



# SAFETY DATA SHEET

Metal Primer Base

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

### 1.1 Product identifier

**Product name** : Metal Primer Base  
**Product description** : Primer  
**Product type** : Liquid.  
**UFI** : GW11-Y0W2-Q00X-518J

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

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

### 1.3 Details of the supplier of the safety data sheet

RUST-OLEUM EUROPE  
Martin Mathys NV, Kolenbergstraat 23, B-3545 Zelem, Belgium  
Telephone no.: +32 (0) 13 460 200  
Fax no.: +32 (0) 13 460 201

Tor Coatings Limited  
Unit 21, White Rose Way, Follingsby Park, Gateshead, Tyne & Wear, NE10 8YX United Kingdom  
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@rustoleum.eu

### 1.4 Emergency telephone number

**National advisory body/Poison Centre**

**Supplier**

Telephone number United Kingdom: : +44 870 8200418 / +44 2038073798  
Great Britain

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.

**Ingredients of unknown toxicity** : -

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** : H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H411 - Toxic to aquatic life with long lasting effects.

#### Precautionary statements

**General** : Not applicable.

**Prevention** : P280 - Wear protective gloves. Wear eye or face protection.  
P273 - Avoid release to the environment.

**Response** : P391 - Collect spillage.

**Storage** : Not applicable.

**Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients** : 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane  
1,6-bis(2,3-epoxypropoxy)hexane

**Supplemental label elements** : EUH211 - Warning! Hazardous respirable droplets may be formed when sprayed.  
Do not breathe spray or mist.

**Supplemental label elements : Detergents -** : Not applicable.

**Regulation (EC) No 907/2006**

**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

Metal Primer Base

**SECTION 2: Hazards identification****Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.**SECTION 3: Composition/information on ingredients****3.2 Mixtures** : Mixture**United Kingdom: Great Britain**

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	REACH #: 01-2119456619-26 EC: 216-823-5 CAS: 1675-54-3 Index: 603-073-00-2	≥10 - ≤25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	Skin Irrit. 2, H315: C ≥ 5% Eye Irrit. 2, H319: C ≥ 5%	[1]
benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≥10 - ≤25	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	ATE [Oral] = 1620 mg/kg ATE [Inhalation (dusts and mists)] = 4,178 mg/l	[1]
trizinc bis(orthophosphate)	REACH #: 01-2119485044-40 EC: 231-944-3 CAS: 7779-90-0 Index: 030-011-00-6	≤10	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
1,6-bis(2,3-epoxypropoxy)hexane	REACH #: 01-2119463471-41 EC: 240-260-4 CAS: 16096-31-4	≤5	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	≤0,3	Aquatic Acute 1, H400 Aquatic Chronic 1, H410  <b>See Section 16 for the full text of the H statements declared above.</b>	M [Acute] = 1 M [Chronic] = 1	[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.

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

Type

[1] Substance classified with a health or environmental hazard

This mixture contains ≥ 1% of titanium dioxide. The Annex VI classification of titanium dioxide does not apply to this mixture according to Note 10.

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- 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

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

### 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.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

## SECTION 5: Firefighting measures

**Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
sulfur oxides  
phosphorus oxides  
metal oxide/oxides

### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**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** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**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

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

#### Seveso Directive - Reporting thresholds

##### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E2	200 tonne	500 tonne

### 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 / Biological exposure indices

- Recommended monitoring procedures** : 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
benzyl alcohol	DNEL	Short term Dermal	47 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	450 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	9,5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	90 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Dermal	28,5 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term Inhalation	40,55 mg/m <sup>3</sup>	General population [Consumers]	Systemic
	DNEL	Short term Oral	25 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Dermal	5,7 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	8,11 mg/m <sup>3</sup>	General population [Consumers]	Systemic
	DNEL	Long term Oral	5 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term Dermal	20 mg/kg	General population	Systemic
	DNEL	Long term Oral	4 mg/kg	General population	Systemic
	DNEL	Long term Dermal	8 mg/kg	Workers	Systemic
	DNEL	Short term Oral	20 mg/kg	General population	Systemic
	DNEL	Long term Dermal	4 mg/kg	General population	Systemic
	DNEL	Short term Inhalation	27 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	5,4 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	22 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	110 mg/m <sup>3</sup>	Workers	Systemic
	trizinc bis(orthophosphate)	DNEL	Short term Dermal	40 mg/kg	Workers
DNEL		Long term Inhalation	5 mg/m <sup>3</sup>	Workers	Systemic
DNEL		Long term Inhalation	2,5 mg/m <sup>3</sup>	General population [Consumers]	Systemic
DNEL		Long term Dermal	83 mg/kg bw/day	Workers	Systemic
DNEL		Long term Dermal	83 mg/kg bw/day	General population [Consumers]	Systemic
DNEL		Long term Oral	0,83 mg/kg bw/day	General population [Consumers]	Systemic
zinc oxide	DNEL	Long term Inhalation	5 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term	2,5 mg/m <sup>3</sup>	General	Systemic

## SECTION 8: Exposure controls/personal protection

		Inhalation		population [Consumers]	
	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Oral	0,83 mg/ kg bw/day	General population [Consumers]	Systemic

### PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
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
	Fresh water	2,3 mg/l	-
	Sewage Treatment Plant	39 mg/l	-
	Fresh water sediment	5,27 mg/kg	-
	Soil	0,456 mg/kg	-
trizinc bis(orthophosphate)	Marine water sediment	0,527 mg/kg	-
	Fresh water	1 mg/l	-
	Marine water	0,1 mg/l	-
	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	-
	Fresh water	25,6 µg/l	-
zinc oxide	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** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### 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. Use eye protection according to EN 166. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

#### Skin protection



## SECTION 8: Exposure controls/personal 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.

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

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 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: EN374. 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. 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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

<b>Physical state</b>	: Liquid.
<b>Colour</b>	: Grey.
<b>Odour</b>	: Slight
<b>Odour threshold</b>	: Not available.
<b>Melting point/freezing point</b>	: Not available.
<b>Initial boiling point and boiling range</b>	: Not relevant due to nature of the product.
<b>Flammability (solid, gas)</b>	: Not available.
<b>Lower and upper explosion limit</b>	: Not available.
<b>Flash point</b>	: Closed cup: 101°C (213,8°F) [Literature]

Metal Primer Base

## SECTION 9: Physical and chemical properties

- Auto-ignition temperature** : Not relevant due to nature of the product.  
**Decomposition temperature** : Not available.  
**pH** : Not applicable.  
**pH : Justification** : Product is non-soluble (in water).  
**Viscosity** : Dynamic (room temperature): >6000 mPa·s [Literature]  
 Kinematic (room temperature): 2809 to 2890 mm<sup>2</sup>/s [calculated.]  
 Kinematic (40°C): >20,5 mm<sup>2</sup>/s  
**Solubility(ies)** :

Media	Result
cold water	Not soluble
hot water	Not soluble

- Solubility in water** : Not available.  
**Miscible with water** : No.  
**Partition coefficient: n-octanol/ water** : Not applicable.  
**Vapour pressure** : <0,13 kPa (<1 mm Hg) [Literature]  
**Evaporation rate** : Not available.  
**Relative density** : Not available.  
**Density** : 2,076 to 2,136 g/cm<sup>3</sup> [20°C (68°F)] [DIN 53217]  
**Vapour density** : Not available.  
**Explosive properties** : No unusual hazard if involved in a fire.  
**Oxidising properties** : Not available.  
**Particle characteristics**  
**Median particle size** : Not applicable.

## 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** : The product is stable.  
**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.  
**10.4 Conditions to avoid** : No specific data.  
**10.5 Incompatible materials** : No specific data.  
**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

- 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**  
Acute toxicity

## SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	LD50 Dermal	Rabbit	20 g/kg	-
benzyl alcohol	LC50 Inhalation Dusts and mists	Rat	4,178 mg/l	4 hours
trizinc bis(orthophosphate)	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	1620 mg/kg	-
	LD50 Oral	Rat	1660 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 <sup>3</sup>	4 hours
	LC50 Inhalation Dusts and mists	Rat	>5700 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	>15 g/kg	-

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

### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	N/A	20000	N/A	N/A	N/A
benzyl alcohol	1620	N/A	N/A	N/A	4,178
1,6-bis(2,3-epoxypropoxy)hexane	2900	N/A	N/A	N/A	N/A

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
benzyl alcohol	Eyes - Irritant	Rabbit	-	-	-
	Skin - Moderate irritant	Pig	-	100 Percent	-
zinc oxide	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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	skin	Guinea pig	Sensitising
	skin	Mouse	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

It has been observed that the carcinogenic hazard of this product arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.

Product/ingredient name	Result	Species	Dose	Exposure
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

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

### Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Positive - Dermal	Rabbit	300 mg/kg	1 days per week
benzyl alcohol	Positive - Oral	Rabbit	180 mg/kg	1 days per week
	Positive - Oral	Rat	180 mg/kg	1 days per week
	Negative - Route of exposure 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.

- Information on likely routes of exposure** : Routes of entry anticipated: Dermal, Inhalation, Eyes.

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Causes skin irritation. May cause an allergic skin reaction.  
**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
 pain or irritation  
 watering  
 redness  
**Inhalation** : No specific data.  
**Skin contact** : Adverse symptoms may include the following:  
 irritation  
 redness  
**Ingestion** : No specific data.

## SECTION 11: Toxicological information

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

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

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

Not available.

#### 11.2.2 Other information

Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
benzyl alcohol	Acute EC50 770 mg/l	Algae	72 hours
	Acute LC50 646 mg/l	Fish - <i>Leuciscus idus</i>	48 hours
	Acute LC50 460000 µg/l Fresh water	Fish - <i>Pimephales promelas</i> - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
trizinc bis(orthophosphate)	Acute NOEC 310 mg/l	Algae	72 hours
	Acute EC50 5,7 mg/l	Daphnia spec. - <i>ceriodaphnia dubia</i>	48 hours
zinc oxide	Acute IC50 1,87 mg/l	Algae - <i>selenastrum capricornutum</i>	72 hours
	Acute EC50 0,024 mg/l	Algae	72 hours
	Acute EC50 0,137 mg/l	Algae	72 hours
	Acute EC50 0,413 mg/l	Daphnia spec.	48 hours
	Acute EC50 0,481 mg/l Fresh water	Daphnia spec. - <i>Daphnia magna</i> - Neonate	48 hours
	Acute IC50 46 µg/l Fresh water	Algae - <i>Pseudokirchneriella subcapitata</i> - Exponential growth phase	72 hours
	Acute LC50 98 µg/l Fresh water	Daphnia spec. - <i>Daphnia magna</i> - Neonate	48 hours
Chronic NOEC 0,019 mg/l Chronic NOEC 0,037 mg/l Chronic NOEC 0,082 mg/l Chronic NOEC 0,199 mg/l	Acute LC50 0,33 to 0,78 mg/l	Fish	96 hours
	Chronic NOEC 0,019 mg/l	Algae	7 days
	Chronic NOEC 0,037 mg/l	Daphnia spec.	21 days
	Chronic NOEC 0,082 mg/l	Daphnia spec.	7 days
	Chronic NOEC 0,199 mg/l	Fish	30 days

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

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## SECTION 12: Ecological information

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	OECD 301B	6 to 12 % - Not readily - 28 days	-	-
benzyl alcohol	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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	-	-	Not readily
benzyl alcohol	-	-	Readily
1,6-bis(2,3-epoxypropoxy)hexane	-	-	Not readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	3,84	3 to 31	Low
benzyl alcohol	0,87	-	Low
trizinc bis(orthophosphate)	-	60960	High
1,6-bis(2,3-epoxypropoxy)hexane	0,822	-	Low
zinc oxide	-	177	Low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Non-volatile.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Endocrine disrupting properties

Not available.

### 12.7 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

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## SECTION 13: Disposal considerations

**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.

**European waste catalogue (EWC)**

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

**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 spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number or ID number</b>	UN3082	UN3082	UN3082	UN3082
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PAINT)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PAINT)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PAINT)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PAINT)
<b>14.3 Transport hazard class(es)</b>	9 	9 	9 	9 
<b>14.4 Packing group</b>	III	III	III	III
<b>14.5 Environmental hazards</b>	Yes.	Yes.	Yes.	Yes.
<b>Additional information</b>	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. <b>Limited quantity</b> 5L <b>Special provisions</b> 274, 335, 375, 601 <b>Tunnel code</b> (-)	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. <b>Special provisions</b> 274, 335, 375, 601 <b>Remarks</b> : ≤ 5L: Limited Quantity	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. <b>Emergency schedules</b> F-A, S-F <b>Special provisions</b> 274, 335, 969 <b>Remarks</b> : ≤ 5L: Limited Quantity - IMDG 3.4	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8. <b>Quantity limitation</b> Passenger and Cargo Aircraft: 450 L. Packaging instructions: 964. Cargo Aircraft Only: 450 L. Packaging instructions: 964. Limited Quantities -

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## SECTION 14: Transport information

				Passenger Aircraft: 30 kg. Packaging instructions: Y964. <b>Special provisions</b> A97, A158, A197, A215
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**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.

**14.7 Transport in bulk according to IMO instruments** : Not available.

## SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
[Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles](#)

No listed substance

### Labelling

### 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.

**Industrial emissions (integrated pollution prevention and control) - Air** : Not listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Not listed

**Explosive precursors** : Not applicable.

### United Kingdom: Great Britain

### UK (GB)/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.

### Ozone depleting substances

Not listed.

### Prior Informed Consent (PIC)

Not listed.

### Persistent Organic Pollutants

Not listed.



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## SECTION 15: Regulatory information

**Aerosol dispensers** :

### Seveso Directive

This product is controlled under the Seveso Directive.

### Danger criteria

#### Category

E2

**Annex XVII - Restrictions** : Not applicable.

**on the manufacture,  
placing on the market  
and use of certain  
dangerous substances,  
mixtures and articles**

### International regulations

#### Stockholm Convention on Persistent Organic Pollutants

List name	Ingredient name	Status
Not listed.		

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

List name	Ingredient name	Status
Not listed.		

**CN code** : 3208 90 91 00

### Inventory list

- Australia** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Eurasian Economic Union** : **Russian Federation inventory**: Not determined.
- Japan** : **Japan inventory (CSCL)**: All components are listed or exempted.  
**Japan inventory (ISHL)**: Not determined.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.
- Taiwan** : Not determined.
- Thailand** : Not determined.
- Turkey** : Not determined.
- United States** : Not determined.
- Viet Nam** : Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments are still required.

## 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  
 N/A = Not available  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 vPvB = Very Persistent and Very Bioaccumulative

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

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

#### United Kingdom: Great Britain

### Full text of abbreviated H statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

### Full text of classifications [CLP/GHS]

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1

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### Notice to reader

**IMPORTANT NOTE:** 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 information contained in this data sheet (as may be amended from time to time) is not intended to be exhaustive and is presented in good faith and believed to be correct as of the date on which it is prepared. It is the user's responsibility to verify that this data sheet is current prior to using the product to which it relates. Persons using the information must make their own determinations as to the suitability of the relevant product for their purposes prior to use. Where those purposes are other than as specifically recommended in this

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## **SECTION 16: Other information**

safety data sheet, then the user uses the product at their own risk.

**MANUFACTURER'S DISCLAIMER:** the conditions, methods and factors affecting the handling, storage, application, use and disposal of the product are not under the control and knowledge of the manufacturer. Therefore the manufacturer does not assume responsibility for any adverse events which may occur in the handling, storage, application, use, misuse or disposal of the product and, so far as permitted by applicable law, the manufacturer expressly disclaims liability for any and all loss, damages and/or expenses arising out of or in any way connected to the storage, handling, use or disposal of the product. Safe handling, storage, use and disposal are the responsibility of the users. Users must comply with all applicable health and safety laws.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.