

SAFETY DATA SHEET

Biosan ® Ultra Activator

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

1.1 Product identifier

Product name : Biosan ® Ultra Activator
Product description : Paint. Hardener.
Product type : Liquid.

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

Product use : Paint. Hardener.

1.3 Details of the supplier of the safety data sheet

Rust-Oleum Netherlands BV, PO. Box 138, NL-4700 AC Roosendaal, The Netherlands
Telephone: +31 (0) 165 593 636
Fax no.: +31 (0) 165 593 600

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@ro-m.com

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : +44 (0) 207 858 1228

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Directive 1999/45/EC [DPD]

The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Xi; R36/38
R43
N; R51/53

Human health hazards : Irritating to eyes and skin. May cause sensitization by skin contact.

Environmental hazards : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

See Section 16 for the full text of the R-phrases declared above.

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

2.2 Label elements

Hazard symbol or symbols :



Indication of danger : Irritant, Dangerous for the environment

Date of issue/Date of revision : 27-11-2012.

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SECTION 2: Hazards identification

- Risk phrases** : R36/38- Irritating to eyes and skin.
R43- May cause sensitization by skin contact.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- Safety phrases** : S23- Do not breathe spray.
S25- Avoid contact with eyes.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S29- Do not empty into drains.
S36/37- Wear suitable protective clothing and gloves.
S51- Use only in well-ventilated areas.
S61- Avoid release to the environment. Refer to special instructions/safety data sheet.
- Hazardous ingredients** : bisphenol-A/F-epoxy resin, avg.mol.wght. ≤ 700
oxirane, mono[(C12-14-alkyloxy)methyl]derivs
- Supplemental label elements** : Contains epoxy constituents. See information supplied by the manufacturer. This information is provided by the current Safety Data Sheet.
- Special packaging requirements**
- Containers to be fitted with child-resistant fastenings** : Not applicable.
- Tactile warning of danger** : Not applicable.

2.3 Other hazards

- Other hazards which do not result in classification** : Not available.

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

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700	REACH #: 01-2119456619-26 EC: 500-033-5 CAS: 25068-38-6 Index: 603-074-00-8	50-75	Xi; R36/38 R43 N; R51/53	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700	REACH #: 01-2119454392-40 EC: 500-006-8 CAS: 9003-36-5	5-25	Xi; R36/38 R43 N; R51/53	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
oxirane, mono[(C12-14-alkyloxy)methyl]derivatives	REACH #: 01-2119485289-22 EC: 271-846-8 CAS: 68609-97-2 Index: 603-103-00-4	10-20	Xi; R38 R43 See Section 16 for the full text of the R-phrases declared above.	Skin Irrit. 2, H315 Skin Sens. 1, H317 See Section 16 for the full text of the H statements declared above.	[1]

SECTION 3: Composition/information on ingredients

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 or vPvBs 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

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** : 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.
- 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Give nothing by mouth. If unconscious, place in recovery position and seek medical advice. Get medical attention if adverse health effects persist or are severe. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Call physician immediately. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See sections 3 and 15 for details.

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 preparations, this preparation may be a skin sensitizer and an irritant. It contains low-molecular weight epoxy constituents which are irritating to eyes, mucous membranes and skin. Repeated skin contact may lead to irritation and to sensitization, possibly with cross-sensitization to other epoxies. Skin contact with the preparation and exposure to spray, mist and vapors should be avoided.

SECTION 4: First aid measures

Based on the properties of epoxy constituent(s) and considering toxicological data on similar preparations, this preparation may be a skin sensitizer and a severe irritant. It contains epoxy-based reactive diluents which are moderately to severely irritating to eyes, mucous membranes and skin and are strong sensitizers. Repeated skin contact may lead to irritation and to hypersensitivity, possibly with cross-sensitization 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 concentrations may cause adverse effects in target organs such as the liver and kidneys.

Contains reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 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.

4.3 Indication of any immediate medical attention and special treatment needed

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

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Recommended: alcohol-resistant foam, CO₂, powders, water spray.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

5.3 Advice for firefighters

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

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 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 specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also Section 8 for additional information on hygiene measures.

SECTION 6: Accidental release measures

- 6.2 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.
- 6.3 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.
- 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** : 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 contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Avoid inhalation of dust from sanding.
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.
- 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.
- When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapors in all cases. In such circumstances, they should wear a compressed-air-fed respirator during the spraying process and until the particulate and solvent vapor concentrations have fallen below the exposure limits.**
- 7.2 Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations.
- Notes on joint storage**
Keep away from: oxidizing agents, strong alkalis, strong acids.
Additional information on storage conditions
Observe label precautions. Store between the following temperatures: 2 to 40°C (35.6 to 104°F). Store in a dry, cool and well-ventilated 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. Keep container tightly closed and sealed until ready for use. Containers that have been opened must

SECTION 7: Handling and storage

be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Keep away from sources of ignition. No smoking. Prevent unauthorized access. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection**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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Derived effect levels

Product/ingredient name	Type	Exposure	Value	Population	Effects
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700	DNEL	Short term Dermal	8.3 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	12.3 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	8.3 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	12.3 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	3.6 mg/kg bw/day	Consumers	Systemic
	DNEL	Short term Inhalation	0.75 mg/m ³	Consumers	Systemic
	DNEL	Short term Oral	0.75 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Dermal	3.6 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	0.75 mg/m ³	Consumers	Systemic
	DNEL	Long term Oral	0.75 mg/kg bw/day	Consumers	Systemic
oxirane, mono[(C12-14- alkyloxy)methyl]derivatives	DNEL	Short term Dermal	17 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	68 mg/cm ²	Workers	Local
	DNEL	Short term Inhalation	29 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	9.8 mg/m ³	Workers	Local
	DNEL	Long term Dermal	3.9 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	13.8 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	1.7 mg/cm ²	Workers	Local
	DNEL	Long term Inhalation	0.98 mg/m ³	Workers	Local
	DNEL	Short term Dermal	10 mg/kg bw/day	Consumers	Systemic

SECTION 8: Exposure controls/personal protection

	DNEL	Short term Inhalation	7.6 mg/m ³	Consumers	Systemic
	DNEL	Short term Oral	1219 mg/kg bw/day	Consumers	Systemic
	DNEL	Short term Dermal	40 mg/cm ²	Consumers	Local
	DNEL	Short term Inhalation	2.9 mg/m ³	Consumers	Local
	DNEL	Long term Dermal	2.35 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	4.1 mg/m ³	Consumers	Systemic
	DNEL	Long term Oral	1 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Dermal	1 mg/cm ²	Consumers	Local
	DNEL	Long term Inhalation	1.46 mg/m ³	Consumers	Local

Predicted effect concentrations

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700	PNEC	Fresh water	3 µg/l	-
	PNEC	Marine	0.3 µg/l	-
	PNEC	Sewage Treatment Plant	10 mg/l	-
	PNEC	Fresh water sediment	0.5 mg/kg dwt	-
	PNEC	Marine water sediment	0.5 mg/kg dwt	-
	PNEC	Sediment	0.05 mg/kg dwt	-
oxirane, mono[(C12-14-alkyloxy)methyl]derivatives	PNEC	Fresh water	0.0072 mg/l	-
	PNEC	Marine	0.00072 mg/l	-
	PNEC	Sewage Treatment Plant	10 mg/l	-
	PNEC	Fresh water sediment	66.77 mg/kg dwt	-
	PNEC	Marine water sediment	6.677 mg/kg dwt	-
	PNEC	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 vapors 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 glasses with side shields. (EN166)

Skin protection

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

SECTION 8: Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Recommended: Wear overalls or long sleeved shirt. (EN 467)
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.
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: During fumigation/spraying wear suitable respiratory equipment.
- organic vapor (Type A) and particulate filter (EN 141)
- Environmental exposure controls** : Do not allow to enter drains or watercourses. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Yellowish.
- Odor** : Slight
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : >200°C
- Flash point** : Closed cup: 130°C
- Evaporation rate** : <1 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Upper/lower flammability or explosive limits** : Not available.
- Vapor pressure** : <0.000001 kPa [20°C]
- Vapor density** : >1 [Air = 1]
- Relative density** : 1.11 to 1.16
- Solubility(ies)** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : >450°C
- Decomposition temperature** : >200°C
- Viscosity** : Dynamic: 800 to 1100 mPa·s
- Explosive properties** : Not available.
- Oxidizing properties** : Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : Stable under recommended storage and handling conditions (see section 7).
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : When exposed to high temperatures may produce hazardous decomposition products.
- 10.5 Incompatible materials** : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO₂ and smoke can be generated.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

There are no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See sections 3 and 15 for details.

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 preparations, this preparation may be a skin sensitizer and an irritant. It contains low-molecular weight epoxy constituents which are irritating to eyes, mucous membranes and skin. Repeated skin contact may lead to irritation and to sensitization, possibly with cross-sensitization to other epoxies. Skin contact with the preparation and exposure to spray, mist and vapors should be avoided.

Based on the properties of epoxy constituent(s) and considering toxicological data on similar preparations, this preparation may be a skin sensitizer and a severe irritant. It contains epoxy-based reactive diluents which are moderately to severely irritating to eyes, mucous membranes and skin and are strong sensitizers. Repeated skin contact may lead to irritation and to hypersensitivity, possibly with cross-sensitization 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 concentrations may cause adverse effects in target organs such as the liver and kidneys.

Contains reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 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.

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	-
	LD50 Oral	Rat	30 g/kg	-
bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700	LD50 Dermal	Rat	>2 g/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
oxirane, mono[(C12-14- alkyloxy)methyl]derivatives	LC50 Inhalation Dusts and mists	Rat	>150 mg/m ³	7 hours
	LD50 Oral	Rat - Female	>2 g/kg	-

SECTION 11: Toxicological information**Conclusion/Summary** : 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 - Edema	Rabbit	1 to 1.5	-	-
	Skin - Erythema/Eschar	Rabbit	1.5 to 2	-	-
bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700 oxirane, mono[(C12-14-alkyloxy)methyl]derivatives	Eyes - Mild irritant	Rabbit	-	-	-
	Eyes - Cornea opacity	Rabbit	<1.7	-	-
	Skin - Mild irritant	Rabbit	-	-	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters	-
	Skin - Primary dermal irritation index (PDII)	Rabbit	4.1	24 hours	-
	Skin - Primary dermal irritation index (PDII)	Rabbit	5.75	24 hours	-
	Eyes - Mild irritant	Rabbit	-	-	-

Conclusion/Summary : Not available.**Sensitization**

Product/ingredient name	Route of exposure	Species	Result
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700	skin	Mouse	Sensitizing
bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700	skin	Guinea pig	Sensitizing
	skin	Guinea pig	Sensitizing
oxirane, mono[(C12-14-alkyloxy)methyl]derivatives	skin	Guinea pig	Sensitizing

Conclusion/Summary : Not available.**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
bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700	OECD 476	Experiment: In vitro Subject: Mammalian-Animal	Positive
	OECD 471	Subject: Bacteria	Positive
	OECD 474	Subject: Mammalian-Animal	Negative
oxirane, mono[(C12-14-alkyloxy)methyl]derivatives	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 : Not available.**Carcinogenicity**

Product/ingredient name	Result	Species	Dose	Exposure

SECTION 11: Toxicological information

bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700	Negative - Oral - TDLo	Rat	-	2 years; 7 days per week 2 years; 5 days per week 2 years; 3 days per week
	Negative - Dermal - TDLo	Rat - Female	1000 mg/kg	
	Negative - Dermal - TDLo	Mouse - Male	100 mg/kg	

Conclusion/Summary : Not available.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700	Negative	-	-	Rat	Oral: 750 mg/kg	-
bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700	Negative	-	-	Rat	Oral: 540 mg/kg	-

Conclusion/Summary : Not available.

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700	Negative - Dermal	Rabbit - Female	>300 mg/kg	-
	Negative - Oral	Rat - Female	>180 mg/kg	-
bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700	Negative - Oral	Rabbit - Female	>180 mg/kg	-
	Negative - Unreported	Rabbit - Female	>300 mg/kg	-
	Negative - Unreported	Rat - Female	>200 mg/kg	-

Conclusion/Summary : Not available.

Other information : Not available.

SECTION 12: Ecological information**12.1 Toxicity**

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

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is classified for eco-toxicological properties accordingly. See sections 3 and 15 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
bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700	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
oxirane, mono[(C12-14- alkyloxy)methyl]derivatives	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
	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 : Not available.

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SECTION 12: Ecological information**12.2 Persistence and degradability**

Product/ingredient name	Test	Result	Dose	Inoculum
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700	OECD 301B	12 % - Not readily - 28 days	-	-
	OECD 301F	5 % - Not readily - 28 days	-	-
bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700	-	0 % - Not readily - 28 days	-	-
	OECD 301F	57 to 65 % - Inherent - 7 days	-	-
oxirane, mono[(C12-14-alkyloxy)methyl]derivatives	OECD 301D	35 % - Not readily - 28 days	-	-

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700	Fresh water 4 to 7 days	-	Not readily
bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700	-	-	Not readily
oxirane, mono[(C12-14-alkyloxy)methyl]derivatives	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700	3.242	31	low
bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700	2.7 to 3.6	-	high
oxirane, mono[(C12-14-alkyloxy)methyl]derivatives	3.77	160 to 263	high

12.4 Mobility in soil

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

Mobility : Non-volatile liquid

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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

SECTION 13: Disposal considerations

Do not allow to enter drains or watercourses.

Dispose of according to all federal, state and local applicable regulations.

13.1 Waste treatment methods**Product**

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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.

Hazardous waste : Yes.

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SECTION 13: Disposal considerations

- European waste catalogue (EWC)** : The European Waste Catalogue classification of this product, when disposed of as waste, is:
08 01 11* waste paint and varnish containing organic solvents or other dangerous substances.
If this product is mixed with other wastes, this code may no longer apply. If mixed with other wastes, the appropriate code should be assigned. For further information, contact your local waste authority.
- Packaging**
- Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	3082	3082	3082
14.2 UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. Limited quantity (bisphenol-F-epoxy resin avg.mol.wght. < 700)	Environmentally hazardous substance, liquid, n.o.s. Limited quantity Marine pollutant (bisphenol-F-epoxy resin avg.mol.wght. < 700)	Environmentally hazardous substance, liquid, n.o.s. (bisphenol-F-epoxy resin avg.mol.wght. < 700)
14.3 Transport hazard class(es)	9	9	9  
14.4 Packing group	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.
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.	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 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.
Additional information	Limited quantity: LQ7 Remarks: (≤ 5L:) Limited Quantity - ADR/IMDG 3.4 ADR Tunnel Code: (E)	Emergency schedules (EmS): F-A + S-F Marine pollutant (P) Remarks: (≤ 5L:) Limited Quantity - ADR/IMDG 3.4.6	Passenger and Cargo Aircraft Quantity limitation: - Packaging instructions: 914

SECTION 14: Transport information

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

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.

CN code : 3907 30 00

EU Regulation (EC) No. 1907/2006 (REACH)**Annex XIV - List of substances subject to authorization****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: 140g/l (2007) 140g/l (2010). <= 10g/l VOC.

Europe inventory : All components are listed or exempted.

Black List Chemicals : Not listed

Priority List Chemicals : Not listed

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.

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

🔍 Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 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 : H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H411 Toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS] : Aquatic Chronic 2, H411 AQUATIC TOXICITY (CHRONIC) - Category 2
 Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
 Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2
 Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1

SECTION 16: Other information

Full text of abbreviated R phrases	: R38- Irritating to skin. R36/38- Irritating to eyes and skin. R43- May cause sensitization by skin contact. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Full text of classifications [DSD/DPD]	: Xi - Irritant N - Dangerous for the environment



Version	: 1	Date of printing	: 27-11-2012.
Date of issue/ Date of revision			: 27-11-2012.
Date of previous issue			: No previous validation.

Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.
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