



SAFETY DATA SHEET

Elastaseal Z Metal Primer Part A

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

1.1 Product identifier

Product name : Elastaseal Z Metal Primer Part A
Product description : Primer
Product type : Liquid.

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

Identified uses	
Industrial uses Professional uses	
Uses advised against	Reason
Consumer use	-

1.3 Details of the supplier of the safety data sheet

Tor Coatings Limited
 Portobello Industrial Estate
 Birtley
 County Durham
 United Kingdom
 DH3 2RE
 Telephone no.: +44 (0) 191 4106611
 Fax no.: +44 (0) 191 4920125
 enquiries@tor-coatings.com

e-mail address of person responsible for this SDS : rpmeurohas@ro-m.com

1.4 Emergency telephone number

Supplier

Telephone number : +44 (0) 207 858 1228
Hours of operation : 24 / 7

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Irrit. 2, H315
 Eye Irrit. 2, H319
 Skin Sens. 1, H317
 Aquatic Chronic 2, H411

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

SECTION 2: Hazards identification

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : Causes serious eye irritation.
Causes skin irritation.
May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : Wear protective gloves and eye protection: neoprene-Safety glasses with side shields.

Response : IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : bisphenol-A-epoxy resin avg.mol.wght. ≤ 700
1,6-bis(2,3-epoxypropoxy)hexane

Supplemental label elements : Contains epoxy constituents. May produce an allergic reaction.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

The mixture may be a skin sensitiser. It may also be a skin irritant and repeated contact may increase this effect. The mixture may be a skin sensitiser. It may also be a severe skin irritant.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
bisphenol-A-epoxy resin avg.mol.wght. ≤ 700	REACH #: 01-2119456619-26 EC: 500-033-5 CAS: 25068-38-6 Index: 603-074-00-8	≥10 - <25	Xi; R36/38 R43 N; R51/53	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≥10 - <25	Xn; R20/22	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	[1]
trizinc bis (orthophosphate)	REACH #: 02-2119485044-40 EC: 231-944-3 CAS: 7779-90-0 Index: 030-011-00-6	≥5 - <10	N; R50/53	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]
1,6-bis(2,3-epoxypropoxy) hexane	EC: 240-260-4 CAS: 16096-31-4	≥3 - <5	Xi; R36/38 R43 R52/53	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412	[1]
zinc oxide	REACH #: 01-2119463881-32 EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	≥0.1 - <0.3	N; R50/53 See Section 16 for the full text of the R-phrases declared above.	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
 [2] Substance with a workplace exposure limit
 [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
 [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
 [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures**4.1 Description of first aid measures**

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

SECTION 4: First aid measures

- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitiser and an irritant. It contains low molecular weight epoxy constituents which are irritating to eyes, mucous membrane and skin. Repeated skin contact may lead to irritation and to sensitisation, possibly with cross-sensitisation to other epoxies. Skin contact with the mixture and exposure to spray mist and vapour should be avoided.

Based on the properties of epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitiser and a severe irritant. It contains epoxy based reactive diluents which are moderate to severely irritating to eyes, mucous membrane and skin and are strong sensitisers. Repeated skin contact may lead to irritation and to hyper-sensitivity, possibly with cross-sensitisation to other epoxies. Single oral exposure to doses of the epoxy based reactive diluents at or close to the lethal dose has been shown to cause transient neurotoxic effects in animals in some cases. However, uptake through skin and by inhalation has not caused such effects in animals. Prolonged exposure to high concentration may cause adverse effects in target organs such as liver and kidney.

Contains bisphenol-A-epoxy resin avg.mol.wght. ≤ 700 , 1,6-bis(2,3-epoxypropoxy)hexane. May produce an allergic reaction.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO₂, powders, water spray.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Appropriate breathing apparatus may be required.

Additional information : No unusual hazard if involved in a fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance.

- 7.1 Precautions for safe handling** :
- Keep away from heat, sparks and flame. No sparking tools should be used.
 - Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.
 - Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
 - Put on appropriate personal protective equipment (see Section 8).
 - Never use pressure to empty. Container is not a pressure vessel.
 - Always keep in containers made from the same material as the original one.
 - Comply with the health and safety at work laws.
 - Do not allow to enter drains or watercourses.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Seveso Directive - Reporting thresholds (in tonnes)

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E2: Hazardous to the aquatic environment - Chronic 2	200	500

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Type	Exposure	Value	Population	Effects
bisphenol-A-epoxy resin avg.mol. wght. ≤ 700	DNEL	Short term Dermal	8.3 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	12.3 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	8.3 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	12.3 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	3.6 mg/kg bw/day	Human via the environment	Systemic
	DNEL	Short term Inhalation	0.75 mg/m ³	Human via the environment	Systemic
	DNEL	Short term Oral	0.75 mg/kg bw/day	Human via the environment	Systemic
	DNEL	Long term Dermal	3.6 mg/kg bw/day	Human via the environment	Systemic
	DNEL	Long term Inhalation	0.75 mg/m ³	Human via the environment	Systemic
	DNEL	Long term Oral	0.75 mg/kg bw/day	Human via the environment	Systemic
benzyl alcohol	DNEL	Short term Dermal	47 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	450 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	9.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	90 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	28.5 mg/kg bw/day	Consumers	Systemic
	DNEL	Short term Inhalation	40.55 mg/m ³	Consumers	Systemic
	DNEL	Short term Oral	25 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Dermal	5.7 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	8.11 mg/m ³	Consumers	Systemic
	DNEL	Long term Oral	5 mg/kg bw/day	Consumers	Systemic
trizinc bis(orthophosphate)	DNEL	Long term Inhalation	5 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	2.5 mg/m ³	Consumers	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Oral	0.83 mg/kg bw/day	Consumers	Systemic
zinc oxide	DNEL	Long term Inhalation	5 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	2.5 mg/m ³	Consumers	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Oral	0.83 mg/kg bw/day	Consumers	Systemic

PNECs

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Compartment Detail	Value	Method Detail
bisphenol-A-epoxy resin avg.mol.wght. ≤ 700	Fresh water	3 µg/l	-
	Marine	0.3 µg/l	-
	Sewage Treatment Plant	10 mg/l	-
	Fresh water sediment	0.5 mg/kg dwt	-
	Marine water sediment	0.5 mg/kg dwt	-
	Sediment	0.05 mg/kg dwt	-
benzyl alcohol	Fresh water	1 mg/l	Assessment Factors
	Marine	0.1 mg/l	Assessment Factors
	Fresh water sediment	5.27 mg/kg	Assessment Factors
	Marine water sediment	0.527 mg/kg	Assessment Factors
	Soil	0.456 mg/kg	Assessment Factors
	Sewage Treatment Plant	39 mg/l	Assessment Factors
trizinc bis(orthophosphate)	Fresh water	48.1 µg/l	-
	Marine	14.2 µg/l	-
	Fresh water sediment	550.2 mg/kg	-
	Marine water sediment	263.9 mg/kg	-
	Soil	249.4 mg/kg	-
	Sewage Treatment Plant	121.4 µg/l	-
zinc oxide	Fresh water	25.6 µg/l	-
	Marine	7.6 µg/l	-
	Sewage Treatment Plant	64.7 µg/l	-
	Fresh water sediment	146 mg/kg dwt	-
	Marine water sediment	70.3 mg/kg dwt	-
	Soil	44.3 mg/kg dwt	-

8.2 Exposure controls

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Recommended: safety glasses with side-shields. (EN 166)

Skin protection

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

SECTION 8: Exposure controls/personal protection

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

- Gloves** : For prolonged or repeated handling, use the following type of gloves:
Recommended: > 8 hours (breakthrough time): neoprene (0.65mm)
The recommendation for the type or types of glove to use when handling this product is based on information from the following source:
EN 374-3 : 2003
The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Wear overalls or long sleeved shirt. (EN 467)
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapour (Type A) and particulate filter (as filter combination A-P2) (EN 141)
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****Appearance**

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Slight
- Odour threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: 101°C
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Not available.
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Relative density** : 2.092
- Solubility(ies)** : Insoluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (room temperature): 28270 mPa·s
- Explosive properties** : Not available.

SECTION 9: Physical and chemical properties

Oxidising properties : Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.

10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO₂ and smoke can be generated.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitizer and an irritant. It contains low molecular weight epoxy constituents which are irritating to eyes, mucous membrane and skin. Repeated skin contact may lead to irritation and to sensitisation, possibly with cross-sensitisation to other epoxies. Skin contact with the mixture and exposure to spray mist and vapour should be avoided.

Based on the properties of epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitizer and a severe irritant. It contains epoxy based reactive diluents which are moderate to severely irritating to eyes, mucous membrane and skin and are strong sensitizers. Repeated skin contact may lead to irritation and to hyper-sensitivity, possibly with cross-sensitisation to other epoxies. Single oral exposure to doses of the epoxy based reactive diluents at or close to the lethal dose has been shown to cause transient neurotoxic effects in animals in some cases. However, uptake through skin and by inhalation has not caused such effects in animals. Prolonged exposure to high concentration may cause adverse effects in target organs such as liver and kidney.

Contains bisphenol-A-epoxy resin avg.mol.wght. ≤ 700, 1,6-bis(2,3-epoxypropoxy)hexane. May produce an allergic reaction.

SECTION 11: Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
bisphenol-A-epoxy resin avg.mol.wght. ≤ 700	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Mouse	20 g/kg	-
benzyl alcohol	LD50 Oral	Rat	30 g/kg	-
	LC50 Inhalation Vapour	Rat	>4178 mg/l	4 hours
	LD50 Dermal	Rabbit	2000 mg/kg	-
trizinc bis(orthophosphate)	LD50 Oral	Rat	1230 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>5.7 mg/l	4 hours
1,6-bis(2,3-epoxypropoxy) hexane	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	2900 mg/kg	-
zinc oxide	LC50 Inhalation Dusts and mists	Mouse	2500 mg/m ³	4 hours
	LC50 Inhalation Dusts and mists	Rat	>5700 mg/m ³	4 hours
	LD50 Oral	Rat	>15 g/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
bisphenol-A-epoxy resin avg. mol.wght. ≤ 700	Skin - Oedema	Rabbit	1	4 hours	-
	Skin - Erythema/Eschar	Rabbit	1.5	4 hours	-
	Skin - Mild irritant	Rabbit	-	4 hours	-
	Eyes - Irritant	Rabbit	-	-	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters	-
benzyl alcohol zinc oxide	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Moderate irritant	Pig	-	100 Percent	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Conclusion/Summary

Skin : Causes skin irritation.

Eyes : Causes serious eye irritation.

Respiratory : Based on available data, the classification criteria are not met.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
bisphenol-A-epoxy resin avg. mol.wght. ≤ 700	skin	Mouse	Sensitising
	skin	Guinea pig	Sensitising

Conclusion/Summary

SECTION 11: Toxicological information**Skin** : May cause an allergic skin reaction.**Respiratory** : Based on available data, the classification criteria are not met.**Mutagenicity****Conclusion/Summary** : Based on available data, the classification criteria are not met.**Carcinogenicity**

Product/ingredient name	Result	Species	Dose	Exposure
bisphenol-A-epoxy resin avg. mol.wght. ≤ 700	Negative - Oral - TDLo	Rat - Female	>1000 mg/kg	2 years; 7 days per week
	Negative - Oral - TDLo	Mouse - Male	>100 mg/kg	2 years; 3 days per week
benzyl alcohol	Negative - Oral - TD	Rat	-	103 weeks; 5 days per week

Conclusion/Summary : Based on available data, the classification criteria are not met.**Reproductive toxicity**

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
bisphenol-A-epoxy resin avg. mol.wght. ≤ 700	-	Negative	-	Rat	Oral: 750 mg/kg	7 days per week

Conclusion/Summary : Based on available data, the classification criteria are not met.**Teratogenicity**

Product/ingredient name	Result	Species	Dose	Exposure
bisphenol-A-epoxy resin avg. mol.wght. ≤ 700	Negative - Oral	Rat - Female	>540 mg/kg	7 days per week
	Negative - Dermal	Rabbit - Female	>300 mg/kg	7 days per week
benzyl alcohol	Negative - Unreported	Mouse - Female	550 mg/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met.**Specific target organ toxicity (single exposure)**

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Other information : Not available.**SECTION 12: Ecological information****12.1 Toxicity**

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

SECTION 12: Ecological information

Product/ingredient name	Result	Species	Exposure
bisphenol-A-epoxy resin avg. mol.wght. ≤ 700	Acute EC50 2.1 mg/l	Daphnia spec.	48 hours
benzyl alcohol	Acute LC50 1.3 mg/l	Fish	96 hours
	Chronic NOEC 0.3 mg/l	Daphnia spec.	21 days
	Acute EC50 770 mg/l	Algae	72 hours
	Acute LC50 646 mg/l	Fish - Leuciscus idus	48 hours
trizinc bis(orthophosphate)	Acute LC50 460000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Acute EC50 5.7 mg/l	Daphnia spec. - ceriodaphnia dubia	48 hours
	Acute IC50 1.87 mg/l	Algae - selenastrum capricornutum	72 hours

Conclusion/Summary : Toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
bisphenol-A-epoxy resin avg. mol.wght. ≤ 700	OECD 301B	6 to 12 % - Not readily - 28 days	-	-
benzyl alcohol	OECD 301F	5 % - Not readily - 28 days	-	-
	OECD 301A	96 % - Readily - 21 days	-	-

Conclusion/Summary : This product has not been tested for biodegradation. Based on available data, the classification criteria are not met.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
bisphenol-A-epoxy resin avg. mol.wght. ≤ 700	-	-	Not readily
benzyl alcohol	-	-	Readily
1,6-bis(2,3-epoxypropoxy) hexane	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
bisphenol-A-epoxy resin avg. mol.wght. ≤ 700	3,24	3 to 31	low
benzyl alcohol	1,1	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Non-volatile.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance.

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

Disposal considerations : Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

European waste catalogue (EWC)

The European Waste Catalogue classification of this product, when disposed of as waste, is:

Waste code	Waste designation
08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Disposal considerations : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN3082	UN3082	UN3082	UN3082
14.2 UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. [bisphenol-A-epoxy resin avg.mol.wght. ≤700]	Environmentally hazardous substance, liquid, n.o.s. [bisphenol-A-epoxy resin avg.mol.wght. ≤ 700,]	Environmentally hazardous substance, liquid, n.o.s. Marine pollutant [bisphenol-A-epoxy resin avg.mol. wght.≤ 700]	Environmentally hazardous substance, liquid, n.o.s.[bisphenol-A-epoxy resin avg.mol.wght. ≤700]
14.3 Transport hazard class(es)	9 	9 	9 	9
14.4 Packing group	III	III	III	III

SECTION 14: Transport information

14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes.
Additional information	<p>Limited quantity: LQ7</p> <p>Remarks: (≤ 5L:) Limited Quantity - ADR/IMDG 3.4</p> <p>ADR Tunnel code: (E)</p>		<p>Emergency schedules (EmS): F-A + S-F</p> <p>Marine pollutant (P)</p> <p>Remarks: (≤ 5L:) Limited Quantity - ADR/IMDG 3.4.6</p>	<p>Passenger and Cargo Aircraft Quantity limitation: 450 L Packaging instructions: 964</p> <p>Cargo Aircraft Only Quantity limitation: 450 L Packaging instructions: 964</p> <p>Limited Quantities - Passenger Aircraft Quantity limitation: 30 Kg Packaging instructions: Y 964</p>

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

VOC : The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

VOC for Ready-for-Use Mixture : 2004/42/EC - IIA/j: 500g/l (2010). ≤ 300g/l VOC.

Europe inventory : All components are listed or exempted.

Priority List Chemicals (793/93/EEC) : Listed

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category

E2: Hazardous to the aquatic environment - Chronic 2

SECTION 15: Regulatory information

National regulations

- Industrial use** : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.
- References** : EH40/2005 Workplace exposure limits
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2015/830

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

CN code : 3208 90 91

International lists

National inventory

- Australia** : Not determined.
Canada : Not determined.
China : Not determined.
Japan : Not determined.
Malaysia : Not determined.
New Zealand : Not determined.
Philippines : Not determined.
Republic of Korea : Not determined.
Taiwan : Not determined.
United States : Not determined.

15.2 Chemical Safety Assessment : No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

- : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

SECTION 16: Other information

Classification	Justification
Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	Expert judgment Expert judgment Expert judgment Expert judgment

Full text of abbreviated H statements	: H302 H315 H317 H319 H332 H400 H410 H411 H412	Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects.
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Full text of classifications [CLP/GHS]	: Acute Tox. 4, H302 Acute Tox. 4, H332 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Aquatic Chronic 2, H411 Aquatic Chronic 3, H412 Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1, H317	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 ACUTE AQUATIC HAZARD - Category 1 LONG-TERM AQUATIC HAZARD - Category 1 LONG-TERM AQUATIC HAZARD - Category 2 LONG-TERM AQUATIC HAZARD - Category 3 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITIZATION - Category 1
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Notice to reader

The information in this Safety Data Sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.