diamine 01-2119976310-41	15520-10-2 239-556-6	2.5%<C<5%	Acute Tox. 4; H332 Acute Tox. 4; H312 Acute Tox. 4; H302 Skin Corr. 1A; H314 STOT SE 3; H335	(1)(10)	Constituent

(1) For H-statements in full: see heading 16

(2) Substance with a Community workplace exposure limit

(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Wash immediately with lots of water (15 minutes)/shower. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

After eye contact:

Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist.

After ingestion:

Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Immediately consult a doctor/medical service. Do not give chemical antidote.

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

4.2.1 Acute symptoms

After inhalation:

EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Respiratory difficulties. Dry/sore throat. Corrosion of the upper respiratory tract.

After skin contact:

Caustic burns/corrosion of the skin.

After eye contact:

Corrosion of the eye tissue. Permanent eye damage.

After ingestion:

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Nausea. Vomiting. Abdominal pain. Burns to the gastric/intestinal mucosa.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting class B foam extinguisher, Quick-acting CO2 extinguisher.

Major fire: Class B foam (alcohol-resistant), Water spray if puddle cannot expand.

5.1.2 Unsuitable extinguishing media:

Small fire: Water (quick-acting extinguisher, reel); risk of puddle expansion.

Major fire: Water; risk of puddle expansion.

5.2. Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

5.3. Advice for firefighters

5.3.1 Instructions:

Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it. Heat exposure: dilute toxic gas/vapour with water spray.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Face-shield. Corrosion-proof suit. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Face-shield. Corrosion-proof suit.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Contain released product. Dam up the liquid spill. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

Take up liquid spill into absorbent material. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Keep away from naked flames/heat. Gas/vapour heavier than air at 20°C. Observe very strict hygiene - avoid contact. Remove contaminated clothing immediately. Do not discharge the waste into the drain. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Store in a dry area. Protect against frost. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, oxidizing agents, (strong) acids, (strong) bases, metals.

7.2.3 Suitable packaging material:

No data available

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

Germany

Benzylalkohol	Time-weighted average exposure limit 8 h (TRGS 900)	5 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	22 mg/m ³

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

Product name	Test	Number
Benzyl Alcohol	OSHA	2009
Butyl Acrylate	OSHA	2011

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values

DNEL/DMEL - Workers

benzyl alcohol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	22 mg/m ³	
	Acute systemic effects inhalation	110 mg/m ³	
	Long-term systemic effects dermal	8 mg/kg bw/day	
	Acute systemic effects dermal	40 mg/kg bw/day	

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	0.073 mg/m ³	
	Acute local effects inhalation	0.073 mg/m ³	

2-methylpentane-1,5-diamine

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	0.25 mg/m ³	
	Acute local effects inhalation	0.5 mg/m ³	
	Long-term systemic effects dermal	1.5 mg/kg bw/day	

DNEL/DMEL - General population

benzyl alcohol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	5.4 mg/m ³	
	Acute systemic effects inhalation	27 mg/m ³	
	Long-term systemic effects dermal	4 mg/kg bw/day	
	Acute systemic effects dermal	20 mg/kg bw/day	
	Long-term systemic effects oral	4 mg/kg bw/day	
	Acute systemic effects oral	20 mg/kg bw/day	

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects oral	0.526 mg/kg bw/day	

2-methylpentane-1,5-diamine

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	0.125 mg/m ³	
	Acute local effects inhalation	0.25 mg/m ³	
	Long-term systemic effects dermal	0.75 mg/kg bw/day	
	Long-term systemic effects oral	0.75 mg/kg bw/day	

PNEC

benzyl alcohol

Compartments	Value	Remark
Fresh water	1 mg/l	
Marine water	0.1 mg/l	
Aqua (intermittent releases)	2.3 mg/l	
STP	39 mg/l	
Fresh water sediment	5.27 mg/kg sediment dw	
Marine water sediment	0.527 mg/kg sediment dw	
Soil	0.456 mg/kg soil dw	

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3-aminomethyl-3,5,5-trimethylcyclohexylamine

Compartments	Value	Remark
Fresh water	0.06 mg/l	
Marine water	0.006 mg/l	
Aqua (intermittent releases)	0.23 mg/l	
STP	3.18 mg/l	
Fresh water sediment	5.784 mg/kg sediment dw	
Marine water sediment	0.578 mg/kg sediment dw	
Soil	1.121 mg/kg soil dw	

2-methylpentane-1,5-diamine

Compartments	Value	Remark
Fresh water	0.42 mg/l	
Salt water	0.042 mg/l	
Aqua (intermittent releases)	0.42 mg/l	
STP	1.25 mg/l	
Fresh water sediment	7.58 mg/kg sediment dw	
Marine water sediment	0.758 mg/kg sediment dw	
Soil	1.27 mg/kg soil dw	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe very strict hygiene - avoid contact. Do not eat, drink or smoke during work.

a) Respiratory protection:

High gas/vapour concentration: full face mask with filter type A.

b) Hand protection:

Gloves.

- materials (good resistance)

Nitrile rubber.

c) Eye protection:

Face shield.

d) Skin protection:

Corrosion-proof clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Liquid
Odour	Characteristic odour
Odour threshold	No data available
Colour	Yellow
Particle size	Not applicable (liquid)
Explosion limits	No data available
Flammability	Non-flammable
Log Kow	Not applicable (mixture)
Dynamic viscosity	220 mPa.s ; 20 °C
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	> 200 °C
Evaporation rate	No data available
Relative vapour density	No data available
Vapour pressure	No data available
Solubility	Water ; miscible
Relative density	1.0 ; 20 °C
Decomposition temperature	No data available
Auto-ignition temperature	435 °C
Flash point	> 100 °C
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	12

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9.2. Other information

Absolute density	1030 kg/m ³ ; 20 °C
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SECTION 10: Stability and reactivity

10.1. Reactivity

Temperature above flashpoint: higher fire/explosion hazard. Basic reaction.

10.2. Chemical stability

No data available.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat.

10.5. Incompatible materials

Oxidizing agents, (strong) acids, (strong) bases, metals.

10.6. Hazardous decomposition products

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

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No (test) data on the mixture available

Classification is based on the relevant ingredients

benzyl alcohol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		1620 mg/kg bw		Rat (male)	Experimental value	
Dermal	LD50		> 2000 mg/kg		Rabbit	Inconclusive, insufficient data	
Inhalation (aerosol)	LC50	OECD 403	> 4.178 mg/l air	4 h	Rat (male/female)	Experimental value	

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	1030 mg/kg		Rat (male)	Experimental value	
Dermal	LD50	OECD 402	> 2000 mg/kg bw	24 h	Rat (male/female)	Experimental value	
Dermal			category 4			Annex VI	
Inhalation (aerosol)	LC50	OECD 403	> 5.01 mg/l	4 h	Rat (male/female)	Experimental value	

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test

tetraethylenepentamine

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		3250 mg/kg bw		Rat (male)	Literature study	
Oral			category 4			Annex VI	
Dermal	LD50		660 mg/kg bw - 1260 mg/kg bw		Rabbit (male)	Literature study	
Dermal			category 3			Annex VI	
Inhalation	LC50		> 9.9 ppm	8 h	Rat (male)	Literature study	

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2-methylpentane-1,5-diamine

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	1690 mg/kg bw		Rat (male)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	1870 mg/kg bw		Rat (male/female)	Read-across	
Inhalation (aerosol)	LC50	Equivalent to OECD 403	1.23 mg/l	4 h	Rat (male/female)	Experimental value	Converted value

Conclusion

Harmful if swallowed.
Harmful if inhaled.
Not classified as acute toxic in contact with skin

Corrosion/irritation

POXYCON B

No (test) data on the mixture available
Classification is based on the relevant ingredients
benzyl alcohol

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating	OECD 405	24 h	24; 48; 72 hours	Rabbit	Experimental value	
Skin	Slightly irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage	OECD 405	24 h	24 hours	Rabbit	Experimental value	
Skin	Corrosive	Draize Test	24 h	24; 72 hours	Rabbit	Experimental value	

tetraethylenepentamine

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Corrosive	Other			Rabbit	Experimental value	
Skin	Corrosive	Other	4 h		Rabbit	Experimental value	

2-methylpentane-1,5-diamine

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage		≥ 20 seconds		Rabbit	Experimental value	Single treatment
Skin	Corrosive	Equivalent to OECD 404	3 minutes	24; 48 hours	Rabbit	Experimental value	
Inhalation	Irritating; STOT SE cat.3					Literature study	

Conclusion

Causes severe skin burns and eye damage.

Respiratory or skin sensitisation

POXYCON B

No (test) data on the mixture available
Classification is based on the relevant ingredients
benzyl alcohol

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 406			Guinea pig	Weight of evidence	002

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	OECD 406		24; 48; 72 hours	Guinea pig (male)	Experimental value	

tetraethylenepentamine

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing				Guinea pig	Experimental value	

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Conclusion

May cause an allergic skin reaction.
Not classified as sensitizing for inhalation

Specific target organ toxicity

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No (test)data on the mixture available

Judgement is based on the relevant ingredients

benzyl alcohol

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	Equivalent to OECD 451	400 mg/kg bw/day		No effect	103 weeks (5 days/week)	Rat (male/female)	Experimental value
Dermal								Data waiving
Inhalation (aerosol)	NOAEC	OECD 412	1072 mg/m ³		No effect	4 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (drinking water)	LOAEL	OECD 408	160 mg/kg bw/day	Kidney	Histopathology	13 weeks (daily)	Rat (male)	Experimental value
Dermal								Data waiving
Inhalation (mixture of vapour and aerosol)	LOEC	Subacute toxicity test	18 mg/m ³ air	Nose	Local effects		Rat (male)	Experimental value

tetraethylenepentamine

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Dermal	NOEL	OECD 410	50 mg/kg bw			4 weeks (6h/day, 5 days/week)	Rabbit (male/female)	Experimental value
Dermal	LOAEL	OECD 410	100 mg/kg bw			4 weeks (6h/day, 5 days/week)	Rabbit (male/female)	Experimental value

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

POXYCON B

No (test)data on the mixture available

benzyl alcohol

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value
Limited positive test result	Equivalent to OECD 476	Mouse (lymphoma L5178Y cells)		Experimental value

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Result	Method	Test substrate	Effect	Value determination
Negative	OECD 473	Chinese hamster ovary (CHO)	No effect	Experimental value

tetraethylenepentamine

Result	Method	Test substrate	Effect	Value determination
Negative	OECD 476	Chinese hamster ovary (CHO)		Experimental value
Positive	OECD 479	Chinese hamster ovary (CHO)		Experimental value

Mutagenicity (in vivo)

POXYCON B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

benzyl alcohol

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD 474		Mouse (male)	Bone marrow	Experimental value

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3-aminomethyl-3,5,5-trimethylcyclohexylamine

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral)	OECD 474		Mouse (male/female)	Blood	Experimental value

tetraethylenepentamine

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative			Mouse (male/female)		Literature study

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

POXYCON B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

benzyl alcohol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral	NOAEL	Equivalent to OECD 451	> 400 mg/kg bw/day	103 weeks (5 days/week)	Rat (male/female)	No carcinogenic effect		Experimental value

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Unknown								Data waiving

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

POXYCON B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

benzyl alcohol

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	LOAEL	Chernoff Kavlock assay.	750 mg/kg bw/day	8 days (gestation, daily)	Mouse	Reduced foetal bodyweights	Foetus	Experimental value
Maternal toxicity	LOAEL		750 mg/kg bw/day	8 days (gestation, daily)	Mouse	Mortality; body weight; food consumption		Experimental value
Effects on fertility	NOAEL		1072 mg/m ³ air	4 weeks (6h/day, 5 days/week)	Rat (male/female)	No effect		Experimental value

3-aminomethyl-3,5,5-trimethylcyclohexylamine

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	OECD 414	> 250 mg/kg bw/day	2 weeks (daily)	Rat	No effect	Foetus	Experimental value
Maternal toxicity (Oral (stomach tube))	NOEL	OECD 414	50 mg/kg bw/day	2 weeks (daily)	Rat	No effect	General	Experimental value
Effects on fertility								Data waiving

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

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No (test)data on the mixture available

Chronic effects from short and long-term exposure

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ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation.

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SECTION 12: Ecological information

12.1. Toxicity

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No (test)data on the mixture available

Classification is based on the relevant ingredients

benzyl alcohol

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	EPA 600/3 - 76/097	460 mg/l	96 h	Pimephales promelas	Static system	Fresh water	Experimental value
Acute toxicity crustacea	EC50	OECD 202	230 mg/l	48 h	Daphnia magna		Fresh water	Experimental value
Toxicity algae and other aquatic plants	NOEC	OECD 201	310 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value
	EC50	OECD 201	770 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea	NOEC	OECD 211	51 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value
Toxicity aquatic micro-organisms	IC50	ISO 8192	2100 mg/l	49 h	Activated sludge	Static system	Fresh water	Experimental value

3-aminomethyl-3,5,5-trimethylcyclohexylamine

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	EU Method C.1	110 mg/l	96 h	Leuciscus idus	Semi-static system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	OECD 202	23 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EC50	EU Method C.3	37 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; GLP
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea	NOEC	OECD 202	3 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; GLP
Toxicity aquatic micro-organisms	EC10		1120 mg/l	18 h	Pseudomonas putida	Static system	Fresh water	Experimental value; Nominal concentration

tetraethylenepentamine

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	EU Method C.1	420 mg/l	96 h	Poecilia reticulata	Semi-static system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	EU Method C.2	24.1 mg/l	48 h	Daphnia magna	Static system		Experimental value; GLP
Toxicity algae and other aquatic plants	NOEC	OECD 201	0.5 mg/l	72 h	Selenastrum capricornutum			Experimental value; Growth rate
	EC50	OECD 201	6.8 mg/l	72 h	Selenastrum capricornutum			Experimental value; Growth rate
Toxicity aquatic micro-organisms	EC50	OECD 209	1600 mg/l	1 h	Activated sludge			Experimental value; GLP
	EC10	Other	186 mg/l	17 h	Pseudomonas putida			Experimental value; GLP

2-methylpentane-1,5-diamine

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	1825 mg/l	96 h	Pimephales promelas	Static system	Fresh water	Read-across
Acute toxicity crustacea	EC50	EPA 660/3 - 75/009	50 mg/l	48 h	Daphnia magna	Static system	Fresh water	Read-across
Toxicity algae and other aquatic plants	ErC50	OECD 201	> 100 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Read-across; GLP
	NOEC	OECD 201	10 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Read-across; GLP
Long-term toxicity aquatic crustacea	NOEC	OECD 211	4.16 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Read-across; GLP

Conclusion

Reason for revision: 1.1

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Revision number: 0402

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Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

benzyl alcohol

Biodegradation water

Method	Value	Duration	Value determination
OECD 301A: DOC Die-Away Test	95 % - 97 %	21 day(s)	Experimental value

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Biodegradation water

Method	Value	Duration	Value determination
EU Method C.4	8 %; GLP	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.90	4.5 h	500000 /cm ³	Calculated value

tetraethylenepentamine

Biodegradation water

Method	Value	Duration	Value determination
OECD 301A: DOC Die-Away Test	< 10 %; GLP	28 day(s)	Experimental value

Half-life air (t1/2 air)

Method	Value	Primary degradation/mineralisation	Value determination
EPIWIN	24.3 minutes	Primary degradation	Calculated value

2-methylpentane-1,5-diamine

Biodegradation water

Method	Value	Duration	Value determination
OECD 301D: Closed Bottle Test	100 %; GLP	28 day(s)	Experimental value

Conclusion

Contains non readily biodegradable component(s)

12.3. Bioaccumulative potential

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Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

benzyl alcohol

Log Kow

Method	Remark	Value	Temperature	Value determination
		1.05	20 °C	Experimental value

3-aminomethyl-3,5,5-trimethylcyclohexylamine

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF	BCFWIN	3.16			QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 107		0.99	23 °C	Experimental value

tetraethylenepentamine

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF		4.2			Estimated value

Log Kow

Method	Remark	Value	Temperature	Value determination
EPIWIN		-3.16		Calculated

2-methylpentane-1,5-diamine

Log Kow

Method	Remark	Value	Temperature	Value determination
US EPA		≤ 1	25 °C	Experimental value

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

benzyl alcohol

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
0.0879 Pa.m ³ /mol		25 °C		Calculated value

POXYCON B

3-aminomethyl-3,5,5-trimethylcyclohexylamine

(log) Koc

Parameter	Method	Value	Value determination
log Koc		2.97	QSAR

tetraethylenepentamine

(log) Koc

Parameter	Method	Value	Value determination
log Koc		3.04	Calculated value
Koc		3.6	Calculated value

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Other	< 0.1 %			55 %	45 %	Calculated value

Conclusion

Contains component(s) with potential for mobility in the soil
Contains component(s) that adsorb(s) into the soil

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

POXYCON B

Fluorinated greenhouse gases (Regulation (EU) No 517/2014)

None of the known components is included in the list of substances which may contribute to the greenhouse effect (IPCC)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

08 01 11* (wastes from MFSU and removal of paint and varnish: waste paint and varnish containing organic solvents or other hazardous substances).

Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Should not be landfilled with household waste. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

13.1.3 Packaging/Container

European Union

Waste material code packaging (Directive 2008/98/EC).

15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

UN number	2735
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14.2. UN proper shipping name

Proper shipping name	Polyamines, liquid, corrosive, n.o.s. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)
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14.3. Transport hazard class(es)

Hazard identification number	80
Class	8
Classification code	C7

14.4. Packing group

Packing group	III
Labels	8

14.5. Environmental hazards

Environmentally hazardous substance mark	no
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14.6. Special precautions for user

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Revision number: 0402

Product number: 43465

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Special provisions	274
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1. UN number	
UN number	2735
14.2. UN proper shipping name	
Proper shipping name	Polyamines, liquid, corrosive, n.o.s. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)
14.3. Transport hazard class(es)	
Hazard identification number	80
Class	8
Classification code	C7
14.4. Packing group	
Packing group	III
Labels	8
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	274
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1. UN number	
UN number	2735
14.2. UN proper shipping name	
Proper shipping name	Polyamines, liquid, corrosive, n.o.s. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)
14.3. Transport hazard class(es)	
Class	8
Classification code	C7
14.4. Packing group	
Packing group	III
Labels	8
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	274
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG/IMSBC)

14.1. UN number	
UN number	2735
14.2. UN proper shipping name	
Proper shipping name	polyamines, liquid, corrosive, n.o.s. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)
14.3. Transport hazard class(es)	
Class	8
14.4. Packing group	
Packing group	III
Labels	8
14.5. Environmental hazards	
Marine pollutant	-
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	223
Special provisions	274
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	
Annex II of MARPOL 73/78	Not applicable, based on available data

Air (ICAO-TI/IATA-DGR)

14.1. UN number	
UN number	2735
14.2. UN proper shipping name	

POXYCON B

Proper shipping name	Polyamines, liquid, corrosive, n.o.s. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)
14.3. Transport hazard class(es)	
Class	8
14.4. Packing group	
Packing group	III
Labels	8
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	A3
Special provisions	A803
Limited quantities: maximum net quantity per packaging	1 L

SECTION 15: Regulatory information

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

European legislation:

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
<ul style="list-style-type: none"> · benzyl alcohol · 3-aminomethyl-3,5,5-trimethylcyclohexylamine · tetraethylenepentamine · 2-methylpentane-1,5-diamine 	<p>Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008:</p> <p>(a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;</p> <p>(b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10;</p> <p>(c) hazard class 4.1;</p> <p>(d) hazard class 5.1.</p>	<p>1. Shall not be used in:</p> <ul style="list-style-type: none"> — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects, <p>2. Articles not complying with paragraph 1 shall not be placed on the market.</p> <p>3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:</p> <ul style="list-style-type: none"> — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with R65 or H304, <p>4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).</p> <p>5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:</p> <p>a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life-threatening lung damage";</p> <p>b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage";</p> <p>c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.</p> <p>6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.</p> <p>7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'</p>

National legislation Belgium

POXYCON B

No data available

National legislation The Netherlands

POXYCON B

Waterbevaarlijkheid	A (2)
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National legislation France

POXYCON B

No data available

National legislation Germany

POXYCON B

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WGK	2; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4) and Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) of 18 April 2017
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benzyl alcohol

TA-Luft	5.2.5
TRGS900 - Risiko der Fruchtschädigung	Benzylalkohol; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
Hautresorptive Stoffe	Benzylalkohol; H; Hautresorptiv

3-aminomethyl-3,5,5-trimethylcyclohexylamine

TA-Luft	5.2.5; I
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tetraethylenepentamine

TA-Luft	5.2.5
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2-methylpentane-1,5-diamine

TA-Luft	5.2.5
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National legislation United Kingdom

POXYCON B

No data available

Other relevant data

POXYCON B

No data available

15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

SECTION 16: Other information

Full text of any H-statements referred to under heading 3:

- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- 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.

(*)	INTERNAL CLASSIFICATION BY BIG
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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