

Date of issue

3 February 2026

Version 2.02

## Section 1. Product and company identification

**Product name** : SIGMAGUARD CSF 650 BASE

**Product code** : 000001011126

**Other means of identification** : 00247388; 00262234

**Product type** : Liquid.

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

#### Identified uses

Coating. Paints. Painting-related materials.

#### Uses advised against

Not applicable.

#### Reason

#### Supplier's details:

##### Supplier

: PPG Industrial do Brasil – Tintas e Vernizes Ltda  
Via Anhanguera KM 106, Bairro Sao Judas Tadeu  
Sumare / SP, Brasil  
55 19 2103-6000 (Recepção e Portaria)

##### Email address:

: fds@ppg.com

**Emergency telephone number** : 0800 707 1767 / 0800 707 7022 – Empresa Ambipar response (24hs)  
0800 014 8110 / (011)2661-8571 – CEATOX - Centro de Assistência Toxicológica  
(atendimento 24hs)

## Section 2. Hazards identification

#### Classification of the substance or mixture

: SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 1A  
TOXIC TO REPRODUCTION - Category 1B  
AQUATIC HAZARD (ACUTE) - Category 2  
AQUATIC HAZARD (LONG-TERM) - Category 2

#### Target organs

: Contains material which causes damage to the following organs: blood, liver, heart, brain.  
Contains material which may cause damage to the following organs: kidneys, lungs, the reproductive system, cardiovascular system, upper respiratory tract, skin, eyes, central nervous system (CNS).

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 38%

## Section 2. Hazards identification

### GHS label elements

#### Hazard pictograms



#### Signal word

: Danger

#### Hazard statements

: Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
May cause cancer.  
May damage fertility or the unborn child.  
Toxic to aquatic life with long lasting effects.

### Precautionary statements

#### Prevention

: Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Avoid release to the environment. Avoid breathing vapor. Wash thoroughly after handling.

#### Response

: Collect spillage. IF exposed or concerned: Get medical advice or attention. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

#### Storage

: Not applicable.

#### Disposal

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

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

## Section 3. Composition/information on ingredients

### Substance/mixture

: Mixture

### Other means of identification

: 00247388; 00262234

Ingredient name	%	CAS number/other identifiers	Classification
bis-[4-(2,3-epoxipropoxy)phenyl] propane	≥30 - ≤60	1675-54-3	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1B AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2
1,6-bis(2,3-epoxypropoxy)hexane	≥5 - ≤10	16096-31-4	ACUTE TOXICITY (oral) - Category 5 ACUTE TOXICITY (dermal) - Category 5 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A

### Section 3. Composition/information on ingredients

benzyl alcohol	≥5 - ≤10	100-51-6	SKIN SENSITIZATION - Category 1B TOXIC TO REPRODUCTION - Category 1B AQUATIC HAZARD (ACUTE) - Category 3  ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 5 EYE IRRITATION - Category 2A ASPIRATION HAZARD - Category 2
Talc , not containing asbestiform fibres	≥3 - ≤5	14807-96-6	CARCINOGENICITY - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
titanium dioxide	≥3 - ≤5	13463-67-7	CARCINOGENICITY - Category 2
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	<1	100545-48-0	ACUTE TOXICITY (oral) - Category 5 SKIN SENSITIZATION - Category 1B AQUATIC HAZARD (ACUTE) - Category 3 AQUATIC HAZARD (LONG-TERM) - Category 3
crystalline silica, non-respirable powder (>10 microns)	≤0.3	14808-60-7	CARCINOGENICITY - Category 1A

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 and hence require reporting in this section.

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

SUB codes represent substances without registered CAS Numbers.

### Section 4. First aid measures

#### Description of necessary first aid measures

- 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 recognized skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

#### Indication of immediate medical attention and special treatment needed, if necessary

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

## Section 4. First aid measures

**Protection of first-aiders** : 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.

### Potential acute health effects

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

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

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

**Hazardous thermal decomposition products** : ☒ Decomposition products may include the following materials:  
carbon oxides  
metal oxide/oxides

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

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized 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".

**Environmental precautions** : Avoid dispersal of spilled 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.

## Section 6. Accidental release measures

### Methods and materials 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 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. |

## Section 7. Handling and storage

- |  |   |
|--|---|
| Precautions for safe handling                                | : 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 ingest. Avoid breathing vapor or mist. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. |
| Advice on general occupational hygiene                       | : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.   |
| 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 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. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.   |

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
<p>alc , not containing asbestiform fibres</p> <p>titanium dioxide</p> <p>crystalline silica, non-respirable powder (&gt;10 microns)</p>	<p><b>ACGIH TLV (United States, 1/2025)</b> TWA 8 hours: 2 mg/m<sup>3</sup>. Form: Respirable fraction.</p> <p><b>ACGIH TLV (United States, 1/2025)</b> TWA 8 hours: 2.5 mg/m<sup>3</sup>. Form: respirable fraction, finescale particles.</p> <p><b>ACGIH TLV (United States, 1/2025) [Silica, crystalline]</b> TWA 8 hours: 0.025 mg/m<sup>3</sup>. Form: Respirable fraction.</p>

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- 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.

### 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 protection** : Chemical splash goggles.
- Skin 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.
- 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.
- 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.
- 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.

## Section 8. Exposure controls/personal protection

**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.

## Section 9. Physical and chemical properties

### Appearance

**Physical state** : Liquid.  
**Color** : Various  
**Odor** : Aromatic. [Slight]  
**pH** : Not applicable.  
**Melting point** : Not available.  
**Boiling point** : >37.78°C (>100°F)  
**Flash point** : Closed cup: 100°C (212°F)  
**Evaporation rate** : Not available.  
**Flammability (solid, gas)** : Not available.  
**Lower and upper explosive (flammable) limits** : Not available.  
**Vapor pressure** : Not available.  
**Vapor density** : Not available.  
**Relative density** : 1.4

### Solubility(ies)

Media	Result
cold water	Not soluble

**Partition coefficient: n-octanol/water** : Not applicable.  
**Auto-ignition temperature** : 426°C (798.8°F)  
**Decomposition temperature** : Not available.  
**Viscosity** : Dynamic (room temperature): Not available.  
 Kinematic (room temperature): Not available.  
 Kinematic (40°C (104°F)): >21 mm<sup>2</sup>/s (>21 cSt)

### Particle characteristics

**Median particle size** : Not applicable.

## Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.  
**Chemical stability** : The product is stable.  
**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.  
**Conditions to avoid** : When exposed to high temperatures may produce hazardous decomposition products.



## Section 10. Stability and reactivity

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

**Hazardous decomposition products** : Depending on conditions, decomposition products may include the following materials: carbon oxides metal oxide/oxides

## Section 11. Toxicological information

### Information on toxicological effects

This section contains information about toxicological effects and routes of exposure for the substances or mixtures that have these data or information available. There might be substances listed in section 3 of this SDS that will not have the information available.

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

### Acute toxicity

Product/ingredient name	Result	Dose
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Rabbit - Dermal - LD50	23000 mg/kg
1,6-bis(2,3-epoxypropoxy)hexane	Rat - Oral - LD50	15000 mg/kg
	Rat - Oral - LD50	2900 mg/kg
benzyl alcohol	Rat - Dermal - LD50	>2000 mg/kg
	Rabbit - Dermal - LD50	>2000 mg/kg
	Rat - Oral - LD50	1200 mg/kg
	Rat - Inhalation - LC50 Dusts and mists	>5 mg/l [4 hours]
titanium dioxide	Rat - Oral - LD50	>5000 mg/kg
	Rabbit - Dermal - LD50	>5000 mg/kg
	Rat - Inhalation - LC50 Dusts and mists	>6.82 mg/l [4 hours]
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	Rat - Oral - LD50	>2000 mg/kg
	Rat - Inhalation - LC50 Dusts and mists	5.05 mg/l [4 hours]

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

### Irritation/Corrosion

Product/ingredient name	Species	Dose	Score
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Rabbit - Eyes - Redness of the conjunctivae	Duration of treatment/exposure: 24 hours	Irritation score: 0.4
	Rabbit - Eyes - Mild irritant	Duration of treatment/exposure: 24 hours	-
		Fully reversible in 7 days or less	
	Rabbit - Skin - Erythema/Eschar	Duration of treatment/exposure: 4 hours	Irritation score: 0.8
	Rabbit - Skin - Edema	Duration of treatment/exposure: 4 hours	Irritation score: 0.5
	Rabbit - Skin - Mild irritant	Duration of treatment/exposure: 4 hours	-



## Section 11. Toxicological information

### Conclusion/Summary

**Skin** : Causes skin irritation.  
**Eyes** : Causes serious eye irritation.  
**Respiratory** : Based on available data, the classification criteria are not met.

### Sensitization

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

### Conclusion/Summary

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

### Mutagenicity

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

### Carcinogenicity

**Conclusion/Summary** : May cause cancer.

### Classification

Product/ingredient name	OSHA	IARC	NTP
bis-[4-(2,3-epoxipropoxy)phenyl]propane	-	3	-
Talc , not containing asbestiform fibres	-	2A	-
titanium dioxide	-	2B	-
crystalline silica, non-respirable powder (>10 microns)	+	1	Known to be a human carcinogen.

Carcinogen Classification code:

IARC: 1, 2A, 2B, 3, 4

NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen

OSHA: +

Not listed/not regulated: -

### Reproductive toxicity

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

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Talc , not containing asbestiform fibres	Category 3	-	Respiratory tract irritation

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

### Specific target organ toxicity (repeated exposure)

## Section 11. Toxicological information

Not available.

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

**Target organs** : Contains material which causes damage to the following organs: blood, liver, heart, brain.  
 Contains material which may cause damage to the following organs: kidneys, lungs, the reproductive system, cardiovascular system, upper respiratory tract, skin, eyes, central nervous system (CNS).

### Aspiration hazard

Name	Result
benzyl alcohol	ASPIRATION HAZARD - Category 2

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

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

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

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

**Eye contact** : Adverse symptoms may include the following:  
 pain or irritation  
 watering  
 redness  
**Inhalation** : Adverse symptoms may include the following:  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations  
**Skin contact** : Adverse symptoms may include the following:  
 irritation  
 redness  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations  
**Ingestion** : Adverse symptoms may include the following:  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

## Section 11. Toxicological information

**Conclusion/Summary** : There are no data available on the mixture itself. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. For many products, TiO<sub>2</sub> is utilized as a raw material in a liquid coating formulation. In this case, the TiO<sub>2</sub> particles are bound in a matrix with no meaningful potential for human exposure to unbound particles of TiO<sub>2</sub> when the product is applied with a brush or roller. Sanding the coating surface or mist from spray applications may be harmful depending on the duration and level of exposure and require the use of appropriate personal protective equipment and/or engineering controls (see Section 8). Exposure to component solvent vapor 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. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. 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.

### Short term exposure

**Potential immediate effects** : There are no data available on the mixture itself.

**Potential delayed effects** : There are no data available on the mixture itself.

### Long term exposure

**Potential immediate effects** : There are no data available on the mixture itself.

**Potential delayed effects** : There are no data available on the mixture itself.

### Potential chronic health effects

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

**Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.

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

**Reproductive toxicity** : May damage fertility or the unborn child.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
SIGMAGUARD CSF 650 BASE	9213.9	12117.1	N/A	N/A	N/A
bis-[4-(2,3-epoxipropoxy)phenyl]propane	15000	23000	N/A	N/A	N/A
1,6-bis(2,3-epoxypropoxy)hexane	2900	2500	N/A	N/A	N/A
benzyl alcohol	1200	2500	N/A	N/A	N/A
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	2500	N/A	N/A	N/A	5.05

## Section 11. Toxicological information

Other information : Not available.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Dose / Exposure
<div> <div></div> <div> bis-[4-(2,3-epoxipropoxy)phenyl]propane  1,6-bis(2,3-epoxypropoxy)hexane  titanium dioxide  Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine </div> </div>	Chronic - NOEC	Daphnia	0.3 mg/l [21 days]
	Acute - LC50 - Fresh water LC50	Daphnia - <i>daphnia magna</i> Fish	1.8 mg/l [48 hours] 30 mg/l [96 hours]
	EC50	Daphnia	47 mg/l [48 hours]
	NOEC	Daphnia	10 mg/l [21 days]
	Acute - LC50 - Fresh water	Daphnia - <i>Daphnia magna</i>	>100 mg/l [48 hours]
	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]

Conclusion/Summary : Not available.

### Persistence/degradability

Product/ingredient name	Test	Result	Dose / Inoculum
<div> <div></div> <div> 1,6-bis(2,3-epoxypropoxy)hexane  Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine </div> </div>	-	71% [28 days]	
	Ready Biodegradability - Closed Bottle Test	22% [28 days]	

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<div> <div></div> <div> bis-[4-(2,3-epoxipropoxy)phenyl]propane  1,6-bis(2,3-epoxypropoxy)hexane  benzyl alcohol  Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine </div> </div>	-	-	Not readily
	-	-	Readily
	-	-	Readily
	-	-	Inherent

## Section 12. Ecological information

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
1,6-bis(2,3-epoxypropoxy) hexane	0.822	3.57	Low
benzyl alcohol	0.87	-	Low
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	>5.86	-	High

### Mobility in soil

Soil/Water partition coefficient : Not available.

### Other adverse effects

No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	Brazil (ANTT)	IMDG	IATA
UN number	UN3082	UN3082	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoxypropoxy) phenyl]propane)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoxypropoxy) phenyl]propane)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoxypropoxy) phenyl]propane)
Transport hazard class(es)	9	9	9
Packing group	III	III	III
Environmental hazards	Yes.	Yes.	Yes.
Marine pollutant substances	Not applicable.	(bis-[4-(2,3-epoxypropoxy) phenyl]propane)	Not applicable.

## Section 14. Transport information

### Additional information

- Brazil** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
- Risk number** : 90
- IMDG** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
- IATA** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

**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.

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

## Section 15. Regulatory information

**References** : ABNT NBR 14725: 2023 (April 2025)

## Section 16. Other information

### History

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**Key to abbreviations** :

- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
- UN = United Nations

 Indicates information that has changed from previously issued version.

### Disclaimer

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