UNISORB®
INSTALLATION SOLUTIONS

SAFETY DATA SHEET

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

1.1 Product identifier: Standard EU V-100 Epoxy Grout Resin

Other means of identification:

UFI: Q9J9-J0MG-H00S-6EJW

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

Relevant uses (Industrial user): Adhesive
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:

AEV LIMITED
Marion Street
CH416LT Birkenhead - WIRRAL - United Kingdom
Phone: 0044 (0) 151 647 3322
aev@aev.co.uk
www.aev.co.uk

1.4 Emergency telephone number: ECOSTAR Environmental 0044 (0) 172 4732 138 (Monday to Friday 09.00 - 17.00) 0044 (0) 800 2461 274 (Out of office hours)

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. 1A: Sensitisation, skin, Category 1A, 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. 1A: H317 - May cause an allergic skin reaction.

Precautionary statements:

P261: Avoid breathing vapours
P264: Wash thoroughly after handling.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/respiratory protection/eye protection/protective footwear.
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.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
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.

SECTION 2: HAZARDS IDENTIFICATION (continued)

Substances that contribute to the classification

[[(2-ethylhexyl)oxy]methyl]oxirane (CAS: 2461-15-6)

UFI: Q9J9-J0MG-H00S-6EJW

2.3 Other hazards:

Product does not meet PBT/vPvB criteria
Endocrine-disrupting properties: The product does not meet the criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Not relevant

3.2 Mixture:

Chemical description: Epoxides

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-epoxipropoxi)phenyl]propane**[1]	Self-classified	**30 - <70 %**
	Regulation 1272/2008	Aquatic Chronic 2: H411; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Warning	
CAS: 2461-15-6 EC: 219-553-6 Index: Not relevant REACH: 01-2119962196-31-XXXX	**[[(2-ethylhexyl)oxy]methyl]oxirane**[1]	Self-classified	**1 - <30 %**
	Regulation 1272/2008	Skin Irrit. 2: H315; Skin Sens. 1A: H317 - Warning	
CAS: 9003-36-5 EC: 500-006-8 Index: Not relevant REACH: 01-2119454392-40-XXXX	**Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol**[1]	Self-classified	**1 - <30 %**
	Regulation 1272/2008	Aquatic Chronic 2: H411; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Warning	
CAS: 107-21-1 EC: 203-473-3 Index: 603-027-00-1 REACH: 01-2119456816-28-XXXX	**Ethanediol**[2]	Self-classified	**<1 %**
	Regulation 1272/2008	Acute Tox. 4: H302; STOT RE 2: H373 - Warning	

[1] Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878
[2] Substance with a Union workplace exposure limit

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

Other information:

Identification	Specific concentration limit
Bis-[4-(2,3-epoxipropoxi)phenyl]propane CAS: 1675-54-3 EC: 216-823-5	% (w/w) >=5: Skin Irrit. 2 - H315 % (w/w) >=5: Eye Irrit. 2 - H319

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:

SECTION 4: FIRST AID MEASURES (continued)

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:

Not relevant

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. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

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:

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

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:

SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

It is recommended:

Prevent the entrance of product in drains, sewers or watercourses. Absorb the spill using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. Collect the product in appropriate containers and manage it according to current legislation.

Spillages in water or sea:

Small spillages:

Contain spillage using barriers or similar equipment. Use suitable absorbents for collection and treat the waste in accordance with current regulations.

Large spillages:

If possible, contain spillage in open water using barriers or similar equipment. If this is not possible, try to control its spread and collect the product with suitable mechanical means. Always consult experts before using dispersants and make sure you have the necessary approvals if they are to be used. Treat the waste according to current regulations.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

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

Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

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

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities:

A.- Specific storage requirements

Store in a cool, dry, well-ventilated location

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 assessed in the workplace:

EH40/2005 Workplace exposure limits, fourth edition, published 2020:

Identification	Occupational exposure limits		
Ethanediol [1]	WEL (8h)	20 ppm	52 mg/m³
CAS: 107-21-1 EC: 203-473-3	WEL (15 min)	40 ppm	104 mg/m³
Limestone	WEL (8h)		4 mg/m³
CAS: 1317-65-3 EC: 215-279-6	WEL (15 min)		

[1] Skin

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Bis-[4-(2,3-epoxipropoxi)phenyl]propane	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 1675-54-3	Dermal	Not relevant	Not relevant	0.75 mg/kg	Not relevant
EC: 216-823-5	Inhalation	Not relevant	Not relevant	4.93 mg/m³	Not relevant
[[(2-ethylhexyl)oxy]methyl]oxirane	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 2461-15-6	Dermal	1 mg/kg	Not relevant	4.17 mg/kg	Not relevant
EC: 219-553-6	Inhalation	Not relevant	Not relevant	Not relevant	Not relevant
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 9003-36-5	Dermal	Not relevant	Not relevant	104.15 mg/kg	Not relevant
EC: 500-006-8	Inhalation	Not relevant	Not relevant	29.39 mg/m³	Not relevant
Ethanediol	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 107-21-1	Dermal	Not relevant	Not relevant	106 mg/kg	Not relevant
EC: 203-473-3	Inhalation	Not relevant	Not relevant	Not relevant	35 mg/m³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Bis-[4-(2,3-epoxipropoxi)phenyl]propane	Oral	Not relevant	Not relevant	0.5 mg/kg	Not relevant
CAS: 1675-54-3	Dermal	Not relevant	Not relevant	0.0893 mg/kg	Not relevant
EC: 216-823-5	Inhalation	Not relevant	Not relevant	0.87 mg/m³	Not relevant
[[(2-ethylhexyl)oxy]methyl]oxirane	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 2461-15-6	Dermal	0.5 mg/kg	Not relevant	2.5 mg/kg	Not relevant
EC: 219-553-6	Inhalation	Not relevant	Not relevant	Not relevant	Not relevant
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	Oral	Not relevant	Not relevant	6.25 mg/kg	Not relevant
CAS: 9003-36-5	Dermal	Not relevant	Not relevant	62.5 mg/kg	Not relevant
EC: 500-006-8	Inhalation	Not relevant	Not relevant	8.7 mg/m³	Not relevant
Ethanediol	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 107-21-1	Dermal	Not relevant	Not relevant	53 mg/kg	Not relevant
EC: 203-473-3	Inhalation	Not relevant	Not relevant	Not relevant	7 mg/m³

PNEC:

Identification				
Bis-[4-(2,3-epoxipropoxi)phenyl]propane	STP	10 mg/L	Fresh water	0.006 mg/L
CAS: 1675-54-3	Soil	0.065 mg/kg	Marine water	0.001 mg/L
EC: 216-823-5	Intermittent	0.018 mg/L	Sediment (Fresh water)	0.341 mg/kg
	Oral	0.011 g/kg	Sediment (Marine water)	0.034 mg/kg
[[(2-ethylhexyl)oxy]methyl]oxirane	STP	10 mg/L	Fresh water	0.007 mg/L
CAS: 2461-15-6	Soil	57.16 mg/kg	Marine water	0.001 mg/L
EC: 219-553-6	Intermittent	0.072 mg/L	Sediment (Fresh water)	286.66 mg/kg
	Oral	Not relevant	Sediment (Marine water)	28.66 mg/kg
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	STP	10 mg/L	Fresh water	0.003 mg/L
CAS: 9003-36-5	Soil	0.237 mg/kg	Marine water	0 mg/L
EC: 500-006-8	Intermittent	0.025 mg/L	Sediment (Fresh water)	0.294 mg/kg
	Oral	Not relevant	Sediment (Marine water)	0.029 mg/kg
Ethanediol	STP	199.5 mg/L	Fresh water	10 mg/L
CAS: 107-21-1	Soil	1.53 mg/kg	Marine water	1 mg/L
EC: 203-473-3	Intermittent	10 mg/L	Sediment (Fresh water)	37 mg/kg
	Oral	Not relevant	Sediment (Marine water)	3.7 mg/kg

8.2 Exposure controls:

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

A.- Individual protection measures, such as personal protective equipment

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 (Filter type: A)	CE CAT III	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	CE CAT I		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 ISO 21420:2020 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.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.	CE CAT II	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	CE CAT I		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	CE CAT II	EN ISO 20347:2022	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 20345:2022 y EN 13832-1:2019

F.- Additional emergency measures

It is advised to implement additional emergency equipments in workplaces that are particularly exposed to the product or in situations where risk assessments highlight the necessity of such equipments.

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:

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to subsection 7.1.D.

Volatile organic compounds:

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

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 ºC:	0 kg/m³ (0 g/L)
Average carbon number:	Not relevant
Average molecular weight:	Not relevant

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 ºC:	Liquid
Appearance:	Viscous
Colour:	Beige
Odour:	Not available *
Odour threshold:	Not available *

Volatility:

Boiling point at atmospheric pressure:	197 - 2230 ºC
Vapour pressure at 25 ºC:	14 Pa
Vapour pressure at 50 ºC:	90.35 Pa (0.09 kPa)
Evaporation rate at 25 ºC:	Not available *

Product description:

Density at 25 ºC:	1724.4 kg/m³
Relative density at 25 ºC:	1.724
Dynamic viscosity at 25 ºC:	Not available *
Kinematic viscosity at 25 ºC:	Not available *
Kinematic viscosity at 40 ºC:	>20.5 mm²/s
Concentration:	Not available *
pH:	Not available *
Vapour density at 25 ºC:	Not available *
Partition coefficient n-octanol/water 25 ºC:	Not available *
Solubility in water at 25 ºC:	Not available *
Solubility properties:	Not available *
Decomposition temperature:	Not available *
Melting point/freezing point:	Not available *

Flammability:

Flash Point:	Non Flammable (>60 ºC)
Flammability (solid, gas):	Not available *
Autoignition temperature:	400 ºC
Lower flammability limit:	Not available *
Upper flammability limit:	Not available *

Particle characteristics:

Median equivalent diameter:	Not available *

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Not available *
Oxidising properties:	Not available *
Corrosive to metals:	Not available *
Heat of combustion:	Not available *
Aerosols-total percentage (by mass) of flammable components:	Not available *

Other safety characteristics:

Surface tension at 25 ºC:	Not available *
Refraction index:	Not available *

*Not available 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 from Safety Data Sheet.

10.2 Chemical stability:

Chemically stable under the indicated 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 (CO_2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

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

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

Contains glycols. It is recommended not to breathe the vapours for prolonged periods of time due to the possibility of effects that are hazardous to the health .

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, however, it contains 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.

SECTION 11: TOXICOLOGICAL INFORMATION (continued)

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous 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 hazardous 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.

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 hazardous for the effects mentioned. For more information see section 3.
  IARC: Bis-[4-(2,3-epoxipropoxi)phenyl]propane (3); Glass, oxide, chemicals (1)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous 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 hazardous 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 hazardous with sensitising effects. For more information see section 3.
- Skin: 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 hazardous 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. However, it does contain substances classified as hazardous 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 hazardous 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 hazardous for this effect. For more information see section 3.

Other information:

Not relevant

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
[[(2-ethylhexyl)oxy]methyl]oxirane CAS: 2461-15-6 EC: 219-553-6	LD50 oral	>5000 mg/kg	Rat
	LD50 dermal		
	LC50 inhalation		
	LC50 inhalation vapour		
Ethanediol CAS: 107-21-1 EC: 203-473-3	LD50 oral	500 mg/kg	
	LD50 dermal	>3500 mg/kg	Rabbit
	LC50 inhalation		
	LC50 inhalation vapour		

Acute Toxicity Estimate (ATE mix):

ATE mix		Ingredient(s) of unknown toxicity
Oral	>2000 mg/kg (Calculation method)	0 %
Dermal	>2000 mg/kg (Calculation method)	0 %
LC50 inhalation vapour	>20 mg/L (4 h) (Calculation method)	0 %

11.2 Information on other hazards:

SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Endocrine disrupting properties

Endocrine-disrupting properties: The product does not meet the criteria.

Other information

Not relevant

SECTION 12: ECOLOGICAL INFORMATION

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

Toxic to aquatic life with long lasting effects.

12.1 Toxicity:

Acute toxicity:

Identification	Concentration		Species	Genus
Bis-[4-(2,3-epoxipropoxi)phenyl]propane	LC50	2 mg/L (96 h)	Oncorhynchus mykiss	Fish
CAS: 1675-54-3	EC50	1.7 mg/L (48 h)	Daphnia magna	Crustacean
EC: 216-823-5	EC50	9.4 mg/L (72 h)	Scenedesmus subspicatus	Algae
[[(2-ethylhexyl)oxy]methyl]oxirane	LC50	5000 mg/L (96 h)	Oncorhynchus mykiss	Fish
CAS: 2461-15-6	EC50	Not relevant		
EC: 219-553-6	EC50	Not relevant		
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	LC50	>1 - 10 mg/L (96 h)		Fish
CAS: 9003-36-5	EC50	>1 - 10 mg/L (48 h)		Crustacean
EC: 500-006-8	EC50	>1 - 10 mg/L (72 h)		Algae
Ethanediol	LC50	53000 mg/L (96 h)	Pimephales promelas	Fish
CAS: 107-21-1	EC50	51000 mg/L (48 h)	Daphnia magna	Crustacean
EC: 203-473-3	EC50	24000 mg/L (168 h)	Selenastrum capricornutum	Algae

Chronic toxicity:

Identification	Concentration		Species	Genus
Bis-[4-(2,3-epoxipropoxi)phenyl]propane	NOEC	Not relevant		
CAS: 1675-54-3 EC: 216-823-5	NOEC	0.3 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
Bis-[4-(2,3-epoxipropoxi)phenyl]propane	BOD5	Not relevant	Concentration	Not relevant
CAS: 1675-54-3	COD	Not relevant	Period	28 days
EC: 216-823-5	BOD5/COD	Not relevant	% Biodegradable	5 %
[[(2-ethylhexyl)oxy]methyl]oxirane	BOD5	Not relevant	Concentration	100 mg/L
CAS: 2461-15-6	COD	Not relevant	Period	28 days
EC: 219-553-6	BOD5/COD	Not relevant	% Biodegradable	0 %
Ethanediol	BOD5	0.47 g O2/g	Concentration	100 mg/L
CAS: 107-21-1	COD	1.29 g O2/g	Period	14 days
EC: 203-473-3	BOD5/COD	0.36	% Biodegradable	90 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
Bis-[4-(2,3-epoxipropoxi)phenyl]propane	BCF	31
CAS: 1675-54-3	Pow Log	3
EC: 216-823-5	Potential	Moderate

SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Bioaccumulation potential	
[[(2-ethylhexyl)oxy]methyl]oxirane	BCF	355
CAS: 2461-15-6	Pow Log	
EC: 219-553-6	Potential	High
Ethanediol	BCF	10
CAS: 107-21-1	Pow Log	-1.36
EC: 203-473-3	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Bis-[4-(2,3-epoxipropoxi)phenyl]propane	Koc	450	Henry	Not relevant
CAS: 1675-54-3	Conclusion	Low	Dry soil	Not relevant
EC: 216-823-5	Surface tension	Not relevant	Moist soil	Not relevant
Ethanediol	Koc	0	Henry	1.327E-1 Pa·m³/mol
CAS: 107-21-1	Conclusion	Very High	Dry soil	Not relevant
EC: 203-473-3	Surface tension	4.989E-2 N/m (25 °C)	Moist soil	Not relevant

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product does not meet the criteria.

12.7 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	Hazardous

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, The Waste Regulations 2011, 2011 No. 988). As under 15 01 (2014/955/EU) 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-hazardous residue. Waste should not be disposed of to drains. 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 2023 and RID 2023:

SECTION 14: TRANSPORT INFORMATION ** (continued)

14.1	**UN number or ID number:**	UN3082
14.2	**UN proper shipping name:**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bis-[4-(2,3-epoxipropoxi)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 L
14.7	**Maritime transport in bulk according to IMO instruments:**	Not relevant

Transport of dangerous goods by sea:

With regard to IMDG 41-22:

14.1	**UN number or ID number:**	UN3082
14.2	**UN proper shipping name:**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bis-[4-(2,3-epoxipropoxi)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, 969, 274
	EmS Codes:	F-A, S-F
	Physico-Chemical properties:	see section 9
	Limited quantities:	5 L
	Segregation group:	Not relevant
14.7	**Maritime transport in bulk according to IMO instruments:**	Not relevant

Transport of dangerous goods by air:

With regard to IATA/ICAO 2025:

14.1	**UN number or ID number:**	UN3082
14.2	**UN proper shipping name:**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bis-[4-(2,3-epoxipropoxi)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	**Maritime transport in bulk according to IMO instruments:**	Not relevant

*** Changes with regards to the previous version*

SECTION 15: REGULATORY INFORMATION

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

SECTION 15: REGULATORY INFORMATION (continued)

- (Puerto Rico, USA): *Bis-[4-(2,3-epoxipropoxi)phenyl]propane (1675-54-3)* ; *[[(2-ethylhexyl)oxy]methyl]oxirane (2461-15-6)* ; *Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)* ; *Ethanediol (107-21-1)*
- Article 95, REGULATION (EU) No 528/2012: Not relevant
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Not relevant
- Regulation (EU) 2019/1021 on persistent organic pollutants: Not relevant
- Regulation (EU) 2024/590, about substances that deplete the ozone layer: Not relevant
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant

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 ....):

Shall not be used in:
—ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
—tricks and jokes,
—games for one or more participants, or any article intended to be used as such, even with ornamental aspects.
Occupational exposure to respirable crystalline silica must be controlled pursuant to Directive (EU) 2019/130.

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 Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG 2009), SI 2009 No 1348
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment (Amendment) Regulations 2011, 2011 No. 1885
Control of Substances Hazardous to Health Regulations 2002 (as amended)
EH40/2005 Workplace exposure limits
The Waste Regulations 2011, 2011 No. 988

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:

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 (COMMISSION REGULATION (EU) 2020/878)

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

TRANSPORT INFORMATION (SECTION 14):
- UN number
- Packing group

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:

SECTION 16: OTHER INFORMATION (continued)

Acute Tox. 4: H302 - Harmful if swallowed.
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.
Skin Sens. 1A: H317 - May cause an allergic skin reaction.
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Oral).

Classification procedure:

Skin Irrit. 2: Calculation method
Skin Sens. 1A: Calculation method
Aquatic Chronic 2: Calculation method
Eye Irrit. 2: Calculation method

Advice related to training:

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: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

Printing: 3/14/2025 Date of compilation: 7/23/2024 Version: 1

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

1.1 Product identifier: Standard EU V-100 Epoxy Grout Hardener

Other means of identification:

UFI: QXH9-H0UW-900T-J27N

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

Relevant uses (Industrial user): 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:

AEV LIMITED
Marion Street
CH416LT Birkenhead - WIRRAL - United Kingdom
Phone: 0044 (0) 151 647 3322
aev@aev.co.uk
www.aev.co.uk

1.4 Emergency telephone number:

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+H312
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. 1B: Skin corrosion, Category 1B, 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+H312 - Harmful if swallowed or in contact with skin.
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.
Skin Sens. 1: H317 - May cause an allergic skin reaction.

Precautionary statements:

P264: Wash thoroughly after handling.
P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.
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.

Substances that contribute to the classification

2-piperazin-1-ylethylamine (CAS: 140-31-8); 3,6-diazaoctanethylenediamin (CAS: 112-24-3)

UFI: QXH9-H0UW-900T-J27N

SECTION 2: HAZARDS IDENTIFICATION (continued)

2.3 Other hazards:

Product does not meet PBT/vPvB criteria
Endocrine-disrupting properties: The product does not meet the criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Not relevant

3.2 Mixture:

Chemical description: Formulated polyamines

Components:

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

Identification	Chemical name/Classification		Concentration
CAS: 140-31-8 EC: 205-411-0 Index: 612-105-00-4 REACH: 01-2119471486-30-XXXX	**2-piperazin-1-ylethylamine**[1]	ATP CLP00	**30 - <70 %**
	Regulation 1272/2008	Acute Tox. 4: H302+H312; Aquatic Chronic 3: H412; Skin Corr. 1B: H314; Skin Sens. 1: H317 - Danger	
CAS: 112-24-3 EC: 203-950-6 Index: 612-059-00-5 REACH: Not relevant	**3,6-diazaoctanethylenediamin**[1]	ATP CLP00	**30 - <70 %**
	Regulation 1272/2008	Acute Tox. 4: H312; Aquatic Chronic 3: H412; Skin Corr. 1B: H314; Skin Sens. 1: H317 - Danger	
CAS: 62-53-3 EC: 200-539-3 Index: 612-008-00-7 REACH: 01-2119451454-41-XXXX	**Aniline**[2]	Self-classified	**<1 %**
	Regulation 1272/2008	Acute Tox. 3: H301+H311+H331; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Carc. 2: H351; Eye Dam. 1: H318; Muta. 2: H341; Skin Sens. 1B: H317; STOT RE 1: H372 - Danger	
CAS: 98-95-3 EC: 202-716-0 Index: 609-003-00-7 REACH: 01-2119615439-35-XXXX	**nitrobenzene**[2]	ATP ATP05	**<1 %**
	Regulation 1272/2008	Acute Tox. 3: H301+H311+H331; Aquatic Chronic 3: H412; Carc. 2: H351; Repr. 1B: H360F; STOT RE 1: H372 - Danger	

[1] Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878
[2] Substance with a Union workplace exposure limit

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

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acute toxicity		Genus
2-piperazin-1-ylethylamine CAS: 140-31-8 EC: 205-411-0	LD50 oral	500 mg/kg	
	LD50 dermal	1100 mg/kg	
	LC50 inhalation vapour	Not relevant	
3,6-diazaoctanethylenediamin CAS: 112-24-3 EC: 203-950-6	LD50 oral	Not relevant	
	LD50 dermal	1100 mg/kg	
	LC50 inhalation vapour	Not relevant	
Aniline CAS: 62-53-3 EC: 200-539-3	LD50 oral	102 mg/kg	Rat
	LD50 dermal	839 mg/kg	Rabbit
	LC50 inhalation vapour	3.27 mg/L	Rat
nitrobenzene CAS: 98-95-3 EC: 202-716-0	LD50 oral	100 mg/kg	
	LD50 dermal	300 mg/kg	
	LC50 inhalation vapour	2.85 mg/L	Rat

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

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

SECTION 4: FIRST AID MEASURES (continued)

By inhalation:

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms 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:

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:

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

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

Not relevant

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. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

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:

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

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:

Prevent the entrance of product in drains, sewers or watercourses. Absorb the spill using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. Collect the product in appropriate containers and manage it according to current legislation.
Spillages in water or sea:
Small spillages:
Contain spillage using barriers or similar equipment. Use suitable absorbents for collection and treat the waste in accordance with current regulations.
Large spillages:
If possible, contain spillage in open water using barriers or similar equipment. If this is not possible, try to control its spread and collect the product with suitable mechanical means. Always consult experts before using dispersants and make sure you have the necessary approvals if they are to be used. Treat the waste according to current regulations.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

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

Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

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

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities:

A.- Specific storage requirements

Store in a cool, dry, well-ventilated location

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 assessed in the workplace:

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

EH40/2005 Workplace exposure limits, fourth edition, published 2020:

Identification	Occupational exposure limits		
Diphenylamine	WEL (8h)		10 mg/m³
CAS: 122-39-4 EC: 204-539-4	WEL (15 min)		20 mg/m³
Aniline (1)	WEL (8h)	1 ppm	4 mg/m³
CAS: 62-53-3 EC: 200-539-3	WEL (15 min)		
nitrobenzene	WEL (8h)	0.2 ppm	1 mg/m³
CAS: 98-95-3 EC: 202-716-0	WEL (15 min)		

(1) Skin

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2-piperazin-1-ylethylamine	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 140-31-8	Dermal	Not relevant	Not relevant	3.33 mg/kg	Not relevant
EC: 205-411-0	Inhalation	10.6 mg/m³	80 mg/m³	10.6 mg/m³	0.015 mg/m³
Aniline	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 62-53-3	Dermal	4 mg/kg	Not relevant	2 mg/kg	Not relevant
EC: 200-539-3	Inhalation	15.4 mg/m³	Not relevant	7.7 mg/m³	Not relevant

DNEL (General population):

Not relevant

PNEC:

Identification				
2-piperazin-1-ylethylamine	STP	250 mg/L	Fresh water	0.058 mg/L
CAS: 140-31-8	Soil	1 mg/kg	Marine water	0.006 mg/L
EC: 205-411-0	Intermittent	0.58 mg/L	Sediment (Fresh water)	215 mg/kg
	Oral	Not relevant	Sediment (Marine water)	21.5 mg/kg
Aniline	STP	2 mg/L	Fresh water	0.001 mg/L
CAS: 62-53-3	Soil	0.033 mg/kg	Marine water	0 mg/L
EC: 200-539-3	Intermittent	Not relevant	Sediment (Fresh water)	0.153 mg/kg
	Oral	2.3 g/kg	Sediment (Marine water)	0.015 mg/kg

8.2 Exposure controls:

A.- Individual protection measures, such as personal protective equipment

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 (Filter type: K)	CE CAT III	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	Chemical protective gloves (Material: Nitrile, Breakthrough time: > 480 min, Thickness: 0.4 mm)	CE CAT III	EN ISO 21420:2020	Replace the gloves at any sign of deterioration.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

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.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield	CE CAT II	EN 166:2002 UNE-EN ISO 18526-1 al 4:2020 UNE-EN ISO 18526-1 al 4:2020 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	CE CAT III	EN 13034:2005+A1:2009 UNE-EN ISO 18526-1 al 4:2020 EN ISO 13982-1:2005/A1:2011 EN ISO 6529:2013 EN ISO 6530:2005 EN 464:1995	For professional use only. Clean periodically according to the manufacturer´s instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk	CE CAT III	EN ISO 20345:2022 EN 13832-1:2019	Replace boots at any sign of deterioration.

F.- Additional emergency measures

It is advised to implement additional emergency equipments in workplaces that are particularly exposed to the product or in situations where risk assessments highlight the necessity of such equipments.

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:

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to 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 ºC:	0.01 kg/m³ (0.01 g/L)
Average carbon number:	6
Average molecular weight:	101.69 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 ºC:	Liquid
Appearance:	Not available *
Colour:	Blue
Odour:	Not available *

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Odour threshold:	Not available *
Volatility:	
Boiling point at atmospheric pressure:	180 - 2230 ºC
Vapour pressure at 25 ºC:	6 Pa
Vapour pressure at 50 ºC:	45.25 Pa (0.05 kPa)
Evaporation rate at 25 ºC:	Not available *
Product description:	
Density at 25 ºC:	981.8 kg/m³
Relative density at 25 ºC:	0.982
Dynamic viscosity at 25 ºC:	36.41 mPa·s
Kinematic viscosity at 25 ºC:	37.08 mm²/s
Kinematic viscosity at 40 ºC:	Not available *
Concentration:	Not available *
pH:	Not available *
Vapour density at 25 ºC:	Not available *
Partition coefficient n-octanol/water 25 ºC:	Not available *
Solubility in water at 25 ºC:	Not available *
Solubility properties:	Not available *
Decomposition temperature:	Not available *
Melting point/freezing point:	Not available *
Flammability:	
Flash Point:	114 ºC
Flammability (solid, gas):	Not available *
Autoignition temperature:	338 ºC
Lower flammability limit:	Not available *
Upper flammability limit:	Not available *
Particle characteristics:	
Median equivalent diameter:	Not available *

9.2 Other information:

Information with regard to physical hazard classes:	
Explosive properties:	Not available *
Oxidising properties:	Not available *
Corrosive to metals:	Not available *
Heat of combustion:	11.64 kJ/g
Aerosols-total percentage (by mass) of flammable components:	Not available *
Other safety characteristics:	
Surface tension at 25 ºC:	Not available *
Refraction index:	Not available *

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

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

SECTION 10: STABILITY AND REACTIVITY (continued)

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

10.2 Chemical stability:

Chemically stable under the indicated 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 (CO_2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

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

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 : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- 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):

- Carcinogenicity: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous with carcinogenic effects. For more information see section 3.
  IARC: Aniline (2A); nitrobenzene (2B)
- Mutagenicity: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous with mutagenic effects. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: 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 hazardous 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. However, it does contain substances which are classified as dangerous due to repetitive exposure. 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 hazardous 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 hazardous for this effect. For more information see section 3.

Other information:

Not relevant

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
2-piperazin-1-ylethylamine CAS: 140-31-8 EC: 205-411-0	LD50 oral	500 mg/kg	
	LD50 dermal	1100 mg/kg	
	LC50 inhalation		
	LC50 inhalation vapour		
3,6-diazaoctanethylenediamin CAS: 112-24-3 EC: 203-950-6	LD50 oral	2100 mg/kg	Rat
	LD50 dermal	1100 mg/kg	
	LC50 inhalation		
	LC50 inhalation vapour		
Aniline CAS: 62-53-3 EC: 200-539-3	LD50 oral	102 mg/kg	Rat
	LD50 dermal	839 mg/kg	Rabbit
	LC50 inhalation vapour	3.27 mg/L	Rat
nitrobenzene CAS: 98-95-3 EC: 202-716-0	LD50 oral	100 mg/kg	
	LD50 dermal	300 mg/kg	
	LC50 inhalation vapour	2.85 mg/L	Rat

Acute Toxicity Estimate (ATE mix):

ATE mix		Ingredient(s) of unknown toxicity
Oral	793.65 mg/kg (Calculation method)	0 %
Dermal	1104.42 mg/kg (Calculation method)	0 %
LC50 inhalation vapour	>20 mg/L (4 h) (Calculation method)	0 %

11.2 Information on other hazards:

Endocrine disrupting properties

Endocrine-disrupting properties: The product does not meet the criteria.

Other information

Not relevant

SECTION 12: ECOLOGICAL INFORMATION

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

Harmful to aquatic life with long lasting effects.

12.1 Toxicity:

SECTION 12: ECOLOGICAL INFORMATION (continued)

Acute toxicity:

Identification	Concentration		Species	Genus
2-piperazin-1-ylethylamine	LC50	2190 mg/L (96 h)	Pimephales promelas	Fish
CAS: 140-31-8	EC50	58 mg/L (48 h)	Daphnia magna	Crustacean
EC: 205-411-0	EC50	1000 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae
3,6-diazaoctanethylenediamin	LC50	495 mg/L (96 h)	Pimephales promelas	Fish
CAS: 112-24-3	EC50	31.1 mg/L (48 h)	Daphnia magna	Crustacean
EC: 203-950-6	EC50	Not relevant		
Aniline	LC50	10.6 mg/L (96 h)	Oncorhynchus mykiss	Fish
CAS: 62-53-3	EC50	0.16 mg/L (48 h)	Daphnia magna	Crustacean
EC: 200-539-3	EC50	175 mg/L (72 h)	Chlorella pyrenoidosa	Algae
nitrobenzene	LC50	>10 - 100 mg/L (96 h)		Fish
CAS: 98-95-3	EC50	>10 - 100 mg/L (48 h)		Crustacean
EC: 202-716-0	EC50	>10 - 100 mg/L (72 h)		Algae

Chronic toxicity:

Identification	Concentration		Species	Genus
Aniline	NOEC	0.39 mg/L	Pimephales promelas	Fish
CAS: 62-53-3 EC: 200-539-3	NOEC	0.016 mg/L	Daphnia magna	Crustacean
nitrobenzene	NOEC	Not relevant		
CAS: 98-95-3 EC: 202-716-0	NOEC	2.6 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
2-piperazin-1-ylethylamine	BOD5	Not relevant	Concentration	30 mg/L
CAS: 140-31-8	COD	Not relevant	Period	28 days
EC: 205-411-0	BOD5/COD	Not relevant	% Biodegradable	0 %
Aniline	BOD5	Not relevant	Concentration	2 mg/L
CAS: 62-53-3	COD	Not relevant	Period	30 days
EC: 200-539-3	BOD5/COD	Not relevant	% Biodegradable	90 %
nitrobenzene	BOD5	Not relevant	Concentration	100 mg/L
CAS: 98-95-3	COD	Not relevant	Period	14 days
EC: 202-716-0	BOD5/COD	Not relevant	% Biodegradable	3.3 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
Aniline	BCF	3
CAS: 62-53-3	Pow Log	0.91
EC: 200-539-3	Potential	Low
nitrobenzene	BCF	15
CAS: 98-95-3	Pow Log	1.85
EC: 202-716-0	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
2-piperazin-1-ylethylamine	Koc	37000	Henry	Not relevant
CAS: 140-31-8	Conclusion	Immobile	Dry soil	Not relevant
EC: 205-411-0	Surface tension	4.001E-2 N/m (25 °C)	Moist soil	Not relevant
3,6-diazaoctanethylenediamin	Koc	Not relevant	Henry	Not relevant
CAS: 112-24-3	Conclusion	Not relevant	Dry soil	Not relevant
EC: 203-950-6	Surface tension	4.307E-2 N/m (25 °C)	Moist soil	Not relevant

SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Absorption/desorption		Volatility	
Aniline	Koc	310	Henry	2.05E-1 Pa·m³/mol
CAS: 62-53-3	Conclusion	High	Dry soil	Yes
EC: 200-539-3	Surface tension	Not relevant	Moist soil	Yes
nitrobenzene	Koc	Not relevant	Henry	2.43 Pa·m³/mol
CAS: 98-95-3	Conclusion	Not relevant	Dry soil	Not relevant
EC: 202-716-0	Surface tension	4.323E-2 N/m (25 °C)	Moist soil	Not relevant

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product does not meet the criteria.

12.7 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	Hazardous

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, The Waste Regulations 2011, 2011 No. 988). As under 15 01 (2014/955/EU) 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-hazardous residue. Waste should not be disposed of to drains. 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 2023 and RID 2023:

14.1	**UN number or ID number:**	UN2735
14.2	**UN proper shipping name:**	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-piperazin-1-ylethylamine)
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 L
14.7	**Maritime transport in bulk according to IMO instruments:**	Not relevant

SECTION 14: TRANSPORT INFORMATION (continued)

Transport of dangerous goods by sea:

With regard to IMDG 41-22:

14.1	**UN number or ID number:**	UN2735
14.2	**UN proper shipping name:**	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-piperazin-1-ylethylamine)
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 L
	Segregation group:	SGG18
14.7	**Maritime transport in bulk according to IMO instruments:**	Not relevant

Transport of dangerous goods by air:

With regard to IATA/ICAO 2025:

14.1	**UN number or ID number:**	UN2735
14.2	**UN proper shipping name:**	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-piperazin-1-ylethylamine)
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	**Maritime transport in bulk according to IMO instruments:**	Not relevant

SECTION 15: REGULATORY INFORMATION

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

- (Puerto Rico, USA): *2-piperazin-1-ylethylamine (140-31-8)* ; *3,6-diazaoctanethylenediamin (112-24-3)* ; *Aniline (62-53-3)* ; *nitrobenzene (98-95-3)*
- Article 95, REGULATION (EU) No 528/2012: Not relevant
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): *nitrobenzene (98-95-3)*
- Regulation (EU) 2019/1021 on persistent organic pollutants: Not relevant
- Regulation (EU) 2024/590, about substances that deplete the ozone layer: Not relevant
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant

Seveso III:

Not relevant

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

Shall not be used in:
—ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
—tricks and jokes,
—games for one or more participants, or any article intended to be used as such, even with ornamental aspects.
Occupational exposure to respirable crystalline silica must be controlled pursuant to Directive (EU) 2019/130.

SECTION 15: REGULATORY INFORMATION (continued)

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 Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG 2009), SI 2009 No 1348
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment (Amendment) Regulations 2011, 2011 No. 1885
Control of Substances Hazardous to Health Regulations 2002 (as amended)
EH40/2005 Workplace exposure limits
The Waste Regulations 2011, 2011 No. 988

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:

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 (COMMISSION REGULATION (EU) 2020/878)

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

Not relevant

Texts of the legislative phrases mentioned in section 2:

H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H317: May cause an allergic skin reaction.
H412: Harmful to aquatic life with long lasting effects.
H302+H312: Harmful if swallowed or in contact with skin.

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. 3: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled.
Acute Tox. 4: H302+H312 - Harmful if swallowed or in contact with skin.
Acute Tox. 4: H312 - Harmful in contact with skin.
Aquatic Acute 1: H400 - Very toxic to aquatic life.
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.
Carc. 2: H351 - Suspected of causing cancer.
Eye Dam. 1: H318 - Causes serious eye damage.
Muta. 2: H341 - Suspected of causing genetic defects.
Repr. 1B: H360F - May impair fertility.
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.
Skin Sens. 1: H317 - May cause an allergic skin reaction.
Skin Sens. 1B: H317 - May cause an allergic skin reaction.
STOT RE 1: H372 - Causes damage to organs through prolonged or repeated exposure.

Classification procedure:

Skin Corr. 1B: Calculation method
Eye Dam. 1: Calculation method
Skin Sens. 1: Calculation method
Aquatic Chronic 3: Calculation method
Acute Tox. 4: Calculation method

Advice related to training:

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:

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: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer