



# SAFETY DATA SHEET

5500 Solventfree Epoxy System (Base)

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

### 1.1 Product identifier

**Product name** : 5500 Solventfree Epoxy System (Base)  
**Product description** : Paint.  
 Protective coatings for industrial buildings and castings.  
**Product type** : Liquid.  
**UFI** : 0XE0-40CC-100J-0KG9

### 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	Product is not intended for 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

**e-mail address of person responsible for this SDS** : rpmeurohas@rustoleum.eu

### 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

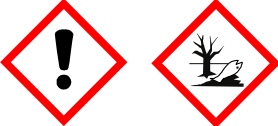
The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

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

## SECTION 2: Hazards identification

<b>Hazard pictograms</b>	:	
<b>Signal word</b>	:	Warning
<b>Hazard statements</b>	:	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.
<b><u>Precautionary statements</u></b>		
<b>General</b>	:	Not applicable.
<b>Prevention</b>	:	P280 - Wear protective gloves and eye protection: neoprene gloves and safety glasses with side-shields. P273 - Avoid release to the environment.
<b>Response</b>	:	P391 - Collect spillage. P302 + P352 - IF ON SKIN: Wash with plenty of water. P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
<b>Storage</b>	:	Not applicable.
<b>Disposal</b>	:	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	:	bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol and Oxirane, mono[ (C12-14-alkyloxy)methyl] derivs.
<b>Supplemental label elements</b>	:	Contains epoxy constituents. May produce an allergic reaction.  Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	:	Not applicable.
<b><u>Special packaging requirements</u></b>		
<b>Containers to be fitted with child-resistant fastenings</b>	:	Not applicable.
<b>Tactile warning of danger</b>	:	Not applicable.

### 2.3 Other hazards

<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	:	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
<b>Other hazards which do not result in classification</b>	:	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

Product/ingredient name	Identifiers	%	Classification	
			Regulation (EC) No. 1272/2008 [CLP]	Type
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	≥25 - ≤50	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
titanium dioxide	REACH #: 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7	≥10 - ≤25	Carc. 2, H351	[1]
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	REACH #: 01-2119454392-40 EC: 500-006-8 CAS: 9003-36-5	≥10 - ≤25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
Oxirane, mono[ (C12-14-alkyloxy) methyl] derivs.	REACH #: 01-2119485289-22 EC: 271-846-8 CAS: 68609-97-2 Index: 603-103-00-4	≤10	Skin Irrit. 2, H315 Skin Sens. 1, H317	[1]
			<b>See Section 16 for the full text of the H statements declared above.</b>	

**Notes**

**The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm.**

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  
 [6] Additional disclosure due to company policy

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.
- 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.

**SECTION 4: First aid measures**

**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 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.  $\leq 700$ , Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol, Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.. May produce an allergic reaction.

**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.

See toxicological information (Section 11)

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Recommended: alcohol-resistant foam, CO<sub>2</sub>, 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** : No specific hazard.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 sulfur oxides  
 halogenated compounds  
 metal oxide/oxides

### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : This material is toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**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.

**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.

## SECTION 6: Accidental release measures

- 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	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

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



**SECTION 8: Exposure controls/personal protection**

(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**

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 <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	8,3 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	12,3 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Dermal	3,6 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term Inhalation	0,75 mg/m <sup>3</sup>	General population [Consumers]	Systemic
	DNEL	Short term Oral	0,75 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Dermal	3,6 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	0,75 mg/m <sup>3</sup>	General population [Consumers]	Systemic
	DNEL	Long term Oral	0,75 mg/kg bw/day	General population [Consumers]	Systemic
titanium dioxide	DNEL	Long term Inhalation	10 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Oral	700 mg/kg bw/day	General population [Consumers]	Systemic
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	DNEL	Short term Dermal	83 mg/cm <sup>2</sup>	Workers	Local
	DNEL	Long term Dermal	104,15 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	29,39 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	62,5 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	8,7 mg/m <sup>3</sup>	General population [Consumers]	Systemic
	DNEL	Long term Oral	6,25 mg/kg bw/day	General population [Consumers]	Systemic
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	DNEL	Short term Dermal	17 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	68 mg/cm <sup>2</sup>	Workers	Local
	DNEL	Short term Inhalation	29 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	9,8 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Dermal	3,9 mg/kg bw/day	Workers	Systemic

**SECTION 8: Exposure controls/personal protection**

	DNEL	Long term Inhalation	13,8 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	1,7 mg/cm <sup>2</sup>	Workers	Local
	DNEL	Long term Inhalation	0,98 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Dermal	10 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term Inhalation	7,6 mg/m <sup>3</sup>	General population [Consumers]	Systemic
	DNEL	Short term Oral	1219 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term Dermal	40 mg/cm <sup>2</sup>	General population [Consumers]	Local
	DNEL	Short term Inhalation	2,9 mg/m <sup>3</sup>	General population [Consumers]	Local
	DNEL	Long term Dermal	2,35 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	4,1 mg/m <sup>3</sup>	General population [Consumers]	Systemic
	DNEL	Long term Oral	1 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Dermal	1 mg/cm <sup>2</sup>	General population [Consumers]	Local
	DNEL	Long term Inhalation	1,46 mg/m <sup>3</sup>	General population [Consumers]	Local

**PNECs**

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	-
titanium dioxide	Fresh water	0,127 mg/l	-
	Marine	>1 mg/l	-
	Sewage Treatment Plant	>100 mg/l	-
	Fresh water sediment	>1000 mg/kg	-
	Marine water sediment	>100 mg/kg	-
	Soil	100 mg/kg	-
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	Fresh water	0,003 mg/l	-
	Marine water	0,0003 mg/l	-
	Sewage Treatment Plant	10 mg/l	-
	Fresh water sediment	0,294 mg/kg dwt	-
	Marine water sediment	0,0294 mg/kg dwt	-
	Soil	0,237 mg/kg dwt	-
Oxirane, mono[(C12-14-alkyloxy)methyl]	Fresh water	0,0072 mg/l	-



## SECTION 8: Exposure controls/personal protection

derivs.	Marine Sewage Treatment Plant	0,00072 mg/l 10 mg/l	- -
	Fresh water sediment	66,77 mg/kg dwt	-
	Marine water sediment	6,677 mg/kg dwt	-
	Soil	80,12 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: chemical splash goggles. 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.

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

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: overall (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** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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: A respirator is not needed under normal and intended conditions of product use.

## SECTION 8: Exposure controls/personal protection

**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

<b>Physical state</b>	: Liquid.
<b>Colour</b>	: Various
<b>Odour</b>	: Odourless.
<b>Odour threshold</b>	: Not available.
<b>pH</b>	: Not available.
<b>Melting point/freezing point</b>	: -10°C
<b>Initial boiling point and boiling range</b>	: >200°C
<b>Flash point</b>	: Closed cup: >130°C [ISO EN 2719 / DIN 51758 / ASTM D93]
<b>Evaporation rate</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge. This material will not burn or burns with difficulty.
<b>Upper/lower flammability or explosive limits</b>	: Not available.
<b>Vapour pressure</b>	: <0,067 kPa [room temperature]
<b>Vapour density</b>	: Not available.
<b>Relative density</b>	: 1,3 to 1,5
<b>Solubility(ies)</b>	: Not available.
<b>Partition coefficient: n-octanol/ water</b>	: Not available.
<b>Auto-ignition temperature</b>	: >400°C
<b>Decomposition temperature</b>	: >200°C
<b>Viscosity</b>	: Dynamic (room temperature): >5000 mPa·s
<b>Explosive properties</b>	: Not available.
<b>Oxidising properties</b>	: Not available.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: Stable under recommended storage and handling conditions (see Section 7).
<b>10.3 Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: When exposed to high temperatures may produce hazardous decomposition products.
<b>10.5 Incompatible materials</b>	: Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

**SECTION 10: Stability and reactivity**

**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, CO<sub>2</sub> and smoke can be generated.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****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	-
titanium dioxide	LD50 Oral	Rat	30 g/kg	-
	LC50 Inhalation Dusts and mists	Rat - Male, Female	3,43 to 5,09 mg/l	4 hours
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	LD50 Dermal	Rabbit	>10 g/kg	-
	LD50 Oral	Rat	>24 g/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	LC50 Inhalation Dusts and mists	Rat	>150 mg/m <sup>3</sup>	7 hours
	LD50 Oral	Rat	17100 mg/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 - Mild irritant	Rabbit	-	-	-
	Skin - Oedema	Rabbit	1 to 1,5	-	-
	Skin - Erythema/Eschar	Rabbit	1,5 to 2	-	-
	Eyes - Cornea opacity	Rabbit	<1,7	-	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters	-
titanium dioxide	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters	-
	Skin - Primary dermal irritation index (PDII)	Rabbit	4,1	24 hours	-
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Skin - Primary dermal irritation	Rabbit	5,75	24 hours	-

**SECTION 11: Toxicological information**

	index (PDII) Eyes - Mild irritant	Rabbit	-	-	-
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**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
titanium dioxide Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	skin	Guinea pig	Sensitising
	skin	Guinea pig	Not sensitizing
	skin	Guinea pig	Sensitising
Oxirane, mono[ (C12-14-alkyloxy)methyl] derivs.	skin	Guinea pig	Sensitising

**Conclusion/Summary**

- Skin** : May cause an allergic skin reaction.  
**Respiratory** : Based on available data, the classification criteria are not met.

**Mutagenicity**

Product/ingredient name	Test	Experiment	Result
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700	OECD 476	Experiment: In vitro Subject: Mammalian-Animal	Positive
	OECD 471	Subject: Bacteria	Positive
	OECD 478	Experiment: In vivo Subject: Mammalian-Animal	Negative
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	OECD 476	Experiment: In vitro Subject: Mammalian-Animal	Positive
	OECD 471	Subject: Bacteria	Positive
Oxirane, mono[ (C12-14-alkyloxy)methyl] derivs.	OECD 474	Subject: Mammalian-Animal	Negative
	OECD 471	Subject: Bacteria	Positive
	OECD 476	Metabolic activation: with and without S9 metabolic activation Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 474	Experiment: In vivo Subject: Mammalian-Animal	Negative
	OECD 475	Experiment: In vivo Subject: Mammalian-Animal	Negative

- 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	-	2 years; 7 days per week
	Negative - Dermal - TDLo	Rat - Female	1000 mg/kg	2 years; 5 days per week
	Negative - Dermal - TDLo	Mouse - Male	100 mg/kg	2 years; 3 days per week

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

**SECTION 11: Toxicological information****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	-
titanium dioxide	Negative	Negative	Negative	Rat - Male, Female	Oral: 100 to 3001000 mg/kg	20 days; 7 days per week
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	Negative	-	-	Rat	Oral: 540 mg/kg	-

**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	-
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	Negative - Dermal	Rabbit - Female	>300 mg/kg	-
	Negative - Oral	Rabbit - Female	>180 mg/kg	-
	Negative - Route of exposure unreported	Rabbit - Female	>300 mg/kg	-
Oxirane, mono[ (C12-14-alkyloxy)methyl] derivs.	Negative - Route of exposure unreported	Rat - Female	>200 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.

**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**

Product/ingredient name	Result	Species	Dose	Exposure
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700	Sub-chronic NOAEL Oral	Rat	50 mg/kg	90 days
titanium dioxide	Sub-chronic NOAEL Dermal	Rat	100 mg/kg	90 days
	Sub-chronic NOEL Dermal	Rat	10 mg/kg	90 days
	Chronic NOAEL Oral	Rat	3500 mg/kg	-
	Chronic NOAEL Inhalation Dusts and mists	Rat	10 mg/m <sup>3</sup>	24 hours

**SECTION 11: Toxicological information**

<b>Conclusion/Summary</b>	: Based on available data, the classification criteria are not met.
<b>General</b>	: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.
<b>Other information</b>	: 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.

Product/ingredient name	Result	Species	Exposure	
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700	Acute IC50 >11 mg/l	Algae	72 hours	
	Acute LC50 2,1 mg/l	Daphnia spec.	48 hours	
	Acute LC50 1,5 mg/l	Fish	96 hours	
	Chronic NOEC 0,3 mg/l	Daphnia spec. - Daphnia magna	21 days	
titanium dioxide	Acute LC50 3 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours	
	Acute LC50 6,5 mg/l Fresh water	Daphnia spec. - Daphnia pulex - Neonate	48 hours	
	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours	
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	Acute EC50 1,8 mg/l	Algae	72 hours	
	Acute EC50 2 mg/l	Daphnia spec.	24 hours	
	Acute EC50 1,6 mg/l	Daphnia spec.	48 hours	
	Acute IC50 >100 mg/l	Bacteria	3 hours	
	Acute LC50 0,55 mg/l	Fish	96 hours	
	Acute LC50 2 mg/l	Fish	96 hours	
	Chronic NOEC 0,3 mg/l	Daphnia spec.	21 days	
	Acute EC50 >100 mg/l	Bacteria	3 hours	
	Oxirane, mono[ (C12-14-alkyloxy)methyl] derivs.	Acute EC50 7,2 mg/l	Daphnia spec.	48 hours
		Acute IC50 844 mg/l	Algae	72 hours
Acute LC50 5000 mg/l		Fish	96 hours	
Acute LC50 1800 mg/l		Fish	96 hours	

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

**12.2 Persistence and degradability**

**SECTION 12: Ecological information**

Product/ingredient name	Test	Result	Dose	Inoculum
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700  Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol Oxirane, mono[ (C12-14-alkyloxy)methyl] derivs.	OECD 301B	12 % - Not readily - 28 days	-	-
	OECD 301F	5 % - Not readily - 28 days	-	-
	-	0 % - Not readily - 28 days	-	-
	OECD 301F	57 to 65 % - Inherent - 7 days	-	-
	OECD 301D	35 % - Not readily - 28 days	-	-

**Conclusion/Summary** : This product is estimated to have a very slow rate of biodegradation of less than 30% degradation over a test period of more than 28 days.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700 titanium dioxide Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol Oxirane, mono[ (C12-14-alkyloxy)methyl] derivs.	Fresh water 4 to 7 days, 20°C	-	Not readily
	-	-	Not readily
	-	-	Not readily
	-	-	Not readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700	2.64 to 3.78	31	low
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	2,7	-	low
Oxirane, mono[ (C12-14-alkyloxy)methyl] derivs.	3,77	160 to 263	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 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 hazardous 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
<b>14.1 UN number</b>	UN 3082	UN 3082	UN 3082	UN 3082
<b>14.2 UN proper shipping name</b>	Environmentally hazardous substance, liquid, n.o.s. [bisphenol-A-epoxy resin]	Environmentally hazardous substance, liquid, n.o.s. [bisphenol-A-epoxy resin]	Environmentally hazardous substance, liquid, n.o.s. Marine pollutant [bisphenol-A-epoxy resin]	Environmentally hazardous substance, liquid, n.o.s. [bisphenol-A-epoxy resin]
<b>14.3 Transport hazard class(es)</b>	9 	9 	9 	9 
<b>14.4 Packing group</b>	III	III	III	III

## SECTION 14: Transport information

<b>14.5 Environmental hazards</b>	Yes.	Yes.	Yes.	Yes.
<b>Additional information</b>	<p><b>Remarks:</b> (<math>\leq</math> 5L: ) Exempted</p> <p>ADR Tunnel code: (E)</p>	-	<p><b>Emergency schedules (EmS):</b> F-A + S-F</p> <p><b>Marine pollutant (P)</b></p> <p><b>Remarks:</b> (<math>\leq</math> 5L: ) Exempted</p>	<p><b>Passenger and Cargo Aircraft</b> Quantity limitation: 450 L Packaging instructions: 964</p> <p><b>Cargo Aircraft Only</b> Quantity limitation: 450 L Packaging instructions: 964</p> <p><b>Limited Quantities - Passenger Aircraft</b> 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 for Ready-for-Use Mixture** : 2004/42/EC - IIA/j: 500g/l (2010).  $\leq$  155g/l VOC.

**Europe inventory** : All components are listed or exempted.

**Black List Chemicals (76/464/EEC)** :

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
titanium dioxide	Not supported	Not supported	Not supported	Not supported

#### Ozone depleting substances (1005/2009/EU)

Not listed.

## SECTION 15: Regulatory information

### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

### Seveso Directive

This product is controlled under the Seveso Directive.

#### Danger criteria

Category
E2

### 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. 2016/918

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

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

Not listed.

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

Not listed.

**CN code** : 3824 90 70

### International lists

#### National inventory

**Australia** : All components are listed or exempted.  
**Canada** : Not determined.  
**China** : Not determined.  
**Japan** : **Japan inventory (ENCS)**: Not determined.  
**Japan inventory (ISHL)**: Not determined.  
**Malaysia** : Not determined  
**New Zealand** : All components are listed or exempted.  
**Philippines** : Not determined.  
**Republic of Korea** : All components are listed or exempted.  
**Taiwan** : All components are listed or exempted.  
**Turkey** : Not determined.  
**United States** : Not determined.  
**Thailand** : Not determined.  
**Viet Nam** : 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

**Contains TiO<sub>2</sub>** : Yes

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

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

**Full text of H-phrases referred to in sections 2 and 3**

<b>Full text of abbreviated H statements</b>	: H315 H317 H319 H351 H411	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Suspected of causing cancer. Toxic to aquatic life with long lasting effects.
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<b>Full text of classifications [CLP/GHS]</b>	: Aquatic Chronic 2 Carc. 2 Eye Irrit. 2 Skin Irrit. 2 Skin Sens. 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 CARCINOGENICITY - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITISATION - 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.