



Tenax Spa

FIXTOP PART B

Revision nr.15
Dated 29/01/2021
Printed on 29/01/2021
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Replaced revision:14 (Dated 20/12/2018)

Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Product name **FIXTOP PART B**

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

Intended use **EPOXY GLUE 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 (VR)**
Italy
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 **800.883300 (24h) Centro Antiveleni (Bergamo)**
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 2015/830.

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:

Reproductive toxicity, category 2	H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
Acute toxicity, category 4	H332	Harmful if inhaled.
Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Skin corrosion, category 1B	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, acute toxicity, category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment, chronic toxicity, category 1	H410	Very toxic 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:

- H361fd** Suspected of damaging fertility. Suspected of damaging the unborn child.
- H332** Harmful if inhaled.
- H373** May cause damage to organs through prolonged or repeated exposure.
- H314** Causes severe skin burns and eye damage.
- H317** May cause an allergic skin reaction.
- H410** Very toxic 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: 2-Piperazin-1-ylethylamine
 4-nonylphenol, branched
 2,2'-DIAMINODIETHYLAMINE
 3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

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%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
4-nonylphenol, branched		
CAS	84852-15-3 5 ≤ x < 10	Repr. 2 H361fd, Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318, Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410 M=10
EC	284-325-5	
INDEX	601-053-00-8	
Reg. no.	01-2119510715-45	
2-Piperazin-1-ylethylamine		
CAS	140-31-8 5 ≤ x < 10	Repr. 2 H361fd, Acute Tox. 3 H311, Acute Tox. 4 H302, STOT RE 1 H372, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Chronic 3 H412
EC	205-411-0	
INDEX	612-105-00-4	
Reg. no.	01-2119471486-30	
BENZYL ALCOHOL		
CAS	100-51-6 5 ≤ x < 10	Acute Tox. 4 H302, Acute Tox. 4 H332, Eye Irrit. 2 H319
EC	202-859-9	
INDEX	603-057-00-5	
Reg. no.	01-2119492630-38	



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

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

CAS 2855-13-2 $1 \leq x < 3$

Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Chronic 3 H412

EC 220-666-8

INDEX 612-067-00-9

Reg. no. 01-2119514687-32

2,2'-DIAMINODIETHYLAMINE

CAS 111-40-0 $1 \leq x < 2,505$

Acute Tox. 2 H330, Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1B H314, Eye Dam. 1 H318, STOT SE 3 H335, Skin Sens. 1 H317

EC 203-865-4

INDEX 612-058-00-X

Reg. no. 01-2119473793-27

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.



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SECTION 6. Accidental release measures ... / >>

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	МИНИСТЕРСТВО НА ТРУДА И СОЦИАЛНАТА ПОЛИТИКА МИНИСТЕРСТВО НА ЗДРАВЕОПАЗВАНЕТО НАРЕДБА No 13 от 30 декември 2003 г (4 Септември 2018г)
CZE	Česká Republika	Nařízení vlády č. 246/2018 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	TRGS 900 - Seite 1 von 69 (Fassung 29.03.2019)- Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
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 2019 (INSST)
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
FIN	Suomi	HTP-VÄRDEN 2018. Koncentrationer som befunnits skadliga. SOCIAL- OCH HÄLSOVÄRDSMINISTERIETS PUBLIKATIONER 10/2018
GRC	Ελλάδα	ΕΦΗΜΕΡΙΔΑ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ - ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 152 - 21 Αυγούστου 2018
HUN	Magyarország	A pénzügyminiszter 7/2018. (VIII. 29.) PM rendelete a munkahelyek kémiai biztonságáról szóló 25/2000. (IX. 30.) EüM–SZCSM együt. Ttes rendelet módosításáról.
NOR	Norge	Fastsatt av Arbeids- og sosialdepartementet 21. august 2018 med hjemmel i lov 17. juni 2005 nr. 62 om arbeidsmiljø, arbeidstid, stillingsvern mv. (arbeidsmiljøloven) § 1-3, § 1-4 og § 4-5
NLD	Nederland	Regeling van de Staatssecretaris van Sociale Zaken en Werkgelegenheid van 13 juli 2018, 2018-0000118517 tot wijziging van de Arbeidsomstandighedenregeling in verband met de implementatie van Richtlijn 2017/164 in Bijlage XIII
POL	Polska	ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 12 czerwca 2018 r
ROU	România	HOTĂRÂRE nr. 584 din 2 august 2018 pentru modificarea Hotărârii Guvernului nr. 1.218/2006 privind stabilirea cerințelor minime de securitate și sănătate în muncă pentru asigurarea protecției lucrătorilor împotriva riscurilor legate de prezența agenților chimici
SWE	Sverige	Hygieniska gränsvärden, AFS 2018:1
SVN	Slovenija	Uradni list Republike Slovenije 20.12.2019 - Uradnem listu RS št. 78/19 -PRAVILNIK o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Third edition, published 2018)
	TLV-ACGIH	ACGIH 2020



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

CALCIUM CARBONATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m ³	ppm	mg/m ³	ppm	
AGW	DEU	10				INHAL
AGW	DEU	3				RESP
TLV	DNK	10				INHAL
TLV	DNK	5				RESP
VLA	ESP	10				
VLEP	FRA	10				INHAL
VLEP	FRA	5				RESP
HTP	FIN	10				INHAL
NDS/NDSch	POL	10				
WEL	GBR	4				

4-nonylphenol, branched

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,00061	mg/l
	4	
Normal value in marine water	0,00052	mg/l
	7	
Normal value for fresh water sediment	4,62	mg/kg/d
Normal value for marine water sediment	1,23	mg/kg/d
Normal value of STP microorganisms	9,5	mg/l
Normal value for the terrestrial compartment	2,3	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,08 mg/kg bw/d				
Inhalation				0,4 mg/m ³	1 mg/m ³	VND	0,5 mg/m ³	
Skin				3,8 mg/kg bw/d	15 mg/kg bw/d	VND	7,5 mg/kg bw/d	

2-Piperazin-1-ylethylamine

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,058	mg/l
Normal value in marine water	0,0058	mg/l
Normal value for fresh water sediment	215	mg/kg
Normal value for marine water sediment	21,5	mg/kg
Normal value for water, intermittent release	0,58	mg/l
Normal value of STP microorganisms	250	mg/l
Normal value for the terrestrial compartment	42,9	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral	VND	1,5 mg/kg	VND	0,3 mg/kg				
Inhalation	VND	5,3 mg/kg	VND	0,9 mg/m ³	21,4 mg/m ³	VND	VND	3,6 mg/m ³
Skin	0,02 mg/kg	10 mg/kg	0,003 mg/kg	1,7 mg/kg	0,04 mg/kg	20 mg/kg	0,006 mg/kg	3,3 mg/kg



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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 local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral	VND	20 mg/kg bw/d	VND	4 mg/kg bw/d				
Inhalation	VND	27 mg/m3	VND	5,4 mg/m3	VND	110 mg/m3	VND	22 mg/m3
Skin	VND	20 mg/kg bw/d	VND	4 mg/kg bw/d	VND	40 mg/kg bw/d	VND	8 mg/kg 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



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2,2'-DIAMINODIETHYLAMINE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	4				
TLV	CZE	4	0,932	8	1,864	
TLV	DNK	4	1			SKIN
VLA	ESP	4,3	1			SKIN
VLEP	FRA	4	1			
HTP	FIN	4,3	1	13	3	SKIN
TLV	GRC	4	1			
AK	HUN	4		8		SKIN
TLV	NOR	4	1			SKIN
TGG	NLD	0,5				SKIN
NDS/NDSch	POL	4		12		SKIN
TLV	ROU	2	0,5	4	1	SKIN
NGV/KGV	SWE	4,5	1	10 (C)	2 (C)	SKIN
WEL	GBR	4,3	1			SKIN
TLV-ACGIH		4,2	1			SKIN

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,56	mg/l
Normal value in marine water	0,056	mg/l
Normal value for fresh water sediment	1072	mg/kg
Normal value for marine water sediment	107,2	mg/kg
Normal value for water, intermittent release	0,32	mg/l
Normal value of STP microorganisms	6	mg/l
Normal value for the terrestrial compartment	7,97	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute		Chronic		Acute		Chronic	
	local	systemic	local	systemic	local	systemic	local	systemic
Inhalation	VND	27,5 mg/m3	VND	4,6 mg/m3	2,6 mg/m3	92,1 mg/m3	0,87 mg/m3	15,4 mg/m3
Skin		4,88 mg/kg bw/d		4,88 mg/kg bw/d			1,1 mg/kg	11,4 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.

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.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: 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 II 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 airtight protective goggles (see standard EN 166).

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



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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 neoprene (EN 374-1: 2016) at least type B or higher based on the risk assessment carried out by the company

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	paste	
Colour	beige	
Odour	characteristic	
Odour threshold	Not available	
pH	8-10	
Melting point / freezing point	Not available	
Initial boiling point	Not available	
Boiling range	Not available	
Flash point	> 60 °C	
Evaporation Rate	Not available	
Flammability of solids and gases	Not available	
Lower inflammability limit	Not available	
Upper inflammability limit	Not available	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Vapour pressure	Not available	
Vapour density	Not available	
Relative density	1,22 g/cc	
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	Not available	
Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
Viscosity	pasta tixotropica	
Explosive properties	Not available	
Oxidising properties	Not available	

9.2. Other information

VOC (Directive 2010/75/EC) :	8,84 %	-	107,79	g/litre
VOC (volatile carbon) :	6,16 %	-	75,19	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.



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10.4. Conditions to avoid

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

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

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 toxicological effects

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) of the mixture:	16,92 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

2-Piperazin-1-ylethylamine	
LD50 (Oral)	> 1470 mg/kg rat
LD50 (Dermal)	866 mg/kg rabbit

4-nonylphenol, branched	
LD50 (Oral)	1620 mg/kg rat
LD50 (Dermal)	2140 mg/kg rabbit

BENZYL ALCOHOL	
LD50 (Oral)	1230 mg/kg Rat
LD50 (Dermal)	2000 mg/kg Rabbit
LC50 (Inhalation)	> 4,1 mg/l/4h Rat

2,2'-DIAMINODIETHYLAMINE	
LD50 (Oral)	1620 mg/kg Rat
LD50 (Dermal)	1045 mg/kg Rabbit
LC50 (Inhalation)	0,3 mg/l/4h Rat

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE	
LD50 (Oral)	1030 mg/kg rat



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SECTION 11. Toxicological information ... / >>

SKIN CORROSION / IRRITATION

Corrosive for the skin

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

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

Suspected of damaging fertility - Suspected of damaging the unborn child

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

May cause damage to organs

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

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

12.1. Toxicity

2-Piperazin-1-ylethylamine

LC50 - for Fish	368 mg/l/96h poecilia reticulata
EC50 - for Crustacea	> 32 mg/l/48h daphnia magna
EC50 - for Algae / Aquatic Plants	494 mg/l/72h Scenedesmus capricornutum

4-nonylphenol, branched

LC50 - for Fish	0,017 mg/l/96h marine water fish
EC50 - for Crustacea	0,051 mg/l/48h marine invertebrates
EC50 - for Algae / Aquatic Plants	0,027 mg/l/72h marine water algae
Chronic NOEC for Fish	0,00046 mg/l marine water fish
Chronic NOEC for Crustacea	0,00946 mg/l marine invertebrates
Chronic NOEC for Algae / Aquatic Plants	0,5 mg/l marine water algae

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

2,2'-DIAMINODIETHYLAMINE

LC50 - for Fish	430 mg/l/96h pimephales promelas
EC50 - for Crustacea	32 mg/l/48h daphnia magna
EC50 - for Algae / Aquatic Plants	1164 mg/l/72h algae
Chronic NOEC for Fish	> 10 mg/l pesce
Chronic NOEC for Crustacea	5,6 mg/l daphnia magna



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SECTION 12. Ecological information ... / >>

Chronic NOEC for Algae / Aquatic Plants	10 mg/l algae
3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE	
LC50 - for Fish	110 mg/l/96h <i>Leuciscus idus</i>
EC50 - for Crustacea	23 mg/l/48h <i>Daphnia magna</i>
EC50 - for Algae / Aquatic Plants	> 50 mg/l/72h <i>Scenedesmus subspicatus</i>
EC10 for Algae / Aquatic Plants	11,2 mg/l/72h <i>Scenedesmus subspicatus</i>
Chronic NOEC for Crustacea	3 mg/l 21 d

12.2. Persistence and degradability

2-Piperazin-1-ylethylamine
NOT rapidly degradable

4-nonylphenol, branched
Rapidly degradable

BENZYL ALCOHOL
Rapidly degradable

2,2'-DIAMINODIETHYLAMINE
Solubility in water 1000 - 10000 mg/l
Degradability: information not available
Rapidly degradable

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE
Solubility in water 1000 - 10000 mg/l
NOT rapidly degradable

12.3. Bioaccumulative potential

2-Piperazin-1-ylethylamine
Partition coefficient: n-octanol/water -1,48 Log Kow

4-nonylphenol, branched
Partition coefficient: n-octanol/water 5,4
BCF > 260

BENZYL ALCOHOL
Partition coefficient: n-octanol/water 1,1

2,2'-DIAMINODIETHYLAMINE
Partition coefficient: n-octanol/water -5,58

12.4. Mobility in soil

4-nonylphenol, branched
Partition coefficient: soil/water > 22

2,2'-DIAMINODIETHYLAMINE
Partition coefficient: soil/water 3,4

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%.

12.6. 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.

SECTION 13. Disposal considerations ... / >>

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

ADR / RID, IMDG, IATA: 1760

14.2. UN proper shipping name

ADR / RID: CORROSIVE LIQUID, N.O.S. (4-nonylphenol, branched; 2-Piperazin-1-ylethylamine)
IMDG: CORROSIVE LIQUID, N.O.S. (4-nonylphenol, branched; 2-Piperazin-1-ylethylamine)
IATA: CORROSIVE LIQUID, N.O.S. (4-nonylphenol, branched; 2-Piperazin-1-ylethylamine)

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: III

14.5. Environmental hazards

ADR / RID: Environmentally Hazardous



IMDG: Marine Pollutant



IATA: NO

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 5 L	Tunnel restriction code: (E)
	Special Provision: -		
IMDG:	EMS: F-A, S-B	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 856
	Pass.:	Maximum quantity: 5 L	Packaging instructions: 852
	Special Instructions:	A3, A803	

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

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/EC: E1



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SECTION 15. Regulatory information ... / >>

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

Product		
Point	3	
Contained substance		
Point	46	4-nonylphenol, branched Reg. no.: 01-2119510715-45

Substances in Candidate List (Art. 59 REACH)

4-nonylphenol, branched
Reg. no.: 01-2119510715-45

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

4-nonylphenol, branched - (NONYLPHENOLS)

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

2-Piperazin-1-ylethylamine
BENZYL ALCOHOL
3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE
2,2'-DIAMINODIETHYLAMINE

SECTION 16. Other information

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

Repr. 2	Reproductive toxicity, category 2
Acute Tox. 2	Acute toxicity, category 2
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1	Skin sensitization, category 1
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H330	Fatal if inhaled.
H311	Toxic in contact with skin.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.



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SECTION 16. Other information ... / >>

- LEGEND:- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
 - CE50: Effective concentration (required to induce a 50% effect)
 - CE NUMBER: Identifier in ESIS (European archive of existing substances)
 - CLP: EC Regulation 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 NUMBER: 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: EC Regulation 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 STEL: Short-term exposure limit
 - TWA: Time-weighted average exposure limit
 - VOC: Volatile organic Compounds
 - vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
 - WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

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 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
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- 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

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.



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SECTION 16. Other information ... / >>

CALCULATION METHODS FOR CLASSIFICATIONChemical 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 / 08 / 09 / 11 / 12 / 14 / 15 / 16.