

Safety Data Sheet

MAPEPRIM SP comp.B

Safety Data Sheet dated: 14/06/2022 - version 4



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

1.1. Product identifier

Mixture identification:

Trade name: MAPEPRIM SP comp.B

Trade code: 901551

UFI: 2VP4-V070-100K-H32U

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

Recommended use: Water-borne synthetic resin based primer

Uses advised against: Not available

1.3. Details of the supplier of the safety data sheet

Company: MAPEI U.K. Ltd - Mapei House Steel Park Road

Halesowen - West Midlands B62 8HD

phone: +44(0)121 508 6970 - fax: +44(0)121 5086 960 - www.mapei.co.uk (office hour 8:30-17:30)

Responsible: sicurezza@mapei.it

1.4. Emergency telephone number

call NHS 111 or a doctor/OHES Environmental Ltd +44(0)333 333 9962

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Skin Sens. 1A May cause an allergic skin reaction.

Aquatic Chronic 2 Toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) n. 1272/2008 (CLP)

Pictograms and Signal Words



Warning

Hazard statements:

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

P261 Avoid breathing mist/vapours/spray.

P273 Avoid release to the environment.

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

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

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

P391 Collect spillage.

Special Provisions:

EUH208 Contains Formaldehyde, polymer with N1-(2-aminoethyl)-N2-[2-[(2-aminoethyl)amino]ethyl]-1,2-ethanediamine, 2,2'-[1,4-butanediylbis (oxymethylene)]bis[oxirane], 4,4'-(1-methylethylidene) bis(4,1-phenyleneoxymethylene)bis[oxirane], reaction products with Bu glycidylether and 1-[[2-(2-aminoethyl)ethyl]amino]- 3-phenoxy-2-propanol, acetates (salts). May produce an allergic reaction.

EUH208 Contains Amines, polyethylenepoly-, tetraethylenepentamine fraction. May produce an allergic reaction.

EUH208 Contains m-xylylenediamine. May produce an allergic reaction.

EUH208 Contains 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one. May produce an allergic reaction.

Contains:

2-Propenenitrile, reaction products with 3-amino 1,5,5-trimethylcyclohexanemethanamine

Special provisions according to Annex XVII of REACH and subsequent amendments:

None.

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%.

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Not Relevant

3.2. Mixtures

Mixture identification: MAPEPRIM SP comp.B

Hazardous components within the meaning of the CLP regulation and related classification:

Concentra tion (% w/w)	Name	Ident. Numb.	Classification	Registration Number
≥2.5 - <5 %	Formaldehyde, polymer with N1-(2-aminoethyl)-N2-[2-[(2-aminoethyl)amino]ethyl]-1,2-ethanediamine, 2,2'-[1,4-butanediylbis (oxymethylene)]bis[oxirane], 4,4'-(1-methylethylidene) bis(4,1-phenyleneoxymethylene)bis [oxirane], reaction products with Bu glycidylether and 1-[[2-(2-aminoethyl) ethyl]amino]- 3-phenoxy-2-propanol, acetates (salts)	CAS:180583-06-6	Aquatic Chronic 2, H411; Skin Sens. 1, H317	
≥1 - <2.5 %	aliphatic polyamine		Aquatic Acute 1, H400; Aquatic Chronic 1, H410	
≥0.49 - <1 %	2-Propenenitrile, reaction products with 3-amino 1,5,5-trimethylcyclohexanemethanamine	CAS:90530-15-7 EC:292-053-3	Skin Corr. 1B, H314; Skin Sens. 1A, H317; Aquatic Chronic 2, H411	01-2120094715-47-XXXX
≥0.25 - <0.49 %	Amines, polyethylenepoly-, tetraethylenepentamine fraction	CAS:90640-66-7 EC:292-587-7 Index:612-060-00-0	Acute Tox. 4, H312; Skin Corr. 1B, H314; Skin Sens. 1, H317; Aquatic Chronic 2, H411; Eye Dam. 1, H318	01-2119487290-37-XXXX
≥0.1 - <0.25 %	m-xylylenediamine	CAS:1477-55-0 EC:216-032-5	Acute Tox. 4, H332; Acute Tox. 4, H302; Skin Corr. 1B, H314; Skin Sens. 1, H317; Aquatic Chronic 3, H412, EUH071	01-2119480150-50
≥0.1 - <0.25 %	ethylene glycol monobutyl ether	CAS:111-76-2 EC:203-905-0 Index:603-014-00-0	Acute Tox. 4, H332 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Toxicity Estimate: ATE - Oral: 1200mg/kg bw	01-2119475108-36-XXXX
≥0.025 - <0.05 %	ethylene glycol	CAS:107-21-1 EC:203-473-3 Index:603-027-00-1	Acute Tox. 4, H302; STOT RE 2, H373	01-2119456816-28-xxxx
≥0.016 - <0.025 %	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS:2634-33-5 EC:220-120-9 Index:613-088-00-6	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Acute Tox. 4, H302 Skin Sens. 1, H317 Aquatic Chronic 2, H411	

Specific Concentration Limits:
C ≥ 0,05%: Skin Sens. 1 H317

≥0.01 - formaldehyde
<0.016 %

CAS:50-00-0
EC:200-001-8
Index:605-001-00-5

Acute Tox. 3, H311 Acute Tox. 3, 01-2119488953-20-XXXX
H331 Acute Tox. 3, H301 Skin
Corr. 1B, H314 Skin Sens. 1, H317
Muta. 2, H341 Carc. 1B, H350

Specific Concentration Limits:
0,2% ≤ C < 100%: Skin Sens. 1
H317
5% ≤ C < 25%: Skin Irrit. 2 H315
5% ≤ C < 25%: Eye Irrit. 2 H319
5% ≤ C < 100%: STOT SE 3 H335
25% ≤ C < 100%: Skin Corr. 1B
H314

<0.0015 % reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

CAS:55965-84-9
EC:611-341-5
Index:613-167-00-5

Aquatic Acute 1, H400 Aquatic
Chronic 1, H410 Acute Tox. 3,
H301 Skin Corr. 1C, H314 Skin
Sens. 1A, H317 Acute Tox. 2,
H310 Acute Tox. 2, H330 Eye
Dam. 1, H318, M-Chronic:100, M-
Acute:100

Specific Concentration Limits:
C ≥ 0,6%: Skin Corr. 1C H314
0,06% ≤ C < 0,6%: Skin Irrit. 2
H315
C ≥ 0,6%: Eye Dam. 1 H318
0,06% ≤ C < 0,6%: Eye Irrit. 2
H319
C ≥ 0,0015%: Skin Sens. 1A H317

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose of safely.

In case of eyes contact:

Wash immediately with water.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and the hazard label.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

Not available

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

(see paragraph 4.1)

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

5.3. Advice for firefighters

Use suitable breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Limit leakages with earth or sand.

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Retain contaminated washing water and dispose it.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

List of components with OEL value

	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Behaviour	Note
m-xylylenediamine CAS: 1477-55-0	ACGIH		C			0,100			Skin - Eye, skin, and GI irr
	National FINLAND					0,1			FINLAND, takvärde, hud
	National NORWAY		C			0,1			T: Ceiling value is an instantaneous value that indicates the maximum concentration of a chemical in the breathing zone that should not be exceeded
	National AUSTRIA			0,1		0,100			
	ACGIH		C			0,1			
	ACGIH								Skin - potential significant contribution to overall exposure by the cutaneous route; eye, gastrointestinal and skin irritation
	National FRANCE					0,100			
	National DENMARK		C			0,1	0,020		
	National FINLAND		C			0,1			
	Malaysi a OEL	MALAYSIA							Skin notation

ethylene glycol monobutyl ether CAS: 111-76-2	Malaysi a OEL	MALAYSIA	C		0,100		
	National	PORTUGAL	C		0,1		
	National	SLOVENIA		0,100			
	National	NORWAY	C		0,1		
	DFG	GERMANY	C		98	20	
	ACGIH			20			A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans;eye and upper respiratory tract irritation;
	National	SWEDEN		50	10		
	National	FRANCE		49	10	246	50
	National	SPAIN		98	20	245	50
	National	GREECE		120	25		
	National	DENMARK		98	20		
	National	FINLAND		98	20	250	50
	National	GERMANY		49	10		
	National	PORTUGAL		98	20	246	50
	National	NORWAY		50	10	75	15
	National	BELGIUM		98	20	246	50
	NDS	POLAND		98			
	NDSch	POLAND				200	
	CHE	SWITZERLAND				98	20
	NDS	NETHERLANDS		100		246	
	National	CZECH REPUBLIC		100			
	National	HUNGARY		98		246	
	Malaysi a OEL	MALAYSIA		96,7	20		Skin notation;
	National	ESTONIA		98	20	246	50
	National	LATVIA		98	20	246	50
	National	CZECH REPUBLIC	C			200	
	National	SLOVAKIA	C			246	
	National	SLOVAKIA		98	20		
	National	SLOVENIA		98	20	245	50
	National	UNITED KINGDOM		123	25	246	50
	National	BULGARIA		98	20	246	50
	National	ROMANIA		98	20	246	50
	TUR	TURKEY		98	20	246	50
	National	LITHUANIA		50	10	100	20
	National	CROATIA		98	20	246	50
	EU			98	20	246	50
						Indicative	Possibility of significant uptake through the skin;
	National	SWEDEN		25	10	50	20
	National	FINLAND		50	20	100	40
	National	NORWAY		52	20	104	40
ethylene glycol CAS: 107-21-1	EU			52	20	104	40
	National	NORWAY		10	10	20	20

formaldehyde CAS: 50-00-0	ACGIH	C		100			(H), A4 - URT and eye irr
	DFG	GERMANY	C	52	20		
	ACGIH		25	10	50		A4 - Not Classifiable as a Human Carcinogen;upper respiratory tract irritation
	National	SWEDEN	25	10			
	National	FRANCE	52	20	104	40	
	National	SPAIN	52	20	104	40	
	National	GREECE	125	50	125	50	
	National	DENMARK	26	10			
	National	FINLAND	50	20	100	40	
	National	PORTUGAL	52	20	104	40	
	NDS	POLAND	15				
	NDSch	POLAND			50		
	National	PORTUGAL	C		100		
	CHE	SWITZERLAND			52	20	
	NDS	NETHERLANDS	52		104		
	National	GERMANY	26	10			
	National	CZECH REPUBLIC	50				
	National	HUNGARY	52		104		
	National	SLOVAKIA	52	20			
	National	SLOVENIA	52	20	104	40	
	National	UNITED KINGDOM	10	20	104	40	
	Malaysi a OEL	MALAYSIA	C		100	39,4	
	National	ESTONIA	52	20	104	40	
	National	LATVIA	52	20	104	40	
	National	CZECH REPUBLIC	C		100		
	National	SLOVAKIA	C		104		
	National	CROATIA	52	20	104	40	
	EU		52	20	104	40	Indicative Possibility of significant uptake through the skin
	National	BULGARIA	52	20	104	40	
	National	ROMANIA	52	20	104	40	
	TUR	TURKEY	52	20	104	40	
	National	LITHUANIA	25	10	50	20	
	ACGIH	C				0,3	DSEN, RSEN, A2 - URT and eye irr
	DFG	GERMANY	C		0,74	0,6	
	ACGIH		0,1			0,3	A1 - Confirmed Human Carcinogen;eye and upper respiratory tract irritation;upper respiratory tract cancer;dermal sensitizer; respiratory sensitizer
	National	SWEDEN	0,37	0,3			
	National	FRANCE		0,5		1	
	National	SPAIN	0,37	0,3	0,74	0,6	
	National	GREECE	2,5	2	2,5	2	
	National	DENMARK	C		0,4	0,3	
	National	FINLAND	0,37	0,3			
	National	FINLAND	C		1,2	1	

National GERMANY		0,37	0,3		
National NORWAY		0,6	0,5		
National NORWAY	C			1,2	1
NDS POLAND		0,37			
NDSch POLAND				0,74	
CHE SWITZERLAND				0,74	0,6
NDS NETHERLANDS		0,15		0,5	
National CZECH REPUBLIC		0,5			
National HUNGARY		0,6		0,6	
Malaysi a OEL	C			0,37	0,3
National PORTUGAL	C				0,3
National ESTONIA		0,6	0,5	1,2	1
National LATVIA		0,5			
National CZECH REPUBLIC	C			1	
National SLOVAKIA	C			0,74	
National SLOVAKIA		0,37	0,3		
National SLOVENIA		0,62	0,5	0,62	0,5
National UNITED KINGDOM		2,5	2	2,5	2
National BULGARIA		1,0		2,0	
National ROMANIA		1,2	1	3	2
National LITHUANIA		0,6	0,5		
National LITHUANIA	C			1,2	1
National CROATIA		2,5	2	2,5	2
EU		0,37	0,3		Binding

Biological Exposure Index

	Value	UoM	Medium	Biological Indicator	Sampling Period
ethylene glycol monobutyl ether CAS: 111-76-2	200	MGGCREAT	Urine	Butoxyacetic acid (BAA)	End of turn

Predicted No Effect Concentration (PNEC) values

	PNEC Limit	Exposure Route	Exposure Frequency	Remark
2-Propenenitrile, reaction products with 3-amino-1,5,5-trimethylcyclohexanemethanamine CAS: 90530-15-7	0,00992 mg/l	Fresh Water		
	0,00099 mg/l	Marine water		
	0,992 mg/l	Intermittent release		
	96,97 mg/kg	Freshwater sediments		
	9,98 mg/kg	Marine water sediments		
	4,65 mg/l	Microorganisms in sewage treatments		
	19,33 mg/kg	Soil		
Amines, polyethylenepoly-, tetraethylenepentamine	0,00068 mg/l	Fresh Water		

fraction
CAS: 90640-66-7

0,00068 mg/l	Marine water
3,34 mg/kg	Freshwater sediments
0,343 mg/kg	Marine water sediments
0,683 mg/kg	Soil
0,094 mg/kg	Fresh Water
0,0094 mg/l	Marine water
0,43 mg/kg	Freshwater sediments
0,043 mg/kg	Marine water sediments
0,152 mg/l	Intermittent release
0,045 mg/kg	Soil
10 mg/l	Microorganisms in sewage treatments

m-xylylenediamine
CAS: 1477-55-0

ethylene glycol
CAS: 107-21-1

10 mg/l	Fresh Water
1 mg/l	Marine water
1,53 mg/kg	Soil
37 mg/kg	Freshwater sediments
10 mg/l	Intermittent release
199,5 mg/l	Microorganisms in sewage treatments
3,7 mg/kg	Marine water sediments

formaldehyde
CAS: 50-00-0

0,47 mg/l	Fresh Water
0,47 mg/l	Marine water
4,7 mg/l	Intermittent release
0,19 mg/l	Microorganisms in sewage treatments
2,44 mg/kg	Freshwater sediments
2,44 mg/kg	Marine water sediments
0,21 mg/kg	Soil

Derived No Effect Level. (DNEL)

	Worker Industrial	Worker Professional	Consumer	Exposure Route	Exposure Frequency	Remark
Amines, polyethylenepoly-, tetraethylenepentamine fraction CAS: 90640-66-7			10 mg/kg	Human Dermal	Short Term, systemic effects	
	0,74 mg/kg	0,32 mg/kg		Human Dermal	Long Term, systemic effects	

		0,53 mg/kg	Human Oral	Long Term, systemic effects	
		0,00129 mg/l	0,00038 mg/l	Human Inhalation	Long Term, systemic effects
m-xylylenediamine CAS: 1477-55-0	0,33 mg/kg		Human Dermal	Long Term, systemic effects	
	1,2 mg/m3		Human Inhalation	Long Term, systemic effects	
	0,2 mg/m3		Human Inhalation	Long Term, local effects	
ethylene glycol CAS: 107-21-1	106 mg/kg	53 mg/kg	Human Dermal	Long Term, systemic effects	
		53 mg/kg	Human Oral	Long Term, systemic effects	
	35 mg/m3	7 mg/m3	Human Inhalation	Long Term, local effects	
formaldehyde CAS: 50-00-0	1 mg/m3		Human Inhalation	Short Term, local effects	
	240 mg/kg	102 mg/kg	Human Dermal	Long Term, systemic effects	
	9 mg/m3	3,2 mg/m3	Human Inhalation	Long Term, systemic effects	
	0,037 mg/cm2	0,012 mg/cm2	Human Dermal	Long Term, local effects	
	0,5 mg/m3	0,1 mg/m3	Human Inhalation	Long Term, local effects	
		4,1 mg/kg	Human Oral	Long Term, systemic effects	

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Suitable materials for safety gloves; EN ISO 374:

Polychloroprene - CR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 480\text{min}$.

Nitrile rubber - NBR: thickness $\geq 0,35\text{mm}$; breakthrough time $\geq 480\text{min}$.

Butyl rubber - IIR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 480\text{min}$.

Fluorinated rubber - FKM: thickness $\geq 0,4\text{mm}$; breakthrough time $\geq 480\text{min}$.

Neoprene gloves are suggested (0,5 mm) not recommended gloves: not waterproof gloves

Respiratory protection:

Personal Protective Equipment should comply with relevant CE standards (as EN ISO 374 for gloves and EN ISO 166 for goggles), correctly maintained and stored. Consult the supplier to check the suitability of equipment against specific chemicals and for user information.

Respiratory protection must be used where exposure levels exceed workplace exposure limits. Refer to appropriate EN standards, like EN 136, 140, 143, 149, 14387 for information on selection and use of appropriate respiratory protection equipment.

Hygienic and Technical measures

Not available

Appropriate engineering controls:

Not available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Appearance: liquid

Color: white

Odour: ammonia

Odour threshold: Not available
Melting point / freezing point: Not available
Initial boiling point and boiling range: 100 °C (212 °F)
Flammability: N.A.
Upper/lower flammability or explosive limits: Not available
Flash point: Not available
Auto-ignition temperature: Not available
Decomposition temperature: Not available
pH: 10.00
Viscosity: 2,300.00 cPs
Kinematic viscosity: Not available
Solubility in water: dispersible
Solubility in oil: insoluble
Partition coefficient (n-octanol/water): Not available
Vapour pressure: Not available
Relative density: 1.05 g/cm³
Vapour density: Not available

Particle characteristics:

Particle size: Not available

9.2. Other information

Miscibility: Not available
Conductivity: Not available
Explosive properties: ==
No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

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

Toxicological information of the mixture:

a) acute toxicity	Not classified
	Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified
	Based on available data, the classification criteria are not met
c) serious eye damage/irritation	Not classified
	Based on available data, the classification criteria are not met
d) respiratory or skin sensitisation	The product is classified: Skin Sens. 1A(H317)
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified
	Based on available data, the classification criteria are not met
i) STOT-repeated exposure	Not classified

j) aspiration hazard

Based on available data, the classification criteria are not met

Not classified

Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

aliphatic polyamine	a) acute toxicity	LD50 Oral Rat > 5000 mg/kg LD50 Skin Rabbit > 2000 mg/kg
2-Propenenitrile, reaction products with 3-amino 1,5,5-trimethylcyclohexanemethanamine	a) acute toxicity	LD50 Oral Rat = 2600 mg/kg
Amines, polyethylenepoly-, tetraethylenepentamine fraction	a) acute toxicity	LD50 Oral Rat = 3250 mg/kg
	d) respiratory or skin sensitisation	LD50 Skin Rabbit > 1000 mg/kg Skin Sensitization Rabbit Positive
m-xylylenediamine	a) acute toxicity	LD50 Oral Mouse = 930 mg/kg LD50 Skin Rabbit = 2000 mg/kg LC50 Inhalation Mist Rat = 1,34 mg/l 4h LC50 Inhalation Rat = 700, ppm 1h
ethylene glycol monobutyl ether	a) acute toxicity	ATE - Oral : 1200 mg/kg bw LD50 Oral Guinea pig = 1414, mg/kg
ethylene glycol	a) acute toxicity	LC50 Inhalation Rat > 2,5 mg/l 6h LD50 Skin Rat > 3500, mg/kg
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	a) acute toxicity	LD50 Oral Rat = 670, mg/kg
formaldehyde	a) acute toxicity	LD50 Oral Rat = 700 mg/kg LC50 Inhalation Rat = 0,578 mg/l LD50 Skin Rabbit = 270 mg/kg LD50 Skin Rabbit = 270 mg/kg LC50 Inhalation Rat = 0,578 mg/l 4h LD50 Oral Rat = 100 mg/kg
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	a) acute toxicity	LC50 Inhalation Rat = 2,36 mg/l 4h LD50 Skin Rabbit = 660, mg/kg LD50 Oral Rat = 53, mg/kg

11.2 Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration $\geq 0.1\%$

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

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

List of Eco-Toxicological properties of the product

The product is classified: Aquatic Chronic 2(H411)

List of components with eco-toxicological properties

Component	Ident. Numb.	Ecotox Infos
2-Propenenitrile, reaction products with 3-amino 1,5,5-trimethylcyclohexanemethanamine	CAS: 90530-15-7 - EINECS: 292-053-3	a) Aquatic acute toxicity : EC50 Algae = 9,92 mg/L 72 b) Aquatic chronic toxicity : NOEC Algae = 8,11 mg/L 72 a) Aquatic acute toxicity : EC50 Daphnia > 100 mg/L 48
Amines, polyethylenepoly-, tetraethylenepentamine fraction	CAS: 90640-66-7 - EINECS: 292-587-7 - INDEX: 612-060-00-0	a) Aquatic acute toxicity : LC50 Fish > 100 mg/L 96 a) Aquatic acute toxicity : EC50 Daphnia = 24,1 mg/L 48 a) Aquatic acute toxicity : EC50 Algae > 2,1 mg/L 72 a) Aquatic acute toxicity : NOEC Algae = 0,5 mg/L
m-xylylenediamine	CAS: 1477-55-0 - EINECS: 216-032-5	a) Aquatic acute toxicity : EC50 Algae = 20 mg/L 72h a) Aquatic acute toxicity : EC50 Daphnia = 15,2 mg/L 48h a) Aquatic acute toxicity : LC50 Fish Oryzias latipes = 87,6 mg/L 96h ECHA
ethylene glycol monobutyl ether	CAS: 111-76-2 - EINECS: 203-905-0 - INDEX: 603-014-00-0	a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 1490 mg/L 96h EPA a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna > 1000 mg/L 48h EPA a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 2950 mg/L 96h IUCLID
ethylene glycol	CAS: 107-21-1 - EINECS: 203-473-3 - INDEX: 603-027-00-1	a) Aquatic acute toxicity : EC50 Daphnia > 100 mg/L 48 a) Aquatic acute toxicity : EC50 Algae > 100 mg/L 96 a) Aquatic acute toxicity : LC50 Fish > 100 mg/L 96 b) Aquatic chronic toxicity : NOEC Fish > 100 mg/L - 7 d b) Aquatic chronic toxicity : NOEC Daphnia > 100 mg/L - 7 d b) Aquatic chronic toxicity : NOEC Algae > 100 mg/L 72 a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 41000 mg/L 96h IUCLID a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss 14 mL/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 27540 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 40761 mg/L 96h IUCLID a) Aquatic acute toxicity : LC50 Fish Pimephales promelas 40000 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Poecilia reticulata = 16000 mg/L 96h IUCLID a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 46300 mg/L 48h IUCLID

		a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata 6500 mg/L 96h IUCLID
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS: 2634-33-5 - EINECS: 220-120-9 - INDEX: 613-088-00-6	a) Aquatic acute toxicity : LC50 Fish = 2,15 mg/L
		b) Aquatic chronic toxicity : NOEC Algae = 0,0403 mg/L 72h b) Aquatic chronic toxicity : EC50 Algae = 0,11 mg/L 72h b) Aquatic chronic toxicity : EC10 Algae = 0,04 mg/L 72h b) Aquatic chronic toxicity : EC50 Daphnia = 3,27 mg/L 48h NOEC Daphnia = 1,2 mg/L 21d
formaldehyde	CAS: 50-00-0 - EINECS: 200-001-8 - INDEX: 605-001-00-5	a) Aquatic acute toxicity : LC50 Fish = 41 mg/L 96
		a) Aquatic acute toxicity : EC50 Daphnia = 42 mg/L 24 a) Aquatic acute toxicity : LC50 Fish Pimephales promelas 22,6 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 1510 µg/L 96h EPA
		a) Aquatic acute toxicity : LC50 Fish Brachydanio rerio = 41 mg/L 96h IUCLID a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss 0,032 mL/L 96h EPA
		a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss 100 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Pimephales promelas 23,2 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 2 mg/L 48h IUCLID
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	CAS: 55965-84-9 - EINECS: 611-341-5 - INDEX: 613-167-00-5	a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna 11,3 mg/L 48h EPA a) Aquatic acute toxicity : EC50 Daphnia = 0,12 mg/L 48
		a) Aquatic acute toxicity : LC50 Fish = 0,22 mg/L 96 a) Aquatic acute toxicity : EC50 Algae = 0,048 mg/L 72 b) Aquatic chronic toxicity : NOEC Algae = 0,0012 mg/L 72 b) Aquatic chronic toxicity : NOEC Fish = 0,098 mg/L - 28 d b) Aquatic chronic toxicity : NOEC Daphnia = 0,004 mg/L - 21 d

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$.

12.6 Endocrine disrupting properties

No endocrine disruptor substances present in concentration $\geq 0.1\%$

12.7 Other adverse effects

Not available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Recover if possible.

A waste code (EWC) according to European List of Waste (LoW) cannot be specified, due to dependence on the usage. Contact and send to an authorized waste disposal service.

Methods of disposal:

Disposal of this product, solutions, packaging and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor.

Do not dispose of waste into sewers.

Hazardous waste: Yes

Disposal considerations:

Do not allow to enter drains or watercourses.

Dispose of product according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

Dispose of containers contaminated by the product in accordance with local or national legal provisions. For further information, contact your local waste authority.

Special precautions:

This material and its container must be disposed of in a safe way. Care should be taken when handling untreated empty containers.

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Empty containers or liners may retain some product residues. Do not re-use empty containers.

SECTION 14: Transport information

14.1. UN number or ID number

3082

14.2. UN proper shipping name

ADR-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (aliphatic polyamine)

IATA-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (aliphatic polyamine)

IMDG-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (aliphatic polyamine)

14.3. Transport hazard class(es)

ADR-Class: 9

IATA-Class: 9

IMDG-Class: 9

14.4. Packing group

ADR-Packing Group: III

IATA-Packing group: III

IMDG-Packing group: III

14.5. Environmental hazards

Marine pollutant: Yes

Environmental Pollutant: Yes

IMDG-EMS: F-A, S-F

14.6. Special precautions for user

Road and Rail (ADR-RID) :

ADR-Label: 9

ADR-Hazard identification number: NA

ADR-Special Provisions: 274 335 375 601

ADR-Transport category (Tunnel restriction code): 3 (-)

Air (IATA) :

IATA-Passenger Aircraft: 964

IATA-Cargo Aircraft: 964

IATA-Label: 9

IATA-Subsidiary hazards: -

IATA-Erg: 9L

IATA-Special Provisioning: A97 A158 A197

Sea (IMDG) :

IMDG-Stowage Code: Category A

IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 274 335 969

IMDG-EMS: F-A, S-F

14.7. Maritime transport in bulk according to IMO instruments

Not Applicable

These substances, when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for

liquids, or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to provisions of ADR, IMDG and IATA DGR.

SECTION 15: Regulatory information

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

- VOC (2004/42/EC) : 5,6 (A+B) g/l
- Dir. 98/24/EC (Risks related to chemical agents at work)
- Dir. 2000/39/EC (Occupational exposure limit values)
- Regulation (EC) n. 1907/2006 (REACH)
- Regulation (EU) n. 2020/878
- Regulation (EC) n. 1272/2008 (CLP)
- Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
- Regulation (EU) n. 286/2011 (ATP 2 CLP)
- Regulation (EU) n. 618/2012 (ATP 3 CLP)
- Regulation (EU) n. 487/2013 (ATP 4 CLP)
- Regulation (EU) n. 944/2013 (ATP 5 CLP)
- Regulation (EU) n. 605/2014 (ATP 6 CLP)
- Regulation (EU) n. 2015/1221 (ATP 7 CLP)
- Regulation (EU) n. 2016/918 (ATP 8 CLP)
- Regulation (EU) n. 2016/1179 (ATP 9 CLP)
- Regulation (EU) n. 2017/776 (ATP 10 CLP)
- Regulation (EU) n. 2018/669 (ATP 11 CLP)
- Regulation (EU) n. 2019/521 (ATP 12 CLP)
- Regulation (EU) n. 2018/1480 (ATP 13 CLP)
- Regulation (EU) n. 2020/217 (ATP 14 CLP)
- Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1	Lower-tier threshold (tonnes)	Upper-tier threshold (tonnes)
Products belongs to category E2	200	500

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3

Restrictions related to the substances contained: 28, 72, 75

SVHC Substances:

SVHC substances not present in a concentration $\geq 0.1\%$ (w/w)

German Water Hazard Class (WGK)

Class 2: hazardous for water.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
EUH071	Corrosive to the respiratory tract.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.

H350	May cause cancer.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
3.1/3/Dermal	Acute Tox. 3	Acute toxicity (dermal), Category 3
3.1/3/Inhal	Acute Tox. 3	Acute toxicity (inhalation), Category 3
3.1/3/Oral	Acute Tox. 3	Acute toxicity (oral), Category 3
3.1/4/Dermal	Acute Tox. 4	Acute toxicity (dermal), Category 4
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.4.2/1A	Skin Sens. 1A	Skin Sensitisation, Category 1A
3.5/2	Muta. 2	Germ cell mutagenicity, Category 2
3.6/1B	Carc. 1B	Carcinogenicity, Category 1B
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2
4.1/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
4.1/C1	Aquatic Chronic 1	Chronic (long term) aquatic hazard, category 1
4.1/C2	Aquatic Chronic 2	Chronic (long term) aquatic hazard, category 2
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008 Classification procedure

3.4.2/1A	Calculation method
4.1/C2	Calculation method

If appropriate, specific provisions in relation to possible training for workers are mentioned in section 2. Any training related to safety in the workplace must in any case refer to a risk assessment that must be carried out by a company safety officer taking into account the specific operating and environmental conditions in which the products are used.

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic
 COD: Chemical Oxygen Demand
 COV: Volatile Organic Compound
 CSA: Chemical Safety Assessment
 CSR: Chemical Safety Report
 DMEL: Derived Minimal Effect Level
 DNEL: Derived No Effect Level.
 DPD: Dangerous Preparations Directive
 DSD: Dangerous Substances Directive
 EC50: Half Maximal Effective Concentration
 ECHA: European Chemicals Agency
 EINECS: European Inventory of Existing Commercial Chemical Substances.
 ES: Exposure Scenario
 GefStoffVO: Ordinance on Hazardous Substances, Germany.
 GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
 IARC: International Agency for Research on Cancer
 IATA: International Air Transport Association.
 IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
 IC50: half maximal inhibitory concentration
 ICAO: International Civil Aviation Organization.
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
 IMDG: International Maritime Code for Dangerous Goods.
 INCI: International Nomenclature of Cosmetic Ingredients.
 IRCCS: Scientific Institute for Research, Hospitalization and Health Care
 KAFH: KAFH
 KSt: Explosion coefficient.
 LC50: Lethal concentration, for 50 percent of test population.
 LD50: Lethal dose, for 50 percent of test population.
 LDLo: Leathal Dose Low
 N.A.: Not Applicable
 N/A: Not Applicable
 N/D: Not defined/ Not available
 NA: Not available
 NIOSH: National Institute for Occupational Safety and Health
 NOAEL: No Observed Adverse Effect Level
 OSHA: Occupational Safety and Health Administration.
 PBT: Persistent, Bioaccumulative and Toxic
 PGK: Packaging Instruction
 PNEC: Predicted No Effect Concentration.
 PSG: Passengers
 RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
 STEL: Short Term Exposure limit.
 STOT: Specific Target Organ Toxicity.
 TLV: Threshold Limiting Value.
 TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
 vPvB: Very Persistent, Very Bioaccumulative.
 WGK: German Water Hazard Class.

*** Sheet model entirely changed in compliance to regulatory update.**