

Safety Data Sheet

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

1.1. Product identifier

Product name

XEPOX 26 component A
XEPOX F Fluid component A
XEPOXF400 Fluid component A
XEPOXF3000 Fluid component A
XEPOXF5000 Fluid component A
Epoxy resin

Chemical name and synonym

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

Identified Uses:

Component (epoxy/melamine) for bicomponent epoxy adhesive for professionals uses in construction sector. Indicated for gluing of wooden structural elements, metals, concrete and FRP.

Professional Uses:

SU: 10, 13, 17, 19.
ERC: 10a, 10b, 11a, 11b.
PROC: 10, 13, 19, 9.
AC: 13, 2, 4.
PC: 1, 15, 18.

Industrial Uses:

SU: 12, 13, 15, 16, 17, 18, 19.
ERC: 10a, 10b, 11a, 11b, 12a, 12b, 5, 7.
PROC: 1, 10, 13, 19, 2, 22, 23, 5, 8a, 8b, 9.
AC: 1, 2, 4, 7.
PC: 1, 32.

1.3. Details of the supplier of the safety data sheet

Name

Rotho Blaas Srl

Full address

via dell'Adige 2/1 - Cortaccia (BZ) 39040 ITALY

Country

ITALIA

Telephone

+39 0471 81 84 84

e-mail address of the competent person
responsible for the Safety Data Sheet

reach@rothoblaas.com

1.4. Emergency telephone number

For urgent inquiries refer to
UK NPIS +44 0344 892 0111

Ireland NPIC (01) 809 2566
(01) 809 2166

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:

Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, category 2	H411	Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms:



Signal words:

Warning

Hazard statements:

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.
EUH205	Contains epoxy constituents. May produce an allergic reaction.

Precautionary statements:

P261	Avoid breathing dust / fume / gas / mist / vapours / spray.
P273	Avoid release to the environment.
P280	Wear protective gloves / eye protection / face protection.
P391	Collect spillage.

Contains:	Oxiran, mono[(C12-14-alkyloxy)methyl] derivs. 1,4-bis(2,3 epoxypropoxy)butane reaction product: bisphenol-A-(epichlorhydrin)
------------------	--

2.3. Other hazards

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

SECTION 3. Composition/information on ingredients

3.1. Substances

Information not relevant. See below.

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
reaction product: bisphenol-A-(epichlorhydrin)		
CAS 1675-54-3	$50 \leq x < 75$	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411
EC 216-823-5		
INDEX -		
Reg. no. 01-2119456619-26-XXXX		
Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.		
CAS 68609-97-2	$1 \leq x < 5$	Skin Irrit. 2 H315, Skin Sens. 1 H317
EC 271-846-8		
INDEX 603-103-00-4		
Reg. no. 01-2119485289-22-xxxx		
1,4-bis(2,3 epoxypropoxy)butane		
CAS 2425-79-8	$1 \leq x < 3$	Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Eye Dam. 1 H318, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 3 H412
EC 219-371-7		
INDEX 603-072-00-7		
Reg. no. 01-2119494060-45-xxxx		

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 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

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. If the product is flammable, use explosion-proof equipment. 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:

DEU	Deutschland	TRGS 900 (Fassung 31.1.2018 ber.) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2017
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 7 czerwca 2017 r
ROU	România	Monitorul Oficial al României 44; 2012-01-19
	TLV-ACGIH	ACGIH 2017

reaction product: bisphenol-A-(epichlorhydrin)

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,006	mg/l
Normal value in marine water	0,0006	mg/l
Normal value for fresh water sediment	0,996	mg/kg
Normal value for marine water sediment	0,0996	mg/kg
Normal value for water, intermittent release	0,018	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the food chain (secondary poisoning)	11	mg/kg
Normal value for the terrestrial compartment	0,196	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		0,75 mg/kg bw/d		0,75 mg/kg bw/d				
Inhalation						12,25 mg/m3		12,25 mg/m3
Skin		3,571 mg/kg bw/d		3,571 mg/kg bw/d		8,33 mg/kg bw/d		8,33 mg/kg bw/d

XEPOXF fluid component A

Revision N° 0

Data rev. 26/09/2018

Pag. 6 a 23

Calcium carbonate

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
AGW	DEU	10			INHAL
AGW	DEU	3			RESP
WEL	GBR	4			RESP

CALCIUM CARBONATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
WEL	GBR	4			
NDS	POL	10			

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0072	mg/l
Normal value in marine water	0,00072	mg/l
Normal value for fresh water sediment	307,16	mg/kg
Normal value for marine water sediment	30,72	mg/kg
Normal value for water, intermittent release	0,072	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 local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,5 mg/kg bw/d				
Inhalation				0,87 mg/m3				3,6 mg/m3
Skin				0,5 mg/kg bw/d				1 mg/kg bw/d

TITANIUM DIOXIDE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
VLA	ESP	10			
VLEP	FRA	10			
WEL	GBR	4			
NDS	POL	10			INHAL
TLV	ROU	10		15	
TLV-ACGIH		10			

1,4-bis(2,3 epoxypropoxy)butane

Predicted no-effect concentration - PNEC

XEPOXF fluid component A	Revision N° 0	Data rev. 26/09/2018	Pag. 7 a 23
--------------------------	---------------	----------------------	-------------

Normal value in fresh water	0,024	mg/l
Normal value in marine water	0,0024	mg/l
Normal value for fresh water sediment	0,084	mg/kg/d
Normal value for marine water sediment	0,0084	mg/kg/d
Normal value for water, intermittent release	0,24	mg/l
Normal value for the food chain (secondary poisoning)	0,028	mg/kg
Normal value for the terrestrial compartment	0,0027	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				0,33 mg/kg bw/d				
Inhalation				1,16 mg/m3				4,7 mg/m3
Skin				3,33 mg/kg bw/d				6,66 mg/kg bw/d

Legend:

(C) = CEILING (ACGIH) ; 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.

When choosing risk management measures and operating conditions, consult the exposition scenarios attached.

Provide an emergency shower with face and eye wash station.

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 Directive 89/686/EEC 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 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.

For information on controlling environmental exposure, see the exposure scenarios attached to this safety datasheet.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid
Colour	white
Odour	characteristic
Odour threshold	Not available
pH	7
Melting point / freezing point	Not available
Initial boiling point	> 80 °C
Boiling range	Not available
Flash point	> 80 °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	1,45 g/ml
Solubility	soluble in organic solvents
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

VOC (Directive 2010/75/EC) :	5,28 % - 76,52 g/litre
Viscosity at 25°C [mPa.s]	14000

SECTION 10. Stability and reactivity

1,4-bis(2,3 epoxypropoxy)butane

10.1. Reactivity

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

reaction product: bisphenol-A-(epichlorhydrin)

Reacts with: amines, aliphatic amines, amides, organic anhydrides.

Avoid contact with: strong oxidising agents, sodium hydroxide.

1,4-bis(2,3 epoxypropoxy)butane

Reacts with: amides, amines, aliphatic amines, organic anhydrides.

Avoid contact with: acids, oxidising agents.

10.2. Chemical stability

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

reaction product: bisphenol-A-(epichlorhydrin)

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.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Information not available

10.6. Hazardous decomposition products

reaction product: bisphenol-A-(epichlorhydrin)

In decomposition develops: carbon monoxide, halogenated compounds.

SECTION 11. Toxicological information

In the absence of experimental data for the mixture 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 mixture.

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 (calculated)

LC50 (Inhalation) of the mixture:

> 20 mg/l

LD50 (Oral) of the mixture:

>2000 mg/kg

LD50 (Dermal) of the mixture:

>2000 mg/kg

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

LD50 (Oral) 26800 mg/kg

LD50 (Dermal) > 4000 mg/kg

LC50 (Inhalation) > 0,15 mg/l Tempo di esposizione: 7 h

1,4-bis(2,3 epoxypropoxy)butane

LD50 (Oral) > 2000 mg/kg Rat

LD50 (Dermal) > 2150 mg/kg Rat

reaction product: bisphenol-A-(epichlorhydrin)

LD50 (Oral) > 2000 mg/kg Metodo: Linee Guida 420 per il Test dell'OECD

LD50 (Dermal) > 2000 mg/kg Metodo: Linee Guida 402 per il Test dell'OECD

SKIN CORROSION / IRRITATION

Causes skin irritation

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

Species: In rabbits

Exposure time: 24 h
Method: Acute dermal toxicity
Result: Irritant for the skin.

1,4-bis(2,3 epoxypropoxy)butane

Species: In rabbits
Evaluation: No irritation of the skin
Method: OECD guideline 404 for the Test
Result: Evaluated on the basis of scientific evidence in Humans
BPL: yes.

reaction product: bisphenol-A-(epichlorhydrin)

Skin - Erythema/Eschar 404 Acute Dermal Irritation/Corrosion in Rabbits 1.5 - 2-
Skin - Oedema 404 Acute Dermal Irritation/Corrosion in Rabbits 1.0 - 1,5
Eyes - 405 Acute Eye Irritation/Corrosion in Rabbits 0
Eyes - Conjunctival reddening in Rabbits 0.7
Skin - Moderately irritating in Rabbits 24 hrs
Skin - Highly irritating in Rabbits 24 hrs
Eyes - Slightly irritating in Rabbits

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

Species: In rabbits
Evaluation: No eye irritation
Method: OECD guideline 405 for the Test
Result: slight irritation.

1,4-bis(2,3 epoxypropoxy)butane

Species: In rabbits
Evaluation: Severe eye irritation
Method: OECD guideline 405 for the Test
Result: Irreversible effects on the eyes
BPL: yes.

reaction product: bisphenol-A-(epichlorhydrin)

Species: In rabbits
Evaluation: Weak eye irritation
Method: OECD guideline 405 for the Test
Result: Eye irritant.

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

Skin sensitization

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

Type of Test: Buehler Test

Route of exposure: Skin

Species: Guinea pigs

Method: OPPTS 870.2600

Result: Can cause sensitivity through contact with the skin.

Skin sensitization

1,4-bis(2,3 epoxypropoxy)butane

Route of exposure: Skin

Species: Guinea pigs

Result: Causes sensitization.

Skin sensitization

reaction product: bisphenol-A-(epichlorhydrin)

In an LLNA in mice, conducted according to OECD 429, the estimated EC3 corresponded to a concentration of 5.7%; this result suggests that BADGE is a moderate skin sensitizer in this test system. In a guinea pig maximisation study, performed according to OECD 406, BADGE induced a positive skin reaction in 100% of the laboratory animals at a 50% stimulus dose concentration. Therefore, BADGE is an "extreme" skin sensitizer under the conditions of this study. BADGE was also positive for skin sensitization in a study using the Buehler method on guinea pigs, conducted according to OECD 406.

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

Type of Test: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with or without metabolic activation

Method: OECD guideline 471 for the Test

Result: positive

Type of Test: In vitro gene mutation test on mammal cells

Test system: Chinese hamster ovarian cells

Concentration: 0.5 - 5,000 µg/ml

Metabolic activation: with or without metabolic activation

Method: OECD guideline 476 for the Test

Result: negative.

Type of Test: In vivo micronucleus test

Species assay: Mice (male and female)

Type of cell: Bone marrow

Method of application: Intraperitoneal injection

Exposure time: 24 hr, 48 hr and 72 hr

Method: OECD guideline 474 for the Test

Result: negative.

1,4-bis(2,3 epoxypropoxy)butane

Concentration: 10 - 5000 µg/plate
 Metabolic activation: with or without metabolic activation
 Method: OECD guideline 471 for the Test
 Result: positive
 BPL: yes
 Concentration: 1 - 100 µg/L
 Metabolic activation: with or without metabolic activation
 Method: OECD guideline 473 for the Test
 Result: positive
 BPL: yes.
 Type of Test: In vivo micronucleus test
 Species assay: Mice
 Type of cell: Somatic
 Method of application: Oral
 Exposure time: 4 d
 Doses: 187.5 - 750 mg/kg
 Method: OECD guideline 474 for the Test
 Result: negative
 BPL: yes
 Type of test: unscheduled DNA synthesis test
 Species assay: Rats
 Type of cell: Liver cells
 Method of application: Oral
 Method: OECD guideline 486 for the Test
 Result: negative
 BPL: yes.

reaction product: bisphenol-A-(epichlorhydrin)

In several studies, BADGE has been shown to induce gene mutation in Ames/Salmonella TA1535 and TA100 TEST strains. In general, mutagenic activity was greater without liver metabolic S9 activation. gene mutation was induced in L5178Y mouse lymphoma cells. Gene mutation and chromosomal damage were induced in Chinese hamster cells V79. Cell transformation was induced in Syrian hamster BHK cells based on clonal growth in soft agar. No evidence of chromosomal damage was found in an oral probe study in a dominant lethal test conducted in mice at high doses of up to 10 grams/kg and in a micronuclear test conducted in mice at high doses of up to 5000 mg/kg. A spermatocytic cytogenetic assay on male mice under treatment for 5 days with oral probe at a high dose of 3000 mg/kg proved negative. An increase in the frequency of chromosomal damage was not induced in a cytogenetic assay on Chinese hamster bone marrow cells, performed by oral probe with a high dose of up to 3300 mg/kg. An increase in DNA strand breakage was not induced in rat liver cells after oral gastric probe treatment with 500 mg/kg, measured by alkaline elution.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

reaction product: bisphenol-A-(epichlorhydrin)

In a rat oral probe study, performed according to OECD 453, there was no evidence of carcinogenicity at high doses of up to 100 mg/kg/day. Studies of cutaneous exposure were performed on male mice and female rats according to OECD 453. No evidence of carcinogenicity was observed in male mice treated at high doses of up to 100 mg/kg/day and in female rats exposed to high doses of up to 1000 mg/kg/day.

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Adverse effects on sexual function and fertility
Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

Species: Rats, male and female
Method of application: Dermal
Duration of individual treatment: 13 Weeks
Treatment frequency: 5 days/week
General parental toxicity: No level of harmfulness observed: 100 mg/kg of body weight
Method: OECD guideline 411 for the Test.

Adverse effects on sexual function and fertility
reaction product: bisphenol-A-(epichlorhydrin)

Type of Test: Bigenerational study
Species: Rats, male and female
Method of application: Oral
Doses: >750 Milligrams per kilo
General parental toxicity: Level within which no effects are observed: 540 mg/kg of body weight
General F1 toxicity: Level within which no effects are observed: 540 mg/kg of body weight
Symptoms: No side effects.
Method: OECD guideline 416 for the Test
Result: No effect was found on fertility and early embryo development.

Harmful effects were seen on the development of offspring

Adverse effects on development of the offspring

Adverse effects on development of the offspring
Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

Species: Rats, female
Method of application: Dermal
Duration of individual treatment: 6 h
General maternal toxicity: No level of harmfulness observed: 200 mg/kg of body weight
Developmental toxicity: No level of harmfulness observed: 200 mg/kg of body weight
Method: OECD guideline 414 for the Test
Result: No teratogenic effects.

Adverse effects on development of the offspring
reaction product: bisphenol-A-(epichlorhydrin)

BADGE did not show any signs of developmental toxicity in rats and rabbits exposed by oral probe, or in rabbits treated by the dermal route, in BPL studies performed according to OECD 414. Oral probe studies were conducted at high doses of up to 180 mg/kg/day which produced maternal toxicity based on the reduction in body weight gain. In rabbits, the toxicity study was conducted at high doses of up to 300 mg/kg/day which induced maternal toxicity based on the reduction in body weight gain.
Species: In rabbits, female
Method of application: Dermal
General maternal toxicity: No level of harmfulness observed: 30 mg/kg of body weight
Method: Other reference guidelines
Result: No teratogenic effects.
Species: In rabbits, female

Method of application: Oral

General maternal toxicity: No level of harmfulness observed: 60 mg/kg of body weight

Method: OECD guideline 414 for the Test

Result: No teratogenic effects.

Species: Rats, female

Method of application: Oral

General maternal toxicity: No level of harmfulness observed: 180 mg/kg of body weight

Method: OECD guideline 414 for the Test

Result: No teratogenic effects.

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

Species: Rats, male and female

NOEL: 1 mg/kg

LOAEL: 10 mg/kg

Method of application: Skin contact

Exposure time: 13 Weeks Number of exposures: 5 days/week for 13 weeks

Method: OECD guideline 411 for the Test.

1,4-bis(2,3 epoxypropoxy)butane

1,4-bis-(2,3-epoxypropoxy)-butane:

Species: Rats, male and female

No level of harmfulness observed: 200 mg/kg

Method of application: Ingestion

Exposure time: 28 d Number of exposures: 7 d

Method: Subacute toxicity.

reaction product: bisphenol-A-(epichlorhydrin)

Species: Rats, male and female

NOAEL: 50 mg/kg

Method of application: Ingestion

Exposure time: 14 Weeks Number of exposures: 7 d

Method: Subchronic toxicity

Species: Rats, male and female

NOEL: 10 mg/kg

Method of application: Skin contact

Exposure time: 13 Weeks Number of exposures: 5 d

Method: Subchronic toxicity

Species: Mice, male

NOAEL: 100 mg/kg

Method of application: Skin contact

Exposure time: 13 Weeks Number of exposures: 3 d

Method: Subchronic toxicity

Repeated dose toxicity - Evaluation

No adverse effects were observed in chronic toxicity tests.

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

reaction product: bisphenol-A-(epichlorhydrin)

There is no classification for toxicity by inhalation.

SECTION 12. Ecological information

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

12.1. Toxicity

1,4-bis(2,3 epoxypropoxy)butane

Toxicity for daphnia and other aquatic invertebrates:

CE50 (Daphnia magna (large water flea)): 75 mg/l

Exposure time: 24 h

Type of Test: Static test

Substance to be tested: Fresh water

Method: OECD guideline 202 for the Test

BPL: no

Toxicity for algae:

EL50 : > 160 mg/l

Exposure time: 72 h

Type of Test: Static test

Substance to be tested: Fresh water

Method: OECD guideline 201 for the Test

BPL: yes

Toxicity for bacteria:

IC50 (active sludge): > 100 mg/l

Exposure time: 3 h

Type of Test: Static test

Substance to be tested: Fresh water

Method: OECD guideline 209 for the Test

BPL: no.

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

LC50 - for Fish

> 100 mg/l Linee Guida 203 per il Test dell'OECD

EC50 - for Crustacea

7,2 mg/l/48h OECD TG 202

EC50 - for Algae / Aquatic Plants

843 mg/l OECD TG 201

1,4-bis(2,3 epoxypropoxy)butane

LC50 - for Fish

24 mg/l Linee Guida 203 per il Test dell'OECD

reaction product: bisphenol-A-(epichlorhydrin)

LC50 - for Fish

1,41 mg/l/96h Tipo di test: Prova statica

EC50 - for Crustacea

2,7 mg/l/48h Tempo di esposizione: 48 h

12.2. Persistence and degradability

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

Type of test: aerobic

Inoculum: active sludge

Concentration: 100 mg/l

Result: Quickly biodegradable.

Biodegradation: 87 %

Exposure time: 28 d

Method: OECD Guideline 301F for the Test.

1,4-bis(2,3 epoxypropoxy)butane

Result: Not immediately biodegradable.

Biodegradation: 38 %

Exposure time: 28 d

Method: OECD guideline 301E for the Test.

reaction product: bisphenol-A-(epichlorhydrin)

In an "improved" OECD 301F study, within the 28-day contact period, the degree of biodegradation was 5%. In a study conducted according to OECD 301B, biodegradation reached 6 - 12% after 28 days of contact. Therefore BADGE is not readily biodegradable under the study conditions.

Water stability:

Degradation half-life (TD50): 4.83 d (25 °C)

pH: 4

Method: OECD TG 111

Observations: Fresh water

Degradation half-life (TD50): 7.1 d (25 °C)

pH: 9

Method: OECD TG 111

Observations: Fresh water

Degradation half-life (TD50): 3.58 d (25 °C)

pH: 7

Method: OECD TG 111

Observations: Fresh water.

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

NOT rapidly degradable

12.3. Bioaccumulative potential

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

log Pow: 3.77 (20 °C)

Method: OECD guideline 107 for the Test.

1,4-bis(2,3 epoxypropoxy)butane

Inoculum: active sludge

Concentration: 20 mg/l

Result: Not immediately biodegradable.

Biodegradation: 43 %

Exposure time: 28 d

Method: OECD Guideline 301F for the Test.

reaction product: bisphenol-A-(epichlorhydrin)

Log Pow 2.64 - 3.78

BCF 3 - 31 31,00

Low potential.

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.
BCF

200

reaction product: bisphenol-A-(epichlorhydrin)
Partition coefficient: n-octanol/water
BCF

2,281

< 6,8 10 ug/l

12.4. Mobility in soil

1,4-bis(2,3 epoxypropoxy)butane

Koc: 12.59 Method: OECD guideline 121 for the Test.

reaction product: bisphenol-A-(epichlorhydrin)

Diffusion to the various environmental sectors: Koc: 445.

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.
Partition coefficient: soil/water

> 5,63

12.5. Results of PBT and vPvB assessment

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

This substance/mixture contains no components that are considered persistent, bioaccumulative or toxic (PBT), or very persistent/very bioaccumulative (vPvB) at concentrations of 0.1% or greater.

reaction product: bisphenol-A-(epichlorhydrin)

This substance/mixture contains no components that are considered persistent, bioaccumulative or toxic (PBT), or very persistent and very bioaccumulative (vPvB) at concentrations of 0.1% or greater.

12.6. Other adverse effects

Oxiran, mono[(C12-14-alkyloxy)methyl] derivs.

An environmental hazard cannot be ruled out in the event of improper handling or disposal. Toxic for aquatic life.

reaction product: bisphenol-A-(epichlorhydrin)

An environmental hazard cannot be ruled out in the event of improper handling or disposal. Toxic for aquatic life with long lasting effects.

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

ADR / RID, IMDG,	3082
IATA:	
ADR / RID:	In accordance with Special Provision 375, this product, when is packed in receptacles of a capacity $\leq$ 5Kg or 5L, is not submitted to ADR provisions.
IMDG:	In accordance with Section 2.10.2.7 of IMDG Code, this product, when is packed in receptacles of a capacity $\leq$ 5Kg or 5L, is not submitted to IMDG Code provisions.
IATA:	In accordance with SP A197, this product, when is packed in receptacles of a capacity $\leq$ 5Kg or 5L, is not submitted to IATA dangerous goods regulations.

14.2. UN proper shipping name

ADR / RID:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin))
IMDG:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin))
IATA:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin))

14.3. Transport hazard class(es)

ADR / RID:	Class: 9	Label: 9
IMDG:	Class: 9	Label: 9
IATA:	Class: 9	Label: 9



14.4. Packing group

ADR / RID, IMDG,	III
IATA:	

14.5. Environmental hazards

ADR / RID:	Environmentall y Hazardous
IMDG:	Marine Pollutant
IATA:	Environmentall y Hazardous



14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 90	Limited Quantities: 5 L	Tunnel restriction code: (-)
IMDG:	Special Provision: - EMS: F-A, S-F	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 450 L	Packaging instructions : 964
	Pass.:	Maximum quantity: 450 L	Packaging instructions : 964
	Special Instructions:	A97, A158, A197	

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: E2

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

Product

Point 3

Contained substance

Point 52 DI-'ISONONYL' PHTHALATE, MIXTURE OF ESTERS Reg. no.: 01-2119430798-28-xxxx

Substances in Candidate List (Art. 59 REACH)

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

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 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

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information

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

EUH205	Contains epoxy constituents. May produce an allergic reaction.
H319	Causes serious eye irritation
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H411	Toxic to aquatic life with long-lasting effects
H302	Harmful if swallowed
H312	Harmful in contact with skin
H332	Harmful if inhaled
H318	Causes serious eye damage
H412	Harmful to aquatic life with long-lasting effects

Use descriptor system:

AC	1	Vehicles
AC	13	Plastic articles
AC	2	Machinery, mechanical appliances, electrical/electronic articles
AC	4	Stone, plaster, cement, glass and ceramic articles
AC	7	Metal articles
ERC	10a	Wide dispersive outdoor use of long-life articles and materials with low release
ERC	10b	Wide dispersive outdoor use of long-life articles and materials with high or intended release (including abrasive processing)
ERC	11a	Wide dispersive indoor use of long-life articles and materials with low release
ERC	11b	Wide dispersive indoor use of long-life articles and materials with high or intended release (including abrasive processing)
ERC	12a	Industrial processing of articles with abrasive techniques (low release)
ERC	12b	Industrial processing of articles with abrasive techniques (high release)
ERC	5	Industrial use resulting in inclusion into or onto a matrix
ERC	7	Industrial use of substances in closed systems
PC	1	Adhesives, sealants
PC	15	Non-metal-surface treatment products
PC	18	Ink and toners
PC	32	Polymer preparations and compounds
PROC	1	Use in closed process, no likelihood of exposure

XEPOXF fluid component A	Revision N° 0	Data rev. 26/09/2018	Pag. 22 a 23
--------------------------	---------------	----------------------	--------------

PROC	10	Roller application or brushing
PROC	13	Treatment of articles by dipping and pouring
PROC	19	Hand-mixing with intimate contact and only PPE available
PROC	2	Use in closed, continuous process with occasional controlled exposure
PROC	22	Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting
PROC	23	Open processing and transfer operations with minerals/metals at elevated temperature
PROC	5	Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
PROC	8a	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
PROC	8b	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
PROC	9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
SU	10	Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU	12	Manufacture of plastics products, including compounding and conversion
SU	13	Manufacture of other non-metallic mineral products, e.g. plasters, cement
SU	15	Manufacture of fabricated metal products, except machinery and equipment
SU	16	Manufacture of computer, electronic and optical products, electrical equipment
SU	17	General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
SU	18	Manufacture of furniture
SU	19	Building and construction work

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

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 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
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X 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

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.

Changes to previous review:

The following sections were modified:

08 / 09 / Exposition Scenarios.

Exposition Scenarios

Substance	reaction product: bisphenol-A-(epichlorhydrin)
Scenario Title	Resina epossidica da bisfenolo A
Revision nr.	1
File	1

Safety Data Sheet

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

1.1. Product identifier

Product name

XEPOX 26 component B
XEPOXF Fluid component B
XEPOXF400 Fluid component B
XEPOXF3000 Fluid component B
XEPOXF5000 Fluid component B
Modified polyamines

Chemical name and synonym

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

Identified Uses:

Component (epoxy/melamine) for bicomponent epoxy adhesive for professionals uses in construction sector. Indicated for gluing of wooden structural elements, metals, concrete and FRP.

Professional uses:

SU: 10, 13, 17, 19.
ERC: 10a, 10b, 11a, 11b.
PROC: 10, 13, 19, 9.
AC: 13, 2, 4.
PC: 1, 15, 18.

Industrial uses:

SU: 12, 13, 15, 16, 17, 18, 19.
ERC: 10a, 10b, 11a, 11b, 12a, 12b, 5, 7.
PROC: 1, 10, 13, 19, 2, 22, 23, 5, 8a, 8b, 9.
AC: 1, 2, 4, 7.
PC: 1, 32.

1.3. Details of the supplier of the safety data sheet

Name	Rotho Blaas Srl
Full address	via dell'Adige 2/1 - Cortaccia (BZ) 39040 ITALY
Country	ITALIA
Telephone	+39 0471 81 84 84

e-mail address of the competent person responsible for the Safety Data Sheet

reach@rothoblaas.com

1.4. Emergency telephone number

For urgent inquiries refer to

UK NPIS +44 0344 892 0111

Ireland NPIC (01) 809 2566
(01) 809 2166

Rotho Blaas Srl

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:

Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
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 1	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.

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:

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.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains: TETA May produce an allergic reaction.

Precautionary statements:

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

Contains: AEP
BADGE reaction product with IPDA
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 greater than 0,1%.

SECTION 3. Composition/information on ingredients

3.1. Substances

Information not relevant. See below.

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
BADGE reaction product with IPDA		
CAS 38294-64-3	$25 \leq x < 30$	Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Chronic 3 H412
EC 500-101-4		
INDEX -		
Reg. no. 01-2119965165-33-0012		
BENZYL ALCOHOL		
CAS 100-51-6	$15 \leq x < 30$	Acute Tox. 4 H302, Eye Irrit. 2 H319
EC 202-859-9		
INDEX 603-057-00-5		
Reg. no. 1-2119492630-38-0000		
3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE		
CAS 2855-13-2	$3 \leq x < 5$	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-xxxx		
AEP		
CAS 140-31-8	$1 \leq x < 3$	Repr. 2 H361, 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-xxxx		
TETA		
CAS 90640-67-8	$0 \leq x < 1$	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 292-588-2		
INDEX 612-059-00-5		
Reg. no. 01-2119487919-13-xxxx		

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. If the product is flammable, use explosion-proof equipment. 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

Manipulation:

It is necessary to observe the alert hazard normally indicated in the manipulation of the chemical product. Avoid skin contact.

Mechanical ventilation and local extractor fan are required. The air must be directed in the opposite way of the persons. The efficiency of the installations has to stay under control on a regular basis.

Storage:

Conserve the container well closed avoiding humidity. Keep away from food.

Protect from cooling below 5°C and from heating over 35°C.

Avoid the contact with copper and their league.

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)

See the exposure scenarios attached to this safety datasheet.

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

DEU
GBR
POL

Deutschland
United Kingdom
Polska

TRGS 900 (Fassung 31.1.2018 ber.) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
EH40/2005 Workplace exposure limits
ROZPORZĄDZENIE MINISTRA RODZIN Y, PRAC Y I POLITYKI SPOŁECZNEJ z dnia 12 czerwca 2018 r

XEPOXF fluid component B

Revision N° 1

Data rev. 2/05/2019

Pag. 6 a 24

BADGE reaction product with IPDA

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,011	mg/l
Normal value in marine water	0,111	mg/l
Normal value for fresh water sediment	4320	mg/kg
Normal value for marine water sediment	432	mg/kg/d
Normal value of STP microorganisms	10	mg/l
Normal value for the food chain (secondary poisoning)	1	mg/kg
Normal value for the terrestrial compartment	864	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		0.99 mg/kg bw/d		0.05 mg/kg bw/d				
Inhalation		1.5 mg/m3		0.074 mg/m3	VND	6,99 mg/m3	VND	0.493 mg/m3
Skin		0.05 mg/kg bw/d			VND	NPI	VND	0,14 mg/kg bw/d

BENZYL ALCOHOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
AGW	DEU	22	5	44	10
NDS	POL	240			

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 wwt
Normal value for marine water sediment	0,527	mg/kg wwt
Normal value for water, intermittent release	2,3	mg/l
Normal value of STP microorganisms	39	mg/l
Normal value for the terrestrial compartment	0,456	mg/kg wwt

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/m^3	VND	5,4 mg/m^3	VND	110 mg/m^3	VND	22 mg/m^3
Skin	VND	20 mg/kg bw/d	VND	4 mg/kg bw/d	VND	40 mg/kg bw/d		8 mg/kg bw/d

Calcium carbonate

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
AGW	DEU	10			INHAL
AGW	DEU	3			RESP

XEPOXF fluid component B	Revision N° 1	Data rev. 2/05/2019	Pag. 7 a 24
--------------------------	---------------	---------------------	-------------

WEL GBR 4 RESP

CALCIUM CARBONATE

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min
		mg/m3 ppm	mg/m3 ppm
WEL	GBR	4	
NDS	POL	10	

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

AEP

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	1	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
Inhalation					80 mg/m3	10,6 mg/m3	0,015 mg/m3	10,6 mg/m3
Skin								3,33 mg/kg bw/d

TETA

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,19	mg/l
Normal value in marine water	0,038	mg/l
Normal value for fresh water sediment	95,9	mg/kg
Normal value for marine water sediment	19,2	mg/kg
Normal value for water, intermittent release	0,2	mg/l
Normal value of STP microorganisms	4,25	mg/l
Normal value for the food chain (secondary poisoning)	0,18	mg/kg
Normal value for the terrestrial compartment	19,1	mg/kg

XEPOXF fluid component B	Revision N° 1	Data rev. 2/05/2019	Pag. 8 a 24
--------------------------	---------------	---------------------	-------------

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	0,41 mg/kg bw/d				
Inhalation	VND	1600 mg/m3	VND	0,29 mg/m3	VND	5380 mg/m3	VND	1 mg/m3
Skin	1 mg/cm2	8 mg/kg bw/d	VND	0,43 mg/cm2			0,028 mg/cm2	0,57 mg/kg bw/d

Legend:

(C) = CEILING (ACGIH) ; 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 Directive 89/686/EEC 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 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.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid
Colour	yellow
Odour	characteristic
Odour threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point	> 80 °C
Boiling range	Not available
Flash point	> 80 °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	1,45 g/ml
Solubility	Not available
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

VOC (Directive 2010/75/EC) :	17,00 %	-	246,51	g/litre
VOC (volatile carbon) :	13,20 %	-	191,47	g/litre
Viscosity at 25°C [mPa.s]	11500			

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.

AEP

Avoid contact with: acids, isocyanates, aluminium alloys.

Polymerises developing heat on contact with: epoxy compounds.

May attack: aluminium.

Reacts violently developing heat on contact with: acids, isocyanates.

Stable in normal conditions of use and storage.

TETA

Polymerises developing heat on contact with: epoxy compounds.

10.2. Chemical stability

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

AEP

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.

BADGE reaction product with IPDA

Reacts with: epoxy compounds, isocyanates.

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.

AEP

Polymerises developing heat on contact with: epoxy compounds.

May react violently with: acids, isocyanates.

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.

AEP

Avoid contact with: acids.

TETA

Avoid exposure to: high temperatures.

10.5. Incompatible materials

BENZYL ALCOHOL

Incompatible with: sulphuric acid, oxidising substances, aluminium.

AEP

Incompatible materials: aluminium.

TETA

Avoid contact with: acids, oxidising agents, nitrites.

Attacks: metals.

10.6. Hazardous decomposition products

Information not available

SECTION 11. Toxicological information

In the absence of experimental data for the mixture 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 mixture.

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

BENZYL ALCOHOL

Subacute oral toxicity

Parameter: NOAEL(C) (BENZYL ALCOHOL; CAS No: 100-51-6)

Route of exposure: Oral

Species: Rats

Effective dose: 400 mg/kg bw/day

Subacute inhalatory toxicity

Parameter: NOAEL(C) (BENZYL ALCOHOL; CAS No: 100-51-6)

Route of exposure: Inhalation

Species: Rats

Effective dose: 1072 mg/m³

Method: OECD 412.

Interactive effects

Information not available

ACUTE TOXICITY (calculated)

LC50 (Inhalation) of the mixture:

Not classified (no significant component)

LD50 (Oral) of the mixture:

>2000 mg/kg

LD50 (Dermal) of the mixture:

>2000 mg/kg

TETA

LD50 (Oral) 1716,2 mg/kg Rat

LD50 (Dermal) 1465,4 mg/kg Rabbit

AEP

LD50 (Oral) 2097 mg/kg rat

LD50 (Dermal) 866 mg/kg rabbit

BENZYL ALCOHOL

LD50 (Oral) 1620 mg/kg Rat

LD50 (Dermal) 2000 mg/kg dw Rabbit

LC50 (Inhalation) > 4178 mg/l/4h Rat OCSE 403

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

LD50 (Oral) 1,03 mg/l simile a Linea Guida OECD 401

BADGE reaction product with IPDA

LD50 (Oral) 300 mg/kg rat

LD50 (Dermal) 2000 mg/kg rat

TETA

Inhalation: May emit gases, vapour or dusts that are highly irritating to the respiratory system. Exposure to decomposition products may be hazardous to health. Serious delayed effects may occur following exposure.

Ingestion: Harmful if ingested. May cause burning in the mouth, throat and stomach.

Contact with the skin: Causes severe burns. Harmful upon contact with skin. May cause an allergic skin reaction.

Eye contact: Causes serious eye damage.

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Evaluation of acute toxicity:

Moderate toxicity after brief contact with the skin. Moderate toxicity after single ingestion.

Experimental/calculated data:

LD50 in rats (oral): 1,030 mg/kg (similar to OECD guideline 401)

LC50 in rats (inhalation): > 5.01 mg/l 4 h (OECD - guideline 403)

LD50 in rats (dermal): > 2,000 mg/kg (OECD - guideline 402)

The European Union has classified the substance as 'harmful'.

SKIN CORROSION / IRRITATION

Corrosive for the skin

TETA

OECD 405 Acute Eye Irritation/Corrosion in Rabbits Corrosive to the Skin
OECD 404 Acute Dermal Irritation/Corrosion in Rabbits Corrosive to the Eyes.

AEP

Species: In rabbits

BENZYL ALCOHOL

Primary skin irritation
Dermal irritation (OECD 404): slightly irritant (Determined on rabbit skin)
Eye irritation
Eye irritation (OECD 405): irritant (Determined in rabbit eyes).

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Evaluation of the irritant effect:
Corrosive. Harmful to skin and eyes.
Experimental/calculated data:
Corrosion/irritation of skin in rabbits: Corrosive.
Sever ocular damage/ocular irritation in rabbits: irreversible damage (OECD guideline 405).

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

AEP

Species: In rabbits
Evaluation: Severe eye irritation
Result: Irreversible effects on eyes.

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin
May produce an allergic reaction. Contains: TETA

AEP

Route of exposure: Skin
Species: Guinea pigs
Method: OECD guideline 406 for the Test
Result: Causes sensitization.

Skin sensitization
TETA

OECD 406 Skin Sensitization Guinea pig Sensitizing agent.

Skin sensitization
BENZYL ALCOHOL

Sensitization: (Guinea Pig): negative.

Skin sensitization
3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Evaluation of the sensitizing effect:
Possible sensitization after repeated contact.
Experimental/calculated data:
Guinea Pig Maximisation Test: skin sensitization (OECD - guideline 406).

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

TETA

OECD 471 Bacterial Reverse Mutation Test - Positive
OECD 482 Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells in vitro - Negative
OECD 474 Mammalian Erythrocyte Micronucleus Test - Negative.

AEP

In vitro genotoxicity
:
Metabolic activation: with or without metabolic activation
Method: OECD guideline 471 for the Test
Result: negative
:
Metabolic activation: with or without metabolic activation
Method: OECD guideline 476 for the Test
Result: negative
:
Metabolic activation: negative
Method: OECD guideline 482 for the Test
Result: negative.

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Mutagenicity evaluation:
No mutagenic effect was found in various experiments on bacteria and mammals. The substance was not mutagenic in experiments on mammals.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

TETA

OECD 451 Carcinogenicity Studies in Mice 3 days per week - Negative Cutaneous.

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Evaluation of carcinogenicity:
Study scientifically not justified.

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

TETA

According to column 2 of Annex VII - X of regulation (EC) 1907/2006, testing of this substance property is not necessary.

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Evaluation of carcinogenicity:
Study scientifically not justified.

Harmful effects on sexual function and fertility

Adverse effects on sexual function and fertility
AEP

Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

Adverse effects on sexual function and fertility
BENZYL ALCOHOL

Parameter: NOAEL(C) (BENZYL ALCOHOL; CAS No: 100-51-6)
Route of exposure: Rats
Effective dose: 1072 mg/m3.

Adverse effects on development of the offspring
TETA

OECD 414 Prenatal Developmental Toxicity Study in Rats 0 to 750 mg/kg NOAEL
OECD 414 Prenatal Developmental Toxicity Study in Rabbits 0 a 125 mg/kg NOAEL.

Adverse effects on development of the offspring
3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Animal tests showed no signs of foetal damage.

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

May cause damage to organs

AEP

2-(piperazin-1-yl)ethanamine:

Route of exposure: Inhalation

Target organ: Respiratory tract

Evaluation: Causes damage to organs through prolonged or repeated exposure.

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

The substance can damage the liver as a result of repeated ingestion of large quantities, as demonstrated by testing in animals.

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

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

BENZYL ALCOHOL

Acute toxicity (short-term) on fish

Parameter: CL50 (BENZYL ALCOHOL; CAS No: 100-51-6)

Species: Pimephales promelas

Effective dose: = 770 mg/l

Exposure time: 1 h

Parameter: CL50 (BENZYL ALCOHOL; CAS No: 100-51-6)

Species: Pimephales promelas

Effective dose: 460 mg/l

Exposure time: 96 h

Acute toxicity (short-term) for daphnia

Parameter: EL50 (BENZYL ALCOHOL; CAS No: 100-51-6)

Species: Daphnia magna

Effective dose: = 230 mg/l

Exposure time: 48 h.

Method: OECD 202

Parameter: EL50 (BENZYL ALCOHOL; CAS No: 100-51-6)

Species: Daphnia magna

Effective dose: 66 mg/l

Exposure time: 21 days

Method: OECD 211

Chronic toxicity (long-term) for daphnia

Parameter: NOEC (BENZYL ALCOHOL; CAS No: 100-51-6)

Species: Daphnia magna (large water flea)

Effective dose: 51 mg/l

Exposure time: 21 days

Method: OECD 211

Acute toxicity (short term) for algae
Parameter: EL50 (BENZYL ALCOHOL; CAS No: 100-51-6)
Species: *Pseudokirchneriella subcapitata*
Effective dose: = 770 mg/l
Exposure time: 72 h
Method: OECD 201.

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Harmful (acute harmfulness) to aquatic organisms. The correct introduction of low concentrations in a biological purification plant should not compromise the breakdown of activated sludge.

Toxicity to fish:

LC50 (96 h) 110 mg/l, *Leuciscus idus* (Directive 84/449/EEC, C.1, semi-static)

Nominal value (confirmed by concentration controls).

Aquatic invertebrates:

EC50 (48 h) 23 mg/l, *Daphnia magna* (OECD - guideline 202, Part 1, static)

Nominal value (confirmed by concentration controls).

CE50 (48 h) 388 mg/l, *Chaetogammarus marinus* (semi-static)

The indications of toxic action refer to the nominal concentration.

Aquatic plants:

CE50 (72 h) > 50 mg/l (growth rate), *Scenedesmus subspicatus* (Directive 88/302/EEC, part C, p 89)

Nominal concentration.

CE10 (72 h) 11,2 mg/l (growth rate), *Scenedesmus subspicatus* (Directive 88/302/EEC, part C, p 89)

Nominal concentration.

Microorganisms/Effects on active sludge:

CE10 (18 h) 1.120 mg/l, *Pseudomonas putida* (DIN 38412 part 8)

Nominal concentration.

Chronic toxicity to fish:

Study scientifically not justified.

Chronic toxicity for aquatic invertebrates:

NOEC (21 d) 3 mg/l, *Daphnia magna* (OECD - guideline 202, part 2, semi-static)

Nominal value (confirmed by concentration controls).

Evaluation of terrestrial toxicity:

Study scientifically not justified.

TETA

LC50 - for Fish 330 mg/l/96h EPA OPPTS EPA OTS 797 1400

EC50 - for Crustacea 31,1 mg/l/48h EU EC C.2 *Daphnia* sp.

EC50 - for Algae / Aquatic Plants 2,5 mg/l/72h OECD 201

AEP

LC50 - for Fish 368 mg/l/96h

EC50 - for Crustacea 45 mg/l/48h

EC50 - for Algae / Aquatic Plants 494 mg/l/72h

BENZYL ALCOHOL

EC50 - for Algae / Aquatic Plants 770 mg/l/72h *Pseudokirchneriella subcapitata*

BADGE reaction product with IPDA

LC50 - for Fish 1,79 mg/l/96h

EC50 - for Crustacea 1,75 mg/l/48h

EC50 - for Algae / Aquatic Plants 2,5 mg/l/72h

EC10 for Algae / Aquatic Plants 1,99 mg/l

Chronic NOEC for Crustacea 0,826 mg/l

Chronic NOEC for Algae / Aquatic Plants

2,07 mg/l

12.2. Persistence and degradability

AEP

Inoculum: active sludge

Result: Not immediately biodegradable.

Biodegradation: 0%

Exposure time: 28 d

Method: OECD Guideline 301F for the Test.

BENZYL ALCOHOL

Parameter: Biodegradation (BENZYL ALCOHOL; CAS No.: 100-51-6)

Effective dose: 92 - 96 %

Exposure time: 14 days

Method: OECD 301C/ISO 9408/EEC 92/69/V, C.4-F

Parameter: Reduction in DOC (BENZYL ALCOHOL; CAS No: 100-51-6)

Effective dose: 95 - 97 %

Exposure time: 21 days

Method: OECD 301A/ISO 7827/EEC 92/69/V, C.4-A

Easily biodegradable.

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Evaluation of biodegradability and elimination (H₂O):

Poor biodegradability (according to OECD criteria).

Disposal considerations:

8% reduction in DOC (28 d) (Directive 92/69/EEC, C.4-A) (aerobic, mainly domestic discharge)

Evaluation of stability in water:

When in contact with water, the substance slowly hydrolyses.

Data on stability in water (hydrolysis):

< 10% (5 d) (50°C, pH 7), (OECD - guideline 111, pH 7).

TETA

NOT rapidly degradable

AEP

NOT rapidly degradable

BENZYL ALCOHOL

Rapidly degradable

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Solubility in water

1000 - 10000 mg/l

NOT rapidly degradable

BADGE reaction product with IPDA

Solubility in water

22180 mg/l

NOT rapidly degradable

12.3. Bioaccumulative potential

AEP

Species: Fish

Observations: Does not bioaccumulate.

BENZYL ALCOHOL

Poor bioaccumulation.

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Evaluation of bioaccumulation potential:

Based on the n-octanol/water partition coefficient (log Pow), accumulation in organisms cannot be predicted.

Bioaccumulation potential:

Based on the n-octanol/water partition coefficient (log Pow), accumulation in organisms is not expected. Indication from the literature.

TETA

BCF

99

AEP

Partition coefficient: n-octanol/water

-1,48

12.4. Mobility in soil

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Evaluation of transport between environmental sectors:

Volatility: The substance does not evaporate into the atmosphere from the surface of the water.

Adsorption in soil: Absorption into the solid phase of the soil is not expected.

AEP

Partition coefficient: soil/water

37000

12.5. Results of PBT and vPvB assessment

AEP

This substance/mixture contains no components that are considered persistent, bioaccumulative or toxic (PBT), or very persistent and very bioaccumulative (vPvB) at concentrations of 0.1% or greater.

BENZYL ALCOHOL

This product is not, or does not contain, a substance called PBT or vPvB.

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

According to Annex XIII of Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not meet the requirements for classification as PBT (persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self-assessment.

12.6. Other adverse effects

AEP

An environmental hazard cannot be ruled out in the event of improper handling or disposal. Harmful to aquatic life with long lasting effects.

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Adsorbable Organic Halides (AOX):

The product does not contain organic halides.

Further ecotoxicity information:

Due to the product's pH value, the residues must be neutralized before entering the purification plant. The correct introduction of low concentrations in a biological purification plant should not compromise the breakdown of activated sludge.

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

ADR / RID, IMDG, 3267
IATA:

14.2. UN proper shipping name

ADR / RID: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (BADGE reaction product with IPDA; 3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE)
IMDG: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (BADGE reaction product with IPDA; 3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE)
IATA: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (BADGE reaction product with IPDA; 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, II
IATA:

14.5. Environmental hazards

ADR / RID: NO
IMDG: NO
IATA: NO

14.6. Special precautions for user

XEPOXF fluid component B

Revision N° 1

Data rev. 2/05/2019

Pag. 21 a 24

ADR / RID:

HIN - Kemler: 80

Limited
Quantities: 1
L

Tunnel
restriction
code: (E)

IMDG:

Special Provision: -

EMS: F-A, S-B

Limited
Quantities: 1
L

IATA:

Cargo:

Maximum
quantity: 30 L

Packaging
instructions:
855
Packaging
instructions:
851

Pass.:

Maximum
quantity: 1 L

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: None

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

3

Substances in Candidate List (Art. 59 REACH)

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

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 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.

Rotho Blaas Srl

15.2. Chemical safety assessment

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

TETA

SECTION 16. Other information

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

H412	Harmful to aquatic life with long lasting effects.
H302	Harmful if swallowed
H373	May cause damage to organs through prolonged or repeated exposure
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H317	May cause an allergic skin reaction
EUH208	Contains <name of sensitising substance>. May produce an allergic reaction.
H319	Causes serious eye irritation
H312	Harmful in contact with skin
H361	Suspected of damaging fertility or the unborn child
H311	Toxic in contact with skin
H372	Causes damage to organs through prolonged or repeated exposure
Repr. 2	Reproductive 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
Skin Sens. 1	Skin sensitization, category 1
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3

Use descriptor system:

AC	1	Vehicles
AC	13	Plastic articles
AC	2	Machinery, mechanical appliances, electrical/electronic articles
AC	4	Stone, plaster, cement, glass and ceramic articles
AC	7	Metal articles
ERC	10a	Wide dispersive outdoor use of long-life articles and materials with low release
ERC	10b	Wide dispersive outdoor use of long-life articles and materials with high or intended release (including abrasive processing)
ERC	11a	Wide dispersive indoor use of long-life articles and materials with low release
ERC	11b	Wide dispersive indoor use of long-life articles and materials with high or intended release (including abrasive processing)
ERC	12a	Industrial processing of articles with abrasive techniques (low release)
ERC	12b	Industrial processing of articles with abrasive techniques (high release)
ERC	5	Industrial use resulting in inclusion into or onto a matrix
ERC	7	Industrial use of substances in closed systems
PC	1	Adhesives, sealants
PC	15	Non-metal-surface treatment products
PC	18	Ink and toners
PC	32	Polymer preparations and compounds
PROC	1	Use in closed process, no likelihood of exposure
PROC	10	Roller application or brushing
PROC	13	Treatment of articles by dipping and pouring
PROC	19	Hand-mixing with intimate contact and only PPE available

XEPOXF fluid component B	Revision N° 1	Data rev. 2/05/2019	Pag. 23 a 24
--------------------------	---------------	---------------------	--------------

PROC	2	Use in closed, continuous process with occasional controlled exposure
PROC	22	Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting
PROC	23	Open processing and transfer operations with minerals/metals at elevated temperature
PROC	5	Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
PROC	8a	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
PROC	8b	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
PROC	9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
SU	10	Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU	12	Manufacture of plastics products, including compounding and conversion
SU	13	Manufacture of other non-metallic mineral products, e.g. plasters, cement
SU	15	Manufacture of fabricated metal products, except machinery and equipment
SU	16	Manufacture of computer, electronic and optical products, electrical equipment
SU	17	General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
SU	18	Manufacture of furniture
SU	19	Building and construction work

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

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 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

9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X 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

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.

Changes to previous review:

The following sections were modified:

03 / 07 / 8 / 14 / 15 /16

Exposition Scenarios

Substance	BENZYL ALCOHOL
Scenario Title	Alcool benzilico
Revision nr.	1
File	1

Substance	3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE
Scenario Title	IPDA
Revision nr.	1
File	2

Substance	AEP
Scenario Title	AEP
Revision nr.	1
File	3

Substance	TETA
Scenario Title	TETA
Revision nr.	1
File	4