

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

Code: ELIOXB
Product name: ELIOX B

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

Intended use: mastic part B

Identified Uses	Industrial	Professional	Consumer
ADHESIVE SYSTEM/TREATMENT FOR STONE SECTOR	✓	✓	-

1.3. Details of the supplier of the safety data sheet

Name: TENAX SPA
Full address: Via I Maggio, 226
District and Country: 37020 Volargne Italy (VR)
Tel.: +39 045 6887593
Fax: +39 045 6862456
e-mail address of the competent person responsible for the Safety Data Sheet: msds@tenax.it

1.4. Emergency telephone number

For urgent inquiries refer to:

Ireland
National Poisons Information Centre, Beaumont Hospital, PO Box 1297, Beaumont Road, Dublin 9
Members of the public: 01 809 2166 (8am to 10pm every day)
Healthcare professionals: 01 809 2566 or 01 837 9964 (24 hours)

Malta
112

0 800 314 7900 (Turkey) only, or +90 0312 433 70 01 - Toxicology Department and Poisons Centre
+98 21 6419306 / +98 21 6405569 - Poisons Information Centre (Tehran)
+91 484 4008056 - Poison Control Centre (South India)
(011) 642 2417 / (011) 488 3108 - Anti-Poison Centre (Johannesburg)

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Acute toxicity, category 4	H302	Harmful if swallowed.
Skin corrosion, category 1A	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin sensitization, category 1A	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

SECTION 2. Hazards identification ... / >>

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: Danger

Hazard statements:

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

Precautionary statements:

P260 Do not breathe dust / fume / gas / mist / vapours / spray.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P280 Wear protective gloves/ protective clothing / eye protection / face protection.

Contains:

1,3-BIS(AMINOMETHYL)CYCLOHEXANE
3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE
3-AMINOPROPYLTRIETHOXYSILANE
BENZYL ALCOHOL
TRISOTRIDECYL PHOSPHITE

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration \geq 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
1,3-BIS(AMINOMETHYL)CYCLOHEXANE		
CAS 2579-20-6	$30 \leq x < 50$	Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1A H314, Eye Dam. 1 H318, Aquatic Chronic 3 H412
EC 219-941-5		LD50 Oral: >300 mg/kg, LD50 Dermal: 1700 mg/kg
INDEX		
REACH Reg. 01-2119543741-41-0000		
3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE		
CAS 2855-13-2	$10 \leq x < 20$	Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1A H317, Aquatic Chronic 3 H412
EC 220-666-8		Skin Sens. 1A H317: $\geq 0,001\%$
INDEX 612-067-00-9		LD50 Oral: 1030 mg/kg, STA Dermal: 1100 mg/kg
REACH Reg. 01-2119514687-32		
BENZYL ALCOHOL		
CAS 100-51-6	$5 \leq x < 10$	Acute Tox. 4 H302, Acute Tox. 4 H332, Eye Irrit. 2 H319
EC 202-859-9		LD50 Oral: 1230 mg/kg, STA Inhalation vapours: 11 mg/l
INDEX 603-057-00-5		
REACH Reg. 01-2119492630-38		

SECTION 3. Composition/information on ingredients ... / >>

3-AMINOPROPYLTRIETHOXYSILANE

CAS 919-30-2 $1 \leq x < 3$

EC 213-048-4

INDEX 612-108-00-0

REACH Reg. 01-2119480479-24

TRISOTRIDECYL PHOSPHITE

CAS 77745-66-5 $0,2 \leq x < 0,25$

EC 278-758-9

INDEX

REACH Reg. 01-2119487302-40

PHENOL

CAS 108-95-2 $0 \leq x < 0,05$

EC 203-632-7

INDEX 604-001-00-2

REACH Reg. 01-2119471329-32

Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317
STA Oral: 500 mg/kg

Skin Sens. 1 H317, Aquatic Chronic 4 H413

Muta. 2 H341, Acute Tox. 3 H301, Acute Tox. 3 H311, Acute Tox. 3 H331,
STOT RE 2 H373, Skin Corr. 1B H314, Eye Dam. 1 H318, Aquatic Chronic 2
H411

Skin Corr. 1B H314: $\geq 3\%$, Skin Irrit. 2 H315: $\geq 1\%$
LD50 Oral: 282 mg/l/4h, LD50 Dermal: 660 mg/l/4h, LC50 Inhalation
mists/powders: 0,9 mg/l/4h

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

BGR	България	НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)
CZE	Česká Republika	Nařízení vlády č. 41/2020 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
DNK	Danmark	Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
FIN	Suomi	HTP-VÄRDEN 2020. Koncentrationer som befunnits skadliga. SOCIAL - OCH HÄLSOVÄRDSMINISTERIETS PUBLIKATIONER 2020:25
GRC	Ελλάδα	Π.Δ. 26/2020 (ΦΕΚ 50/Α' 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ "σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιγόνους παράγοντες κατά την εργασία"»
HUN	Magyarország	Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
HRV	Hrvatska	Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnim kemikalijama

SECTION 8. Exposure controls/personal protection ... / >>

ITA	Italia	na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
NOR	Norge	Decreto Legislativo 9 Aprile 2008, n.81 Forskrift om endring i forskrift om tiltaksverdier og grenseverdier for fysiske og kjemiske faktorer i arbeidsmiljøet samt smitterisikogrupper for biologiske faktorer (forskrift om tiltaks- og grenseverdier), 21. august 2018 nr. 1255
NLD	Nederland	Arbeidsomstandighedenregeling. Lijst van wettelijke grenswaarden op grond van de artikelen 4.3, eerste lid, en 4.16, eerste lid, van het Arbeidsomstandighedenbesluit
PRT	Portugal	Decreto-Lei n.º 1/2021 de 6 de janeiro, valores-limite de exposição profissional indicativos para os agentes químicos. Decreto-Lei n.º 35/2020 de 13 de julho, proteção dos trabalhadores contra os riscos ligados à exposição durante o trabalho a agentes cancerígenos ou mutagénicos
POL	Polska	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
ROU	România	Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1.093/2006
SWE	Sverige	Hygieniska gränsvärden, Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden (AFS 2018:1)
SVN	Slovenija	Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19)
TUR	Türkiye	Kimyasal Maddelerle Çalışmalarda Sağlık ve Güvenlik Önlemleri Hakkında Yönetmelik 12.08.2013 / 28733
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2022

1,3-BIS(AMINOMETHYL)CYCLOHEXANE

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,033	mg/l
Normal value in marine water	0,003	mg/l
Normal value of STP microorganisms	10	mg/l

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute	Chronic	Chronic	Acute	Acute	Chronic	Chronic
	local	systemic	local	systemic	local	systemic	local	systemic
Inhalation							0,00947	
							mg/m3	

SECTION 8. Exposure controls/personal protection ... / >>

BENZYL ALCOHOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	BGR	5					
TLV	CZE	40	8,88	80	17,76		
AGW	DEU	22	5	44	10	SKIN	11
HTP	FIN	45	10				
NDS/NDSch	POL	240					
MV	SVN	22	5	44	10	SKIN	

Predicted no-effect concentration - PNEC

Normal value in fresh water	1	mg/l
Normal value in marine water	0,1	mg/l
Normal value for fresh water sediment	5,27	mg/kg
Normal value for marine water sediment	0,527	mg/kg
Normal value for water, intermittent release	2,3	mg/l
Normal value of STP microorganisms	39	mg/l
Normal value for the terrestrial compartment	0,45	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute	Chronic	Chronic	Acute	Acute	Chronic	Chronic
	local	systemic	local	systemic	local	systemic	local	systemic
Oral	VND	20	VND	4				
		mg/kg bw/d		mg/kg bw/d				
Inhalation	VND	27	VND	5,4	VND	110	VND	22
		mg/m3		mg/m3		mg/m3		mg/m3
Skin	VND	20	VND	4	VND	40	VND	8
		mg/kg bw/d		mg/kg bw/d		mg/kg		mg/kg
						bw/d		bw/d

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,06	mg/l
Normal value in marine water	0,006	mg/l
Normal value for fresh water sediment	5,784	mg/kg
Normal value for marine water sediment	0,578	mg/kg
Normal value for water, intermittent release	0,23	mg/l
Normal value of STP microorganisms	3,18	mg/l
Normal value for the terrestrial compartment	1,121	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute	Chronic	Chronic	Acute	Acute	Chronic	Chronic
	local	systemic	local	systemic	local	systemic	local	systemic
Oral				0,526				
				mg/kg/d				
Inhalation					20,1	20,1	0,073	
					mg/m3	mg/m3	mg/m3	

SECTION 8. Exposure controls/personal protection ... / >>

PHENOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	BGR	8	2	16	4	SKIN	
TLV	CZE	7,5	1,92	15	3,84	SKIN	
AGW	DEU	8	2	16	4	SKIN	11
TLV	DNK	4	1			SKIN	E
VLA	ESP	8	2	16	4	SKIN	
VLEP	FRA	7,8	2	15,6	4	SKIN	
HTP	FIN	8	2	16	4	SKIN	
TLV	GRC	8	2	16	4		
AK	HUN	8		16		SKIN	
GVI/KGVI	HRV	8	2	16	4	SKIN	
VLEP	ITA	8	2	16	4	SKIN	
TLV	NOR	4	1			SKIN	
TGG	NLD	8				SKIN	
VLE	PRT	8	2	16	4	SKIN	
NDS/NDSch	POL	7,8		16		SKIN	
TLV	ROU	8	2	16	4	SKIN	
NGV/KGV	SWE	4	1	16	4	SKIN	
MV	SVN	8	2	16	4	SKIN	
ESD	TUR	8	2	16	4	SKIN	
WEL	GBR	7,8	2	16	4	SKIN	
OEL	EU	8	2	16	4	SKIN	
TLV-ACGIH		19,2	5			SKIN	

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0077	mg/l
Normal value in marine water	0,00077	mg/l
Normal value for fresh water sediment	0,0915	mg/kg/d
Normal value for marine water sediment	0,0915	mg/kg/d
Normal value of STP microorganisms	2,1	mg/l
Normal value for the terrestrial compartment	0,136	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute			Acute	Acute	Chronic	Chronic
	local	systemic	local	systemic	local	systemic	local	systemic
Oral				0,4				
				mg/kg bw/d				
Inhalation				1,32				8
				mg/m3				mg/m3
Skin				0,4				
				mg/kg bw/d				

Siloxanes and Silicones, di-Me, reaction products with silica

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
AGW	DEU	4				INHAL	
VLA	ESP	10				INHAL	
VLA	ESP	3				RESP	
VLEP	FRA	10				INHAL	
VLEP	FRA	5				RESP	
HTP	FIN	5					
VLEP	ITA	10				INHAL	
VLEP	ITA	3				RESP	
TLV	NOR	1,5				RESP	

SECTION 8. Exposure controls/personal protection ... / >>

TRIISOTRIDECYL PHOSPHITE

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute	Chronic	Chronic	Acute	Acute	Chronic	Chronic
	local	systemic	local	systemic	local	systemic	local	systemic
Inhalation								70,5 mg/m3
Skin								50 mg/kg bw/d

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves.

The following should be considered when choosing work glove material (see standard EN 374): compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

HAND PROTECTION: Protect hands with work gloves for protection from chemical agents in nitrile or fluoroelastomer (EN 374-1: 2016) at least type B or higher based on the risk assessment carried out by the company. Breakthrough time > 480 minutes.

Material thickness:

NITRILE

short contact > 0.38 mm

prolonged contact > 0.55 mm

FLUOROELASTOMER

short contact > 0.50 mm

prolonged contact > 1.50 mm

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties

Value

Information

SECTION 9. Physical and chemical properties ... / >>

Appearance	paste
Colour	transparent
Odour	amino
Melting point / freezing point	not available
Initial boiling point	not available
Flammability	not available
Lower explosive limit	not available
Upper explosive limit	not available
Flash point	> 60 °C
Auto-ignition temperature	not available
pH	8-10
Kinematic viscosity	not available
Solubility	partially soluble in water
Partition coefficient: n-octanol/water	not available
Vapour pressure	not available
Density and/or relative density	1 g/cm3
Relative vapour density	not available
Particle characteristics	not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

VOC (Directive 2010/75/EU)	7,97 % - 79,70	g/litre
VOC (volatile carbon)	6,19 % - 61,91	g/litre

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

BENZYL ALCOHOL

Decomposes at temperatures above 870°C/1598°F.Possibility of explosion.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

BENZYL ALCOHOL

May react dangerously with: hydrobromic acid,iron,oxidising agents,sulphuric acid.Risk of explosion on contact with: phosphorus trichloride.

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

May react dangerously with: strong oxidising agents,concentrated inorganic acids.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

1,3-BIS(AMINOMETHYL)CYCLOHEXANE

Avoid exposure to: sources of heat,naked flames,overheated surfaces,ignition sources.

BENZYL ALCOHOL

Avoid exposure to: air,sources of heat,naked flames.

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Avoid contact with: strong acids,strong oxidants.

10.5. Incompatible materials

1,3-BIS(AMINOMETHYL)CYCLOHEXANE

acids,reducing agents,oxidising agents.

BENZYL ALCOHOL

Incompatible with: sulphuric acid,oxidising substances,aluminium.

10.6. Hazardous decomposition products

Information not available

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

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

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation - vapours) of the mixture:	> 20 mg/l
ATE (Oral) of the mixture:	499,60 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

1,3-BIS(AMINOMETHYL)CYCLOHEXANE

LD50 (Dermal):	1700 mg/kg coniglio
LD50 (Oral):	> 300 mg/kg ratto femmina

BENZYL ALCOHOL

LD50 (Dermal):	2000 mg/kg Rabbit
LD50 (Oral):	1230 mg/kg Rat
LC50 (Inhalation vapours):	> 4,1 mg/l/4h Rat
STA (Inhalation vapours):	11 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

LD50 (Dermal):	> 2000 mg/kg Ratto
STA (Dermal):	1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LD50 (Oral):	1030 mg/kg Ratto
LC50 (Inhalation mists/powders):	> 5,01 mg/l/4h Ratto

PHENOL

LD50 (Dermal):	660 mg/kg Rat
LD50 (Oral):	282 mg/kg Rat
LC50 (Inhalation mists/powders):	0,9 mg/l/4h Ratto

3-AMINOPROPYLTRIETHOXYSILANE

STA (Oral):	500 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
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TRIISOTRIDECYL PHOSPHITE

LD50 (Oral):	> 2000 mg/kg ratto
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SKIN CORROSION / IRRITATION

Corrosive for the skin

SERIOUS EYE DAMAGE / IRRITATION

SECTION 11. Toxicological information ... / >>

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

Respiratory sensitization

Information not available

Skin sensitization

Information not available

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Adverse effects on sexual function and fertility

Information not available

Adverse effects on development of the offspring

Information not available

Effects on or via lactation

Information not available

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine

disruptors with human health effects under evaluation.

SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

1,3-BIS(AMINOMETHYL)CYCLOHEXANE

LC50 - for Fish	130 mg/l/96h leuciscus idus
EC50 - for Crustacea	65,4 mg/l/48h daphnia magna
EC50 - for Algae / Aquatic Plants	90 mg/l/72h pseudomonas putida
Chronic NOEC for Algae / Aquatic Plants	14,4 mg/l Pseudokirchneriella subcapitata

BENZYL ALCOHOL

LC50 - for Fish	770 mg/l/96h Pimephales promelas
EC50 - for Crustacea	230 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	770 mg/l/72h Pseudokirchneriella subcapitata
Chronic NOEC for Crustacea	51 mg/l Daphnia magna

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

LC50 - for Fish	110 mg/l/96h Leuciscus idus
EC50 - for Crustacea	23 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 50 mg/l/72h Scenedesmus subspicatus
EC10 for Algae / Aquatic Plants	11,2 mg/l/72h Scenedesmus subspicatus
Chronic NOEC for Crustacea	3 mg/l 21 d

PHENOL

LC50 - for Fish	8,9 mg/l/96h Trota arcobaleno
EC50 - for Crustacea	3,1 mg/l/48h Dafnia
EC50 - for Algae / Aquatic Plants	61,1 mg/l/72h Microalgae
Chronic NOEC for Crustacea	2,2 mg/l Dafnia

12.2. Persistence and degradability

1,3-BIS(AMINOMETHYL)CYCLOHEXANE

Degradability: information not available

BENZYL ALCOHOL

Rapidly degradable

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Solubility in water	1000 - 10000 mg/l
NOT rapidly degradable	

PHENOL

Rapidly degradable

12.3. Bioaccumulative potential

1,3-BIS(AMINOMETHYL)CYCLOHEXANE

Partition coefficient: n-octanol/water	0,783
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BENZYL ALCOHOL

Partition coefficient: n-octanol/water	1,1
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PHENOL

Partition coefficient: n-octanol/water	1,47
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12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.

SECTION 12. Ecological information ... / >>

12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: 2735

14.2. UN proper shipping name

ADR / RID: AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-BIS(AMINOMETHYL)CYCLOHEXANE; 3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE)

IMDG: AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-BIS(AMINOMETHYL)CYCLOHEXANE; 3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE)

IATA: AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-BIS(AMINOMETHYL)CYCLOHEXANE; 3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE)

14.3. Transport hazard class(es)

ADR / RID: Class: 8 Label: 8

IMDG: Class: 8 Label: 8

IATA: Class: 8 Label: 8



14.4. Packing group

ADR / RID, IMDG, IATA: II

14.5. Environmental hazards

ADR / RID: NO

IMDG: NO

IATA: NO

14.6. Special precautions for user

ADR / RID: HIN - Kemler: 80
Special provision: -

IMDG: EMS: F-A, S-B

IATA: Cargo:

Passengers:

Special provision:

Limited Quantities: 1 L

Limited Quantities: 1 L

Maximum quantity: 30 L

Maximum quantity: 1 L

A3, A803

Tunnel restriction code: (E)

Packaging instructions: 855

Packaging instructions: 851

SECTION 14. Transport information ... / >>

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product	
Point	3
Contained substance	
Point	75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage \geq than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances

1,3-BIS(AMINOMETHYL)CYCLOHEXANE

BENZYL ALCOHOL

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Muta. 2	Germ cell mutagenicity, category 2
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1A	Skin corrosion, category 1A
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Sens. 1A	Skin sensitization, category 1A
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H341	Suspected of causing genetic defects.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H302	Harmful if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.

SECTION 16. Other information ... / >>

H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
 3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
 4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
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 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
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 21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - ECHA website
 - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

SECTION 16. Other information ... / >>

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 07 / 08 / 09 / 10 / 11 / 12 / 15 / 16.