

Safety data sheet


This SDS is an English translation of Regulation (EU) n° 2015/830, without any country-specific legislation

GEMS GLOBAL SOLUTION FOR CHEMICAL & TOOLS GemsBond X-9010 Part A Extra Clear

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier:** GEMS SRLS
GemsBond X-9010 Part A Extra Clear
- Other means of identification:**
Non-applicable
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant uses: Filler for repairing surfaces. For industrial user only.
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:**
GEMS SRLS
VIA MONTE CENGIO, 11/O
36073 CORNEDO VICENTINO (VI) - ITALY
Email: ceo@gemsitalia.com
Ph.: +39 3453602104 (available 8am-8pm)
- 1.4 Emergency telephone number:** NHS Direct in England or Wales 0845 46 47

SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
- CLP Regulation (EC) No 1272/2008:**
Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411
Eye Irrit. 2: Eye irritation, Category 2, H319
Skin Irrit. 2: Skin irritation, Category 2, H315
Skin Sens. 1: Sensitisation, skin, Category 1, H317
- 2.2 Label elements:**
- CLP Regulation (EC) No 1272/2008:**
- Warning**
- 
- Hazard statements:**
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Skin Irrit. 2: H315 - Causes skin irritation.
Skin Sens. 1: H317 - May cause an allergic skin reaction.
- Precautionary statements:**
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P264: Wash thoroughly after handling.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P391: Collect spillage.
P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.
- Supplementary information:**
EUH205: Contains epoxy constituents. May produce an allergic reaction.
- Substances that contribute to the classification**
Bis-[4-(2,3-epoxypropoxy)phenyl]propane (CAS: 1675-54-3); oxirane, mono[[C12-14-alkyloxy)methyl] derivs. (CAS: 68609-97-2); p-tert-butylphenyl 1-(2,3-epoxy)propyl ether (CAS: 3101-60-8)
- UFI:** MJ70-G07M-000X-V2YG
- 2.3 Other hazards:**

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SECTION 2: HAZARDS IDENTIFICATION (continued)

Product fails to meet PBT/vPvB criteria

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: Epoxic resin

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 1675-54-3 EC: 216-823-5 Index: 603-073-00-2 REACH: 01-2119456619-26-XXXX	Bis-[4-(2,3-epoxipropoxy)phenyl]propane⁽¹⁾ Self-classified	76 - <100 %
	Regulation 1272/2008 Aquatic Chronic 2: H411; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Warning	
CAS: 68609-97-2 EC: 271-846-8 Index: 603-103-00-4 REACH: 01-2119485289-22-XXXX	oxirane, mono[(C12-14-alkyloxy)methyl] derivs.⁽¹⁾ ATP CLP00	5 - <10 %
	Regulation 1272/2008 Skin Irrit. 2: H315; Skin Sens. 1: H317 - Warning	
CAS: 3101-60-8 EC: 221-453-2 Index: Non-applicable REACH: 01-2119959496-20-XXXX	p-tert-butylphenyl 1-(2,3-epoxy)propyl ether⁽¹⁾ Self-classified	<5 %
	Regulation 1272/2008 Aquatic Chronic 2: H411; Skin Sens. 1: H317 - Warning	
CAS: 2530-83-8 EC: 219-784-2 Index: Non-applicable REACH: 01-2119513212-58-XXXX	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane⁽¹⁾ Self-classified	<5 %
	Regulation 1272/2008 Eye Dam. 1: H318 - Danger	

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

This product does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Non-applicable

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SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

Non-applicable

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal

6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Due to its inflammable nature, the product does not present a fire risk under normal conditions of storage, handling and use.

C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal See sections 8 and 13.

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.: 15 °C

Maximum Temp.: 35 °C

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SECTION 7: HANDLING AND STORAGE (continued)

Maximum time: 12 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Nuisance dust: Inhalable dust 10 mg/m³ // Respirable dust 4 mg/m³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Bis-[4-(2,3-epoxypropoxy)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,75 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	4,93 mg/m ³	Non-applicable
oxirane, mono[(C12-14-alkyloxy)methyl] derivs. CAS: 68609-97-2 EC: 271-846-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	3,6 mg/m ³	Non-applicable
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether CAS: 3101-60-8 EC: 221-453-2	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	1 mg/kg	Non-applicable	1 mg/kg	Non-applicable
	Inhalation	3,5 mg/m ³	3,5 mg/m ³	3,5 mg/m ³	3,5 mg/m ³
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane CAS: 2530-83-8 EC: 219-784-2	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	10 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	70,5 mg/m ³	Non-applicable

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Bis-[4-(2,3-epoxypropoxy)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	Oral	Non-applicable	Non-applicable	0,5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,0893 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,87 mg/m ³	Non-applicable
oxirane, mono[(C12-14-alkyloxy)methyl] derivs. CAS: 68609-97-2 EC: 271-846-8	Oral	Non-applicable	Non-applicable	0,5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,87 mg/m ³	Non-applicable
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether CAS: 3101-60-8 EC: 221-453-2	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	0,5 mg/kg	Non-applicable	0,5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1,75 mg/m ³	1,75 mg/m ³
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane CAS: 2530-83-8 EC: 219-784-2	Oral	Non-applicable	Non-applicable	5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	17 mg/m ³	Non-applicable

PNEC:

Identification				
Bis-[4-(2,3-epoxypropoxy)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	STP	10 mg/L	Fresh water	0,006 mg/L
	Soil	0,065 mg/kg	Marine water	0,001 mg/L
	Intermittent	0,018 mg/L	Sediment (Fresh water)	0,341 mg/kg
	Oral	0,011 g/kg	Sediment (Marine water)	0,034 mg/kg
oxirane, mono[(C12-14-alkyloxy)methyl] derivs. CAS: 68609-97-2 EC: 271-846-8	STP	10 mg/L	Fresh water	0,106 mg/L
	Soil	1,234 mg/kg	Marine water	0,011 mg/L
	Intermittent	0,072 mg/L	Sediment (Fresh water)	307,16 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	30,72 mg/kg

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)



Identification				
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether CAS: 3101-60-8 EC: 221-453-2	STP	100 mg/L	Fresh water	0,0075 mg/L
	Soil	11,4 mg/kg	Marine water	0,00075 mg/L
	Intermittent	0,075 mg/L	Sediment (Fresh water)	33,54 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	3,354 mg/kg
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane CAS: 2530-83-8 EC: 219-784-2	STP	8,2 mg/L	Fresh water	0,45 mg/L
	Soil	0,063 mg/kg	Marine water	0,045 mg/L
	Intermittent	0,45 mg/L	Sediment (Fresh water)	1,6 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,16 mg/kg

8.2 Exposure controls:



A.- General security and hygiene measures in the work place

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours		EN 405:2002+A1:2010	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Protective gloves against minor risks			Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420:2004+A1:2010 and EN ISO 374-1:2016+A1:2018

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.



D.- Ocular and facial protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.		EN 166:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Work clothing			Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994.
	Anti-slip work shoes		EN ISO 20347:2012	Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345:2012 y EN 13832-1:2007

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	0 % weight
V.O.C. density at 25 °C:	0 kg/m ³ (0 g/L)
Average carbon number:	Non-applicable
Average molecular weight:	Non-applicable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Solid
Appearance:	Transparent
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	Non-applicable *
Vapour pressure at 25 °C:	Non-applicable *
Vapour pressure at 50 °C:	Non-applicable *
Evaporation rate at 25 °C:	Non-applicable *

Product description:

Density at 25 °C:	1102,2 kg/m ³
Relative density at 25 °C:	1,102
Dynamic viscosity at 25 °C:	Non-applicable *
Kinematic viscosity at 25 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 25 °C:	Non-applicable *
Partition coefficient n-octanol/water 25 °C:	Non-applicable *
Solubility in water at 25 °C:	
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *

Flammability:

Flash Point:	Non-applicable
Heat of combustion:	Non-applicable *
Flammability (solid, gas):	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Autoignition temperature:	400 °C
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *
Explosive:	
Lower explosive limit:	Non-applicable *
Upper explosive limit:	Non-applicable *

9.2 Other information:

Surface tension at 25 °C:	Non-applicable *
Refraction index:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Not applicable	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.

IARC: Bis-[4-(2,3-epoxypropoxy)phenyl]propane (3)

- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.

- Cutaneous: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane CAS: 2530-83-8 EC: 219-784-2	8025 mg/kg		Rat
		4250 mg/kg	Rabbit
		Non-applicable	

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

Identification	Acute toxicity		Species	Genus
	LC50	EC50		
Bis-[4-(2,3-epoxypropoxy)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	2 mg/L (96 h)		Oncorhynchus mykiss	Fish
	1.7 mg/L (48 h)		Daphnia magna	Crustacean
	9.4 mg/L (72 h)		Scenedesmus subspicatus	Algae
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether CAS: 3101-60-8 EC: 221-453-2	7.5 mg/L (96 h)		Oncorhynchus mykiss	Fish
	68 mg/L (48 h)		Daphnia magna	Crustacean
	9 mg/L (72 h)		Pseudokirchneriella subcapitata	Algae
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane CAS: 2530-83-8 EC: 219-784-2	55 mg/L (96 h)		Cyprinus carpio	Fish
	324 mg/L (48 h)		Daphnia magna	Crustacean
	Non-applicable			

12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
	BOD5	COD	Concentration	Period
Bis-[4-(2,3-epoxypropoxy)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	Non-applicable			Non-applicable
	Non-applicable		Period	28 days
	Non-applicable		% Biodegradable	5 %
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether CAS: 3101-60-8 EC: 221-453-2	Non-applicable		Concentration	5 mg/L
	Non-applicable		Period	28 days
	Non-applicable		% Biodegradable	1,1 %

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SECTION 12: ECOLOGICAL INFORMATION (continued)

12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
Bis-[4-(2,3-epoxypropoxy)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	BCF	31
	Pow Log	3
	Potential	Moderate
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane CAS: 2530-83-8 EC: 219-784-2	BCF	
	Pow Log	0.5
	Potential	

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
	Bis-[4-(2,3-epoxypropoxy)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	Koc	450	Henry
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether CAS: 3101-60-8 EC: 221-453-2	Conclusion	Low	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable
	Koc	755	Henry	Non-applicable
	Conclusion	Low	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances	Dangerous

Type of waste (Regulation (EU) No 1357/2014):

HP14 Ecotoxic, HP13 Sensitising, HP4 Irritant — skin irritation and eye damage

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2021 and RID 2021:

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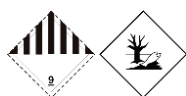
SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number:** UN3077
14.2 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (p-tert-butylphenyl 1-(2,3-epoxy)propyl ether; Bis-[4-(2,3-epoxypropoxy)phenyl]propane)
14.3 Transport hazard class(es): 9
 Labels: 9
14.4 Packing group: III
14.5 Environmental hazards: Yes
14.6 Special precautions for user
 Special regulations: 274, 335, 375, 601
 Tunnel restriction code: -
 Physico-Chemical properties: see section 9
 Limited quantities: 5 kg
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 39-18:



- 14.1 UN number:** UN3077
14.2 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (p-tert-butylphenyl 1-(2,3-epoxy)propyl ether; Bis-[4-(2,3-epoxypropoxy)phenyl]propane)
14.3 Transport hazard class(es): 9
 Labels: 9
14.4 Packing group: III
14.5 Marine pollutant: Yes
14.6 Special precautions for user
 Special regulations: 335, 966, 274, 967, 969
 EmS Codes: F-A, S-F
 Physico-Chemical properties: see section 9
 Limited quantities: 5 kg
 Segregation group: Non-applicable
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2021:



- 14.1 UN number:** UN3077
14.2 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (p-tert-butylphenyl 1-(2,3-epoxy)propyl ether; Bis-[4-(2,3-epoxypropoxy)phenyl]propane)
14.3 Transport hazard class(es): 9
 Labels: 9
14.4 Packing group: III
14.5 Environmental hazards: Yes
14.6 Special precautions for user
 Physico-Chemical properties: see section 9
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

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SECTION 15: REGULATORY INFORMATION (continued)

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Non-applicable

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
E2	ENVIRONMENTAL HAZARDS	200	500

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc):

Non-applicable

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830).

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Non-applicable

Texts of the legislative phrases mentioned in section 2:

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H411: Toxic to aquatic life with long lasting effects.

H319: Causes serious eye irritation.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.

Eye Dam. 1: H318 - Causes serious eye damage.

Eye Irrit. 2: H319 - Causes serious eye irritation.

Skin Irrit. 2: H315 - Causes skin irritation.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

Classification procedure:

Skin Irrit. 2: Calculation method

Skin Sens. 1: Calculation method

Aquatic Chronic 2: Calculation method

Eye Irrit. 2: Calculation method

Advice related to training:

Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

Abbreviations and acronyms:

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SECTION 16: OTHER INFORMATION (continued)

ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol-water partition coefficient
Koc: Partition coefficient of organic carbon

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -

Safety data sheet

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GEMS GLOBAL SOLUTION FOR CHEMICAL & TOOLS GemsBond X-9010 Part B Extra Clear

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: GEMS SRLS
GemsBond X-9010 Part B Extra Clear

Other means of identification:

Non-applicable

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

Relevant uses: Hardener for adhesives. For industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

GEMS SRLS
VIA MONTE CENGIO, 11/O
36073 CORNEDO VICENTINO (VI) - ITALY
Email: ceo@gemsitalia.com
Ph.: +39 3453602104 (available 8am-8pm)

1.4 Emergency telephone number: NHS Direct in England or Wales 0845 46 47

SECTION 2: HAZARDS IDENTIFICATION **

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Acute Tox. 4: Acute toxicity, Category 4, H302+H332

Aquatic Chronic 3: Hazardous to the aquatic environment, long-term hazard, Category 3, H412

Eye Dam. 1: Serious eye damage, Category 1, H318

Skin Corr. 1A: Skin corrosion, Category 1A, H314

Skin Sens. 1: Sensitisation, skin, Category 1, H317

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

Danger



Hazard statements:

Acute Tox. 4: H302+H332 - Harmful if swallowed or if inhaled.

Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.

Skin Corr. 1A: H314 - Causes severe skin burns and eye damage.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

Precautionary statements:

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

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+P352: IF ON SKIN: Wash with plenty of water.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a poison center/doctor.

P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

Supplementary information:

EUH205: Contains epoxy constituents. May produce an allergic reaction.

Substances that contribute to the classification

1,3-Cyclohexanedimethanamine (CAS: 2579-20-6); benzyl alcohol (CAS: 100-51-6); Bis-[4-(2,3-epoxipropoxy)phenyl]propane (CAS: 1675-54-3)

** Changes with regards to the previous version

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SECTION 2: HAZARDS IDENTIFICATION ** (continued)

UFI: V970-Y05E-300F-V279

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria

*** Changes with regards to the previous version*

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS **

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: Solution composed of amines

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 2579-20-6 EC: 219-941-5 Index: Non-applicable REACH: 01-2119543741-41-XXXX	1,3-Cyclohexanedimethanamine⁽¹⁾ Self-classified	25 - <50 %
	Regulation 1272/2008 Acute Tox. 4: H302+H312; Aquatic Chronic 3: H412; Skin Corr. 1A: H314 - Danger	
CAS: 100-51-6 EC: 202-859-9 Index: 603-057-00-5 REACH: 01-2119492630-38-XXXX	benzyl alcohol⁽¹⁾ ATP CLP00	25 - <50 %
	Regulation 1272/2008 Acute Tox. 4: H302+H332 - Warning	
CAS: 1675-54-3 EC: 216-823-5 Index: 603-073-00-2 REACH: 01-2119456619-26-XXXX	Bis-[4-(2,3-epoxipropoxy)phenyl]propane⁽¹⁾ Self-classified	10 - <25 %
	Regulation 1272/2008 Aquatic Chronic 2: H411; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Warning	

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

*** Changes with regards to the previous version*

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

Request medical assistance immediately, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Request immediate medical assistance, showing the SDS of this product. Do not induce vomiting, because its expulsion from the stomach can be hazardous to the mucus of the main digestive tract, and also risk damage to the respiratory system through inhalation. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Keep the person affected at rest.

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

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SECTION 4: FIRST AID MEASURES (continued)

Acute and delayed effects are indicated in sections 2 and 11.

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

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

Non-applicable

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal

6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Due to its inflammable nature, the product does not present a fire risk under normal conditions of storage, handling and use.

C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

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SECTION 7: HANDLING AND STORAGE (continued)

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal See sections 8 and 13.

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.: 15 °C
Maximum Temp.: 35 °C
Maximum time: 12 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Nuisance dust: Inhalable dust 10 mg/m³ // Respirable dust 4 mg/m³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
1,3-Cyclohexanedimethanamine CAS: 2579-20-6 EC: 219-941-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	25,2 mg/kg	Non-applicable	0,1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	0,00947 mg/m ³
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	40 mg/kg	Non-applicable	8 mg/kg	Non-applicable
	Inhalation	110 mg/m ³	Non-applicable	22 mg/m ³	Non-applicable
Bis-[4-(2,3-epoxipropoxy)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,75 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	4,93 mg/m ³	Non-applicable

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	Oral	20 mg/kg	Non-applicable	4 mg/kg	Non-applicable
	Dermal	20 mg/kg	Non-applicable	4 mg/kg	Non-applicable
	Inhalation	27 mg/m ³	Non-applicable	5,4 mg/m ³	Non-applicable
Bis-[4-(2,3-epoxipropoxy)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	Oral	Non-applicable	Non-applicable	0,5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,0893 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,87 mg/m ³	Non-applicable

PNEC:

Identification					
1,3-Cyclohexanedimethanamine CAS: 2579-20-6 EC: 219-941-5	STP	10 mg/L	Fresh water	0,033 mg/L	
	Soil	0,024 mg/kg	Marine water	0,003 mg/L	
	Intermittent	0,331 mg/L	Sediment (Fresh water)	0,218 mg/kg	
	Oral	Non-applicable	Sediment (Marine water)	0,022 mg/kg	
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	STP	39 mg/L	Fresh water	1 mg/L	
	Soil	0,456 mg/kg	Marine water	0,1 mg/L	
	Intermittent	2,3 mg/L	Sediment (Fresh water)	5,27 mg/kg	
	Oral	Non-applicable	Sediment (Marine water)	0,527 mg/kg	

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)



Identification				
Bis-[4-(2,3-epoxipropoxy)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	STP	10 mg/L	Fresh water	0,006 mg/L
	Soil	0,065 mg/kg	Marine water	0,001 mg/L
	Intermittent	0,018 mg/L	Sediment (Fresh water)	0,341 mg/kg
	Oral	0,011 g/kg	Sediment (Marine water)	0,034 mg/kg

8.2 Exposure controls:



A.- General security and hygiene measures in the work place

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours		EN 405:2002+A1:2010	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands





Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves		EN ISO 374-1:2016+A1:2018 EN 16523-1:2015+A1:2018 EN 420:2004+A1:2010	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.



D.- Ocular and facial protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield		EN 166:2002 EN 167:2002 EN 168:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks		EN 13034:2005+A1:2009 EN 168:2002 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk		EN ISO 20345:2011 EN 13832-1:2019	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	38,7 % weight
V.O.C. density at 25 °C:	388,24 kg/m ³ (388,24 g/L)
Average carbon number:	8
Average molecular weight:	140,23 g/mol

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Solid
Appearance:	Transparent
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	Non-applicable *
Vapour pressure at 25 °C:	Non-applicable *
Vapour pressure at 50 °C:	Non-applicable *
Evaporation rate at 25 °C:	Non-applicable *

Product description:

Density at 25 °C:	1003,2 kg/m ³
Relative density at 25 °C:	1,003
Dynamic viscosity at 25 °C:	Non-applicable *
Kinematic viscosity at 25 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	ca. 11
Vapour density at 25 °C:	Non-applicable *
Partition coefficient n-octanol/water 25 °C:	Non-applicable *
Solubility in water at 25 °C:	
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *

Flammability:

Flash Point:	Non-applicable
Heat of combustion:	Non-applicable *
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	436 °C
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Explosive:

Lower explosive limit: Non-applicable *

Upper explosive limit: Non-applicable *

9.2 Other information:

Surface tension at 25 °C: Non-applicable *

Refraction index: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Precaution	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity : The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.

B- Inhalation (acute effect):

- Acute toxicity : Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.
- Contact with the eyes: Produces serious eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
IARC: Bis-[4-(2,3-epoxipropoxy)phenyl]propane (3)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
- Cutaneous: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
1,3-Cyclohexanedimethanamine CAS: 2579-20-6 EC: 219-941-5	LD50 oral	700 mg/kg	Rat
	LD50 dermal	1700 mg/kg	Rabbit
	LC50 inhalation	Non-applicable	
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	LD50 oral	500 mg/kg	Rat
	LD50 dermal	2500 mg/kg	
	LC50 inhalation	1,5 mg/L (4 h) (ATEi)	

SECTION 12: ECOLOGICAL INFORMATION **

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

Identification	Acute toxicity		Species	Genus
1,3-Cyclohexanedimethanamine CAS: 2579-20-6 EC: 219-941-5	LC50	130 mg/L (96 h)	Leuciscus idus	Fish
	EC50	33 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	30 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	LC50	646 mg/L (48 h)	Leuciscus idus	Fish
	EC50	400 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	79 mg/L (3 h)	Scenedesmus subspicatus	Algae
Bis-[4-(2,3-epoxipropoxy)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	LC50	2 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	1.7 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	9.4 mg/L (72 h)	Scenedesmus subspicatus	Algae

12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
1,3-Cyclohexanedimethanamine CAS: 2579-20-6 EC: 219-941-5	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	29 %

** Changes with regards to the previous version

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SECTION 12: ECOLOGICAL INFORMATION ** (continued)

Identification	Degradability		Biodegradability	
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	94 %
Bis-[4-(2,3-epoxipropoxy)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	5 %

12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	BCF	0.3
	Pow Log	1.1
	Potential	Low
Bis-[4-(2,3-epoxipropoxy)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	BCF	31
	Pow Log	3
	Potential	Moderate

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
1,3-Cyclohexanedimethanamine CAS: 2579-20-6 EC: 219-941-5	Koc	30	Henry	Non-applicable
	Conclusion	Very High	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	3,679E-2 N/m (25 °C)	Moist soil	Non-applicable
Bis-[4-(2,3-epoxipropoxy)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	Koc	450	Henry	Non-applicable
	Conclusion	Low	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Other adverse effects:

Not described

** Changes with regards to the previous version

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances	Dangerous

Type of waste (Regulation (EU) No 1357/2014):

HP14 Ecotoxic, HP6 Acute Toxicity, HP13 Sensitising, HP8 Corrosive

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

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SECTION 14: TRANSPORT INFORMATION (continued)

Transport of dangerous goods by land:

With regard to ADR 2021 and RID 2021:



- | | |
|---|---|
| 14.1 UN number: | UN3259 |
| 14.2 UN proper shipping name: | AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S. (1,3-Cyclohexanedimethanamine) |
| 14.3 Transport hazard class(es): | 8 |
| Labels: | 8 |
| 14.4 Packing group: | II |
| 14.5 Environmental hazards: | No |
| 14.6 Special precautions for user | |
| Special regulations: | 274 |
| Tunnel restriction code: | E |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | 1 kg |
| 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: | Non-applicable |

Transport of dangerous goods by sea:

With regard to IMDG 39-18:



- | | |
|---|---|
| 14.1 UN number: | UN3259 |
| 14.2 UN proper shipping name: | AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S. (1,3-Cyclohexanedimethanamine) |
| 14.3 Transport hazard class(es): | 8 |
| Labels: | 8 |
| 14.4 Packing group: | II |
| 14.5 Marine pollutant: | No |
| 14.6 Special precautions for user | |
| Special regulations: | 274 |
| EmS Codes: | F-A, S-B |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | 1 kg |
| Segregation group: | SGG18 |
| 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: | Non-applicable |

Transport of dangerous goods by air:

With regard to IATA/ICAO 2021:



- | | |
|---|---|
| 14.1 UN number: | UN3259 |
| 14.2 UN proper shipping name: | AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S. (1,3-Cyclohexanedimethanamine) |
| 14.3 Transport hazard class(es): | 8 |
| Labels: | 8 |
| 14.4 Packing group: | II |
| 14.5 Environmental hazards: | No |
| 14.6 Special precautions for user | |
| Physico-Chemical properties: | see section 9 |
| 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: | Non-applicable |

SECTION 15: REGULATORY INFORMATION

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

Regulation (EC) No 528/2012: contains a preservative to protect the initial properties of the treated article. Contains benzyl alcohol.

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

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SECTION 15: REGULATORY INFORMATION (continued)

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: benzyl alcohol (Product-type 6)

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Seveso III:

Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc):

Non-applicable

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION **

Legislation related to safety data sheets:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830).

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

COMPOSITION/INFORMATION ON INGREDIENTS (SECTION 3, SECTION 12):

· New declared substances

Bis-[4-(2,3-epoxipropoxy)phenyl]propane (1675-54-3)

Substances that contribute to the classification (SECTION 2):

· New declared substances

Bis-[4-(2,3-epoxipropoxy)phenyl]propane (1675-54-3)

CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16):

· Hazard statements

· Precautionary statements

· Supplementary information

Texts of the legislative phrases mentioned in section 2:

H314: Causes severe skin burns and eye damage.

H318: Causes serious eye damage.

H412: Harmful to aquatic life with long lasting effects.

H317: May cause an allergic skin reaction.

H302+H332: Harmful if swallowed or if inhaled.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

Acute Tox. 4: H302+H312 - Harmful if swallowed or in contact with skin.

Acute Tox. 4: H302+H332 - Harmful if swallowed or if inhaled.

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.

Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.

Eye Irrit. 2: H319 - Causes serious eye irritation.

Skin Corr. 1A: H314 - Causes severe skin burns and eye damage.

Skin Irrit. 2: H315 - Causes skin irritation.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

Classification procedure:

Skin Corr. 1A: Calculation method

Eye Dam. 1: Calculation method

Aquatic Chronic 3: Calculation method

Skin Sens. 1: Calculation method

Acute Tox. 4: Calculation method

Advice related to training:

** Changes with regards to the previous version

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SECTION 16: OTHER INFORMATION ** (continued)

Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5-day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

LC50: Lethal Concentration 50

EC50: Effective concentration 50

Log-POW: Octanol-water partition coefficient

Koc: Partition coefficient of organic carbon

*** Changes with regards to the previous version*

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -