

# SAFETY DATA SHEET

Date of issue/Date of revision

: 6 February 2026

Version

: 4



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

### 1.1 Product identifier

Product name : SIGMA SHIELD 880 (TINTED)

Product code : 000001199105

### Other means of identification

00472104; 00472105; 00472107; 00472108

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

Product use : Professional applications, Used by spraying.

Use of the substance/mixture : Coating.

Uses advised against : Product is not intended, labelled or packaged for consumer use.

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

PPG Protective and Marine Coatings Pty Ltd  
7 Arnold Street,  
Alrode, Alberton, Gauteng  
South Africa  
Tel: 0027 11 389 4800

e-mail address of person responsible for this SDS : PS.ACMEA@ppg.com

1.4 Emergency telephone number : +27 (0)861 555 777

## 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]

Flam. Liq. 3, H226  
Skin Irrit. 2, H315  
Eye Dam. 1, H318  
Skin Sens. 1, H317  
Repr. 1B, H360F  
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

Hazard pictograms :



: Danger

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## SECTION 2: Hazards identification

<b>Hazard statements</b>	: <input checked="" type="checkbox"/> Flammable liquid and vapour. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. May damage fertility. Toxic to aquatic life with long lasting effects.
<b>Precautionary statements</b>	
<b>Prevention</b>	: <input checked="" type="checkbox"/> Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment.
<b>Response</b>	: <input checked="" type="checkbox"/> Collect spillage. IF exposed or concerned: Get medical advice or attention.
<b>Storage</b>	: Not applicable.
<b>Disposal</b>	: Dispose of contents and container in accordance with all local, regional, national and international regulations. <input checked="" type="checkbox"/> P280, P210, P273, P391, P308 + P313, P501
<b>Hazardous ingredients</b>	: <input checked="" type="checkbox"/> bis-[4-(2,3-epoxipropoxy)phenyl]propane; Epoxy Resin (700<MW<=1100); Phenol, methylstyrenated; 2-methylpropan-1-ol; oxirane, mono[(C12-14-alkyloxy)methyl] derivs. and Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine
<b>Supplemental label elements</b>	: Contains epoxy constituents. May produce an allergic reaction.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: Restricted to professional users.
<b>Special packaging requirements</b>	
<b>Containers to be fitted with child-resistant fastenings</b>	: Not applicable.
<b>Tactile warning of danger</b>	: Not applicable.
<b>2.3 Other hazards</b>	
<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	: This mixture contains substances that are assessed to be a PBT or a vPvB, refer to Section 3.2.
<b>Other hazards which do not result in classification</b>	: Prolonged or repeated contact may dry skin and cause irritation.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

: Mixture

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## SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
<b>β</b> -[4-(2,3-epoxipropoxy)phenyl]propane	REACH #: 01-2119456619-26 EC: 216-823-5 CAS: 1675-54-3 Index: 603-073-00-2	≥25 - ≤50	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]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥10 - ≤14	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 3, H412	ATE [Dermal] = 1700 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
Epoxy Resin (700<MW <=1100)	REACH #: Exempt CAS: 25036-25-3	≥5.0 - ≤10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317	-	[1]
Phenol, methylstyrenated	REACH #: 01-2119555274-38 EC: 270-966-8 CAS: 68512-30-1	≥5.0 - ≤10	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412	-	[1] [3]
2-methylpropan-1-ol	REACH #: 01-2119484609-23 EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1	≥1.0 - ≤5.0	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	-	[1] [2]
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	REACH #: 01-2119485289-22 EC: 271-846-8 CAS: 68609-97-2 Index: 603-103-00-4	≥1.0 - ≤5.0	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Repr. 1B, H360F	-	[1]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥1.0 - ≤5.0	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	ATE [Inhalation (vapours)] = 17.8 mg/l	[1] [2]
2-methoxy-1-methylethyl acetate	REACH #: 01-2119475791-29 EC: 203-603-9 CAS: 108-65-6 Index: 607-195-00-7	≥1.0 - ≤5.0	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]
12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine	REACH #: 01-0000017900-73 EC: 432-840-2 CAS: 220926-97-6 Index: 616-201-00-7	≥1.0 - ≤5.0	Acute Tox. 4, H332 STOT RE 2, H373 (lungs) (inhalation) Aquatic Chronic 4, H413	ATE [Inhalation (dusts and mists)] = 3.56 mg/l	[1] [2]
Octadecanoic acid, 12-hydroxy-, reaction	REACH #: 01-2119979085-27	≤0.30	Skin Sens. 1B, H317 Aquatic Chronic 3, H412	-	[1]

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## SECTION 3: Composition/information on ingredients

products with ethylenediamine	EC: 309-629-8 CAS: 100545-48-0	≤0.30	Repr. 2, H361fd	-	[1] [2]
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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.

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Eye contact</b>	: <input checked="" type="checkbox"/> Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
<b>Inhalation</b>	: 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.
<b>Skin contact</b>	: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
<b>Ingestion</b>	: If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
<b>Protection of first-aiders</b>	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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

#### Potential acute health effects

<b>Eye contact</b>	: <input checked="" type="checkbox"/> Causes serious eye damage.
<b>Inhalation</b>	: No known significant effects or critical hazards.
<b>Skin contact</b>	: Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
<b>Ingestion</b>	: No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: <input checked="" type="checkbox"/> Adverse symptoms may include the following: pain watering redness
<b>Inhalation</b>	: Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations

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## SECTION 4: First aid measures

**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
dryness  
cracking  
blistering may occur  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
stomach pains  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations

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

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing media** : Do not use water jet.

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

**Hazards from the substance or mixture** : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. 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 oxides  
nitrogen oxides  
sulfur oxides  
halogenated compounds  
metal oxide/oxides

### 5.3 Advice for firefighters

**Special precautions 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**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.

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## 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe 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. Use spark-proof tools and explosion-proof equipment. 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. Use spark-proof tools and explosion-proof equipment. 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. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 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. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

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## SECTION 7: Handling and storage

**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 between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. 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. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. 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.

### 7.3 Specific end use(s)

See Section 1.2 for Identified uses.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
titanium dioxide	<b>DOL OEL (South Africa, 3/2021) CARC.</b> TWA 8 hours: 10 mg/m <sup>3</sup> .
Talc , not containing asbestiform fibres	<b>DOL OEL (South Africa, 3/2021)</b> TWA 8 hours: 4 mg/m <sup>3</sup> . Form: Respirable fraction.
xylene	<b>DOL OEL (South Africa, 3/2021) [xylene, o-, m-, p- or mixed isomers]</b> Absorbed through skin. TWA 8 hours: 200 ppm. STEL 15 minutes: 300 ppm.
barium sulfate	<b>DOL OEL (South Africa, 3/2021)</b> TWA 8 hours: 10 mg/m <sup>3</sup> . Form: Inhalable fraction.
2-methylpropan-1-ol	<b>DOL OEL (South Africa, 3/2021)</b> TWA 8 hours: 100 ppm.
ethylbenzene	<b>DOL OEL (South Africa, 3/2021)</b> CARC. Absorbed through skin. TWA 8 hours: 40 ppm.
12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine	<b>ACGIH TLV (United States)</b> TWA: 10 mg/m <sup>3</sup> . Form: Inhalable particle. TWA: 3 mg/m <sup>3</sup> (inhalable dust). Form: Respirable particle.
aluminium hydroxide	<b>DOL OEL (South Africa, 3/2021) [aluminium metal and insoluble compounds]</b> TWA 8 hours: 2 mg/m <sup>3</sup> (as Al). Form: Respirable fraction.
propylidynetrimethanol	<b>ACGIH TLV (United States, 1/2025)</b> TWA 8 hours: 0.5 ppm. Form: Inhalable fraction and vapor.

#### Biological exposure indices

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## SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure indices
xylene	<b>DOL BEI (South Africa, 3/2021) [xylenes]</b> BEI: 1.5 g/g creatinine, methylhippuric acid [in urine]. Sampling time: end of shift.
ethylbenzene	<b>DOL BEI (South Africa, 3/2021)</b> BEI: 0.15 g/g creatinine, sum of mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: end of shift.

**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.

### 8.2 Exposure controls

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

#### 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** :  Chemical splash goggles and face shield.

#### Skin protection

**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. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. 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.

**Gloves** : butyl rubber

**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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

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

**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. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Wear a respirator conforming to EN140. Filter type: organic vapour (Type A) and particulate filter P3

**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****Appearance**

**Physical state** : Liquid.

**Colour** : Various

**Odour** : Aromatic. [Slight]

**Odour threshold** : Not available.

**Melting point/freezing point** : Not determined.

**Initial boiling point and boiling range** : >37.78°C

**Flammability** : Not determined. There are no data available on the mixture itself.

**Upper/lower flammability or explosive limits** : Not available.

**Flash point** : Closed cup: 37°C

**Auto-ignition temperature**

Ingredient name	°C	°F	Method
2-methoxy-1-methylethyl acetate	333	631.4	DIN 51794

**Decomposition temperature** : Stable under recommended storage and handling conditions (see Section 7).

**pH** : Not applicable. insoluble in water.

**Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): >400 mm<sup>2</sup>/s  
Kinematic (40°C): >21 mm<sup>2</sup>/s

**Viscosity** : > 100 s (ISO 6mm)

**Solubility(ies)** :

Media	Result
cold water	Not soluble

**Partition coefficient: n-octanol/ water** : Not applicable.

**Vapour pressure**

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
2-methylpropan-1-ol	<12.00102	<1.6	DIN EN 13016-2			

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## SECTION 9: Physical and chemical properties

Relative density	: 1.6
Explosive properties	: The product itself is not explosive, but the formation of an explosive mixture of vapour or dust with air is possible.
Oxidising properties	: Product does not present an oxidizing hazard.
<u>Particle characteristics</u>	
Median particle size	: Not applicable.

### 9.2 Other information

Explosive properties	: The product itself is not explosive, but the formation of an explosive mixture of vapour or dust with air is possible.
Oxidising properties	: Product does not present an oxidizing hazard.

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	: 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	: When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.
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	: Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly.

Causes serious eye damage.  
 Causes skin irritation.  
 May cause an allergic skin reaction.  
 May damage fertility.

#### Acute toxicity

Product/ingredient name	Result	Dose / Exposure
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Rabbit - Dermal - LD50 Rat - Oral - LD50	23000 mg/kg 15000 mg/kg
XYLENES	Rat - Oral - LD50	4.3 g/kg
EPOXY RESIN (AVERAGE MOLECULAR WEIGHT >700 - <1100)	Rabbit - Dermal - LD50 Rat - Oral - LD50	1.7 g/kg >2000 mg/kg
Phenol, methylstyrenated	Rat - Dermal - LD50 Rat - Oral - LD50 Rabbit - Dermal - LD50	>2000 mg/kg >2000 mg/kg >2000 mg/kg

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**SECTION 11: Toxicological information**

2-methylpropan-1-ol	Rat - Oral - LD50 Rabbit - Dermal - LD50 Rat - Inhalation - LC50 Vapour Rat - Oral - LD50	2830 mg/kg 2460 mg/kg 24.6 mg/l [4 hours] 17100 mg/kg
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Rabbit - Dermal - LD50 Rat - Oral - LD50 Rabbit - Dermal - LD50 Rat - Inhalation - LC50 Vapour Rabbit - Dermal - LD50 Rat - Oral - LD50	>4000 mg/kg 3.5 g/kg 17.8 g/kg 17.8 mg/l [4 hours] >5 g/kg 6190 mg/kg 30 mg/l [4 hours] >2000 mg/kg
ethylbenzene	Rat - Inhalation - LC50 Vapour Rabbit - Dermal - LD50 Rat - Oral - LD50	
2-methoxy-1-methylethyl acetate	Rat - Inhalation - LC50 Vapour Rabbit - Dermal - LD50 Rat - Oral - LD50	
12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine	Rat - Oral - LD50	
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	Rat - Dermal - LD50 Rat - Inhalation - LC50 Dusts and mists Rat - Oral - LD50	>2000 mg/kg 3.56 mg/l [4 hours] >2000 mg/kg
TRIMETHYLOLPROPANE	Rat - Inhalation - LC50 Dusts and mists Rat - Oral - LD50 Rabbit - Dermal - LD50	5.05 mg/l [4 hours] 14000 mg/kg 10 g/kg

**Acute toxicity estimates**

Route	ATE value
Dermal	28549.59 mg/kg
Inhalation (vapours)	166.18 mg/l
Inhalation (dusts and mists)	438.9 mg/l

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

**Irritation/Corrosion**

Product/ingredient name	Result
bis-[4-(2,3-epoxipropoxy)phenyl] propane	<u>Rabbit - Eyes - Redness of the conjunctivae</u> Duration of treatment/exposure: 24 hours Irritation score: 0.4
-	<u>Rabbit - Eyes - Mild irritant</u> Duration of treatment/exposure: 24 hours Fully reversible in 7 days or less
-	<u>Rabbit - Skin - Erythema/Eschar</u> Duration of treatment/exposure: 4 hours Irritation score: 0.8
-	<u>Rabbit - Skin - Oedema</u> Duration of treatment/exposure: 4 hours Irritation score: 0.5
-	<u>Rabbit - Skin - Mild irritant</u> Duration of treatment/exposure: 4 hours
xylene	<u>Rabbit - Skin - Moderate irritant</u> Amount/concentration applied: 500 mg Duration of treatment/exposure: 24 hours

**Conclusion/Summary**

Skin : Causes skin irritation.

Eyes : Causes serious eye damage.

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**Respiratory** : Based on available data, the classification criteria are not met.**Respiratory or skin sensitization**

Product/ingredient name	Test	Result
bis-[4-(2,3-epoxipropoxy)phenyl] propane	Mouse - skin	Sensitising
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	Guinea pig - skin	Sensitising

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

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

**Carcinogenicity**

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

**Reproductive toxicity**

May damage fertility.

**Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
2-methylpropan-1-ol	Category 3	-	Respiratory tract irritation
-	Category 3	-	Narcotic effects
2-methoxy-1-methylethyl acetate	Category 3	-	Narcotic effects

**Conclusion/Summary (Product) :**

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

**Specific target organ toxicity (repeated exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs
12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine	Category 2	inhalation	lungs

**Conclusion/Summary (Product) :**

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

**Aspiration hazard**

Product/ingredient name	Result
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1

**Conclusion/Summary (Product) :** Based on available data, the classification criteria are not met.**Information on likely routes of exposure** : Not available.

<b>Potential acute health effects</b>	
<b>Inhalation</b>	: No known significant effects or critical hazards.
<b>Ingestion</b>	: No known significant effects or critical hazards.
<b>Skin contact</b>	: Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
<b>Eye contact</b>	: Causes serious eye damage.

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

**Inhalation** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
stomach pains  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
dryness  
cracking  
blistering may occur  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations

**Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness

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

#### Short term exposure

**Potential immediate effects** : No known significant effects or critical hazards.

#### Potential delayed effects

: No known significant effects or critical hazards.

#### Long term exposure

**Potential immediate effects** : No known significant effects or critical hazards.

#### **Potential delayed effects**

: No known significant effects or critical hazards.

#### Potential chronic health effects

**General** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. 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** : May damage fertility.

**Other information** : Not available.

Prolonged or repeated contact may dry skin and cause irritation. Sanding and grinding dusts may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapour/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing.

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

#### 11.2.2 Other information

Not available.

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**SECTION 12: Ecological information****12.1 Toxicity**

Product/ingredient name	Result	Species	Dose / Exposure
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Chronic - NOEC	Daphnia	0.3 mg/l [21 days]
	Acute - LC50 - Fresh water	Daphnia - <i>daphnia magna</i>	1.8 mg/l [48 hours]
2-methylpropan-1-ol	Acute - EC50	Daphnia	1100 mg/l [48 hours]
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	LC50	Fish	>1.8 mg/l [96 hours]
	EC50	Daphnia	7.2 mg/l [48 hours]
	EC50	Algae	844 mg/l [72 hours]
ethylbenzene	Acute - EC50 - Fresh water	Daphnia	1.8 mg/l [48 hours]
	Chronic - NOEC - Fresh water	Daphnia - <i>Ceriodaphnia dubia</i>	1 mg/l
2-methoxy-1-methylethyl acetate	Acute - LC50 - Fresh water	Fish - Trout - <i>Oncorhynchus mykiss</i>	134 mg/l [96 hours]
12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine	Acute - LC50	Fish - <i>Oncorhynchus mykiss (rainbow trout)</i>	>100 mg/l [96 hours]
	Acute - EC50	Daphnia - <i>Daphnia magna (Water flea)</i>	>100 mg/l [48 hours]
	Acute - EC50	Algae - <i>Pseudokirchneriella subcapitata (microalgae)</i>	>100 mg/l [72 hours]
	Chronic - NOEC	Daphnia - <i>Daphnia magna (Water flea)</i>	≥50 mg/l [21 days]
	Chronic - NOEC	Algae - <i>Pseudokirchneriella subcapitata</i>	100 mg/l [72 hours]
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	Acute - LC50	Fish - <i>Oncorhynchus mykiss</i>	>10 mg/l [96 hours]
	Acute - EC50	Daphnia - <i>Daphnia magna</i>	>10 mg/l [48 hours]
	Acute - EC50	Algae - <i>Pseudokirchneriella subcapitata</i>	>100 mg/l [72 hours]
propylidynetrimethanol	Acute - LC50	Fish	>1000 mg/l [96 hours]

Conclusion/Summary :  Toxic to aquatic life with long lasting effects.**12.2 Persistence and degradability**

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**SECTION 12: Ecological information**

Product/ingredient name	Test	Result	Dose	Inoculum
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	OECD [ Ready Biodegradability - Manometric Respirometry Test]	87% [28 days] - Readily		
ethylbenzene	-	79% [10 days] - Readily		
2-methoxy-1-methylethyl acetate	-	83% [28 days] - Readily		
12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine	OECD [ Ready Biodegradability - Closed Bottle Test]	9% [29 days] - Not readily		
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	Ready Biodegradability - Closed Bottle Test	22% [28 days]		

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
bis-[4-(2,3-epoxipropoxi) phenyl]propane	-	-	Not readily
xylene	-	-	Readily
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	-	-	Readily
ethylbenzene	-	-	Readily
2-methoxy-1-methylethyl acetate	-	-	Readily
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	-	-	Inherent

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
xylene	3.12	7.4 to 18.5	Low
Phenol, methylstyrenated	3.627	-	Low
2-methylpropan-1-ol	1	-	Low
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	3.77	160 to 263	Low
ethylbenzene	3.6	79.43	Low
2-methoxy-1-methylethyl acetate	1.2	-	Low
12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine	>6	-	High
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	>5.86	-	High
propylidynetrimehanol	-0.47	-	Low

**12.4 Mobility in soil****Soil/water partition coefficient**

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Product/ingredient name	logKoc	Koc
bis-[4-(2,3-epoxipropoxy)phenyl]propane	4	10465.7
2-methylpropan-1-ol	1.1	12.0246
ethylbenzene	2.2	170.406
2-methoxy-1-methylethyl acetate	0.36	2.31363
propylidynetrimethanol	1.2	16.5101

**12.5 Results of PBT and vPvB assessment**

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
bis-[4-(2,3-epoxipropoxy)phenyl]propane	No	N/A	N/A	No	N/A	N/A	N/A
xylene	No	N/A	No	No	No	N/A	No
Epoxy Resin (700<MW <=1100)	No	N/A	N/A	No	N/A	N/A	N/A
Phenol, methylstyrenated	No	N/A	N/A	No	SVHC (Candidate)	Specified	Specified
2-methylpropan-1-ol	No	N/A	N/A	No	N/A	N/A	N/A
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	No	N/A	No	Yes	No	N/A	No
ethylbenzene	No	N/A	No	Yes	No	N/A	No
2-methoxy-1-methylethyl acetate	No	N/A	N/A	No	N/A	N/A	N/A
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	No	N/A	N/A	No	N/A	N/A	N/A

**12.6 Endocrine disrupting properties**

The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

**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. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**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.

**European waste catalogue (EWC)**

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**SECTION 13: Disposal considerations**

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.

Type of packaging	European waste catalogue (EWC)
Container	15 01 06 mixed packaging

**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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	ADR/RID	IMDG	IATA
<b>14.1 UN number or ID number</b>	UN1263	UN1263	UN1263
<b>14.2 UN proper shipping name</b>	PAINT	PAINT	PAINT
<b>14.3 Transport hazard class(es)</b>	3	3	3
<b>14.4 Packing group</b>	III	III	III
<b>14.5 Environmental hazards</b>	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
<b>Marine pollutant substances</b>	Not applicable.	(bis-[4-(2,3-epoxipropoxy) phenyl]propane)	Not applicable.

**Additional information**

**ADR/RID** : This class 3 viscous liquid that is also environmentally hazardous is not subject to regulation in packagings up to 5 L, 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 according to 2.2.3.1.5.2.

**Tunnel code** : (D/E)

**IMDG** : This class 3 viscous liquid that is also environmentally hazardous is not subject to regulation in packagings up to 5 L, 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 according to 2.3.2.5.

**IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.

**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.

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## SECTION 14: Transport information

14.7 Transport in bulk : Not applicable.  
according to IMO  
instruments

## 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

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
MPvB	Phenol, methylstyrenated	Candidate	D(2023) 8585-DC	1/23/2024

Annex XVII - Restrictions : Restricted to professional users.  
on the manufacture,  
placing on the market  
and use of certain  
dangerous substances,  
mixtures and articles

#### Other national and international regulations.

Explosive precursors : Not applicable.

#### Ozone depleting substances (EU 2024/590)

Not listed.

### 15.2 Chemical safety assessment

## 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]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

**Full text of abbreviated H statements** : H225 Highly flammable liquid and vapour.  
H226 Flammable liquid and vapour.  
H304 May be fatal if swallowed and enters airways.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H360F May damage fertility.  
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.

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## SECTION 16: Other information

H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
<b>Full text of classifications [CLP/GHS]</b>	
: <input checked="" type="checkbox"/> Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Aquatic Chronic 4	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

### History

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**Prepared by** : EHS

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### Disclaimer

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