

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878

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

1.1 Product identifier

Product identifier : UPOLB
Product name : U-POL FIBREGLASS BRIDGING COMPOUND
Product type : Solid.
Other means of identification : UPOLB/2; UPOLB/4
Date of issue/ Date of revision : 13 May 2025
Version : 1.06
Date of previous issue : 13 May 2025

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

Identified uses : Putty.
Uses advised against : Not for sale to or use by consumers.

1.3 Details of the supplier of the safety data sheet

U-POL Limited
Denington Road
Wellingborough, Northamptonshire, NN8 2QH
+44 (0) 1933 230310
technicalsupport@u-pol.com
e-mail address of person responsible for this SDS : sds-competence@axalta.com

National contact

U-POL Netherlands
B.V. Hoogoorddreef 15
Amsterdam, Netherlands 1101BA
+31 20 240 2216
technicalsupport@u-pol.com

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : 010-456 6700 (9:00-17:00);112

Supplier

+(44)-870-8200418

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]

Acute Tox. 4, H332

Skin Irrit. 2, H315

Eye Irrit. 2, H319

Repr. 2, H361d

STOT SE 3, H335

STOT RE 1, H372

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

Ingredients of unknown toxicity : 2.5 percent of the mixture consists of component(s) of unknown acute oral toxicity
2.5 percent of the mixture consists of component(s) of unknown acute dermal toxicity
2.5 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

Ingredients of unknown ecotoxicity : Contains 2.5% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

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

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Contains : styrene
Reaction mass of ethylbenzene and xylene

Hazard statements : H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H335 - May cause respiratory irritation.
H361d - Suspected of damaging the unborn child.
H372 - Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : P201 - Obtain special instructions before use.
P260 - Do not breathe dust.
P270 - Do not eat, drink or smoke when using this product.
P264 - Wash hands thoroughly after handling.

Response : P302 + P352 - IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.

Storage : Not applicable.

Disposal : Not applicable.

Supplemental label elements : EUH205 - Contains epoxy constituents. May produce an allergic reaction.
EUH208 - Contains phthalic anhydride. May produce an allergic reaction.

SECTION 2: Hazards identification

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
styrene	REACH #: 01-2119457861-32 EC: 202-851-5 CAS: 100-42-5 Index: 601-026-00-0	≥10 - ≤21	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361d STOT SE 3, H335 STOT RE 1, H372 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	ATE [Inhalation (gases)] = 2770 ppm	[1] [2]
Reaction mass of ethylbenzene and xylene	REACH #: 01-2119539452-40 EC: 905-588-0	≤3	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 3, H412	ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1]
reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	REACH #: 01-2119456619-26 EC: 216-823-5 CAS: 1675-54-3	<1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	-	[1]
phthalic anhydride	REACH #: 01-2119457017-41 EC: 201-607-5 CAS: 85-44-9	≤0.2	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Resp. Sens. 1, H334	ATE [Oral] = 1530 mg/kg	[1] [2]

SECTION 3: Composition/information on ingredients

1,4-naphthoquinone	Index: 607-009-00-4 EC: 204-977-6 CAS: 130-15-4	<0.1	Skin Sens. 1, H317 STOT SE 3, H335 Acute Tox. 3, H301 Acute Tox. 1, H330 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	ATE [Oral] = 190 mg/kg ATE [Inhalation (dusts and mists)] = 0.046 mg/l M [Acute] = 10 M [Chronic] = 1	[1]
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There are no 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 physical, health or environmental hazard

[2] Substance with a workplace exposure limit

SECTION 4: First aid measures

4.1 Description of first aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use 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.
- 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.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent 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. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

SECTION 4: First aid measures

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitizer and an irritant. It contains low-molecular weight epoxy constituents which are irritating to eyes, mucous membranes and skin. Repeated skin contact may lead to irritation and to sensitization, possibly with cross-sensitization to other epoxies. Skin contact with the mixture and exposure to spray, mist and vapors should be avoided.

Contains 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, phthalic anhydride. May produce an allergic reaction.

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. |

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

- | | |
|---------------------------------------|--|
| Suitable extinguishing media | : Recommended: alcohol-resistant foam, CO ₂ , 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 combustion products | : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen. |

5.3 Advice for firefighters

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|---|---|
| Special protective actions for fire-fighters | : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. |
| Special protective equipment for fire-fighters | : Appropriate breathing apparatus may be required. |

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- | | |
|------------------------------------|---|
| For non-emergency personnel | : Exclude sources of ignition and ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. |
| 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". |

SECTION 6: Accidental release measures

- 6.2 Environmental precautions** : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.
- 6.3 Methods and materials for containment and cleaning up** : 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). Preferably clean with a detergent. Avoid using solvents.
- 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** : Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits.
In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.
Mixture may charge electrostatically: always use earthing leads when transferring from one container to another.
Operators should wear antistatic footwear and clothing and floors should be of the conducting type.
Keep away from heat, sparks and flame. No sparking tools should be used.
Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Put on appropriate personal protective equipment (see Section 8).
Never use pressure to empty. Container is not a pressure vessel.
Always keep in containers made from the same material as the original one.
Comply with the health and safety at work laws.
Do not allow to enter drains or watercourses.
Information on fire and explosion protection
Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air.

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: 5 to 25°C (41 to 77°F). Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. No smoking. Prevent unauthorized access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

Recommendations : Not available.

SECTION 7: Handling and storage

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Identifiers	Exposure limit values
styrene	REACH #: 01-2119457861-32 EC: 202-851-5 CAS: 100-42-5 Index: 601-026-00-0	Work environment authority Regulation 2018:1 (Sweden, 11/2022) Absorbed through skin , Ototoxicant. TWA 8 hours: 10 ppm. TWA 8 hours: 43 mg/m ³ . STEL 15 minutes: 20 ppm. STEL 15 minutes: 86 mg/m ³ .
phthalic anhydride	REACH #: 01-2119457017-41 EC: 201-607-5 CAS: 85-44-9 Index: 607-009-00-4	Work environment authority Regulation 2018:1 (Sweden, 11/2022) Sensitizer. TWA 8 hours: 0.2 mg/m ³ . STEL 15 minutes: 0.4 mg/m ³ . TWA 8 hours: 0.03 ppm. STEL 15 minutes: 0.06 ppm.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name

styrene

Result

DNEL - General population - Long term - Oral

7.7 µg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Inhalation

1 mg/m³

Effects: Local

DNEL - General population - Long term - Inhalation

1 mg/m³

Effects: Systemic

DNEL - General population - Short term - Inhalation

SECTION 8: Exposure controls/personal protection10 mg/m³Effects: Local**DNEL - General population - Short term - Inhalation**10 mg/m³Effects: Systemic**DNEL - Workers - Long term - Inhalation**85 mg/m³Effects: Systemic**DNEL - Workers - Short term - Inhalation**100 mg/m³Effects: Local**DNEL - Workers - Long term - Inhalation**100 mg/m³Effects: Local**DNEL - Workers - Short term - Inhalation**100 mg/m³Effects: Systemic**DNEL - General population - Long term - Dermal**

343 mg/kg bw/day

Effects: Systemic**DNEL - Workers - Long term - Dermal**

406 mg/kg bw/day

Effects: Systemic

Reaction mass of ethylbenzene and xylene

DNEL - Workers - Long term - Dermal

212 mg/kg bw/day

Effects: Systemic**DNEL - Workers - Long term - Inhalation**221 mg/m³Effects: Systemic4,4'-Isopropylidenediphenol, oligomeric
reaction products with 1-chloro-
2,3-epoxypropane**DNEL - Workers - Long term - Dermal**

0.75 mg/kg bw/day

Effects: Systemic**DNEL - Workers - Long term - Inhalation**4.93 mg/m³Effects: Systemic

phthalic anhydride

DNEL - General population - Long term - Oral

5 mg/kg bw/day

Effects: Systemic**DNEL - General population - Long term - Dermal**

5 mg/kg bw/day

Effects: Systemic**DNEL - General population - Long term - Inhalation**8.7 mg/m³

SECTION 8: Exposure controls/personal protection

	<u>Effects:</u> Systemic
	DNEL - Workers - Long term - Dermal 14 mg/kg bw/day <u>Effects:</u> Systemic
	DNEL - Workers - Long term - Inhalation 49.4 mg/m³ <u>Effects:</u> Systemic
1,4-naphthoquinone	DNEL - Workers - Long term - Inhalation 0.0329 mg/m³ <u>Effects:</u> Systemic
<u>PNECs</u>	
Product/ingredient name	Result
Reaction mass of ethylbenzene and xylene	Fresh water 0.327 mg/l
	Marine water 0.327 mg/l
	Sewage Treatment Plant 6.58 mg/l
	Fresh water sediment 12.46 mg/kg dwt
	Marine water sediment 12.46 mg/kg dwt
	Soil 2.31 mg/kg
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Fresh water 0.006 mg/l
	Marine water 0.001 mg/l
	Sewage Treatment Plant 10 mg/l
	Fresh water sediment 0.341 mg/kg dwt
	Marine water sediment 0.034 mg/kg dwt
	Soil 0.065 mg/kg dwt
phthalic anhydride	Fresh water 1 mg/l
	Marine water

SECTION 8: Exposure controls/personal protection

0.1 mg/l

Sewage Treatment Plant

10 mg/l

Fresh water sediment

3.8 mg/kg

Marine water sediment

0.38 mg/kg

1,4-naphthoquinone

Fresh water - Assessment Factors

26.1 ng/l

Marine water - Assessment Factors

2.61 ng/l

Sewage Treatment Plant - Assessment Factors

0.172 mg/l

Fresh water sediment - Equilibrium Partitioning

321 ng/kg dwt

Sediment - Equilibrium Partitioning

32.1 ng/kg dwt

Soil - Equilibrium Partitioning

49 ng/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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Use safety eyewear designed to protect against splash of liquids.

Skin protection

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

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

SECTION 8: Exposure controls/personal protection

Gloves	: Duration / breakthrough time: <1 hour, Glove material: NBR, nitrile rubber, material thickness as splash protection: at least 0.2 mm, (EN374) Glove material: NBR, nitrile rubber, material thickness for short-term contact: at least 0.5 mm, (EN374) The recommendation for the type or types of glove to use when handling this product is based on information from the following source: Expert judgment The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
Body protection	: Personnel should wear antistatic clothing made of natural fibers or of high-temperature-resistant synthetic fibers.
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. Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flatting should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.
Environmental exposure controls	: Do not allow to enter drains or watercourses.

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	: Solid.
Color	: Yellow.
Odor	: Aromatic.
Odor threshold	: Not available.
Melting point/freezing point	: Technically not possible to measure
Boiling point or initial boiling point and boiling range	: Not applicable.
Flammability	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Flash point	: Closed cup: 32°C [Product does not sustain combustion.]
Decomposition temperature	: Not applicable.
pH	: Not applicable.
Justification	: Product is non-soluble (in water).
Viscosity	: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C): Not available.
Vapor pressure	0.19 kPa (1.4 mm Hg)

SECTION 9: Physical and chemical properties

Density	: 1.45 g/cm ³	
Weight volatiles	: 21.8 % (w/w)	
VOC content	: 21.8 % (w/w)	(2010/75/EU)

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Further information Not available.

9.2.2 Other safety characteristics

Miscible with water : No.

Further information Not available.

room temperature (=20°C)

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** : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

SECTION 11: Toxicological information

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

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent 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. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from

SECTION 11: Toxicological information

short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitizer and an irritant. It contains low-molecular weight epoxy constituents which are irritating to eyes, mucous membranes and skin. Repeated skin contact may lead to irritation and to sensitization, possibly with cross-sensitization to other epoxies. Skin contact with the mixture and exposure to spray, mist and vapors should be avoided.

Contains 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, phthalic anhydride. May produce an allergic reaction.

Acute toxicity

Product/ingredient name	Result
styrene	Rat - Oral - LD50 2650 mg/kg <u>Toxic effects:</u> Behavioral - Somnolence (general depressed activity) Liver - Other changes Rat - Inhalation - LC50 Vapor 11800 mg/m ³ [4 hours] Rat - Inhalation - LC50 Gas. 2770 ppm [4 hours]
Reaction mass of ethylbenzene and xylene	Rat - Oral - LD50 3523 to 4000 mg/kg Rabbit - Dermal - LD50 121236 mg/kg Rat - Inhalation - LC50 Vapor 6350 to 6700 ppm [4 hours]
phthalic anhydride	Rat - Oral - LD50 1530 mg/kg <u>Toxic effects:</u> Behavioral - Somnolence (general depressed activity)
1,4-naphthoquinone	Rat - Oral - LD50 190 mg/kg <u>Toxic effects:</u> Behavioral - Somnolence (general depressed activity) Gross Metabolite Changes - Weight loss or decreased weight gain Rat - Male, Female - Inhalation - LC50 Dusts and mists 0.046 mg/l [4 hours] OECD [Acute Inhalation Toxicity]

Conclusion/Summary [Product] : Not available.

Acute toxicity estimates

SECTION 11: Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
mixture	N/A	42201.2	14646.7	54.4	N/A
styrene	2650	N/A	2770	11.8	N/A
Reaction mass of ethylbenzene and xylene	N/A	1100	N/A	11	N/A
phthalic anhydride	1530	N/A	N/A	N/A	N/A
1,4-naphthoquinone	190	N/A	N/A	N/A	0.046

Skin corrosion/irritation

Product/ingredient name

styrene

Result

Rabbit - Skin - Mild irritant

Amount/concentration applied: 500 mg

Rabbit - Skin - Moderate irritant

Amount/concentration applied: 100 %

4,4'-Isopropylidenediphenol, oligomeric
reaction products with 1-chloro-
2,3-epoxypropane

Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 uL

Rabbit - Skin - Severe irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 2 mg

1,4-naphthoquinone

Rabbit - Skin - Visible necrosis

Duration of treatment/exposure: 4 hours

Observation period: 1 hours

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name

styrene

Result

Human - Eyes - Mild irritant

Amount/concentration applied: 50 ppm

Rabbit - Eyes - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 100 mg

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 100 mg

4,4'-Isopropylidenediphenol, oligomeric
reaction products with 1-chloro-
2,3-epoxypropane

Rabbit - Eyes - Mild irritant

Amount/concentration applied: 100 mg

phthalic anhydride

Rabbit - Eyes - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 50 mg

Conclusion/Summary [Product] : Not available.

SECTION 11: Toxicological information

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Product/ingredient name

1,4-naphthoquinone

Result

Guinea pig - skin

Result: Sensitizing

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name

styrene

Reaction mass of ethylbenzene and xylene

phthalic anhydride

1,4-naphthoquinone

Result

STOT SE 3, H335 (Respiratory tract irritation)

STOT SE 3, H335 (Respiratory tract irritation)

STOT SE 3, H335 (Respiratory tract irritation)

STOT SE 3, H335 (Respiratory tract irritation)

Specific target organ toxicity (repeated exposure)

Product/ingredient name

styrene

Reaction mass of ethylbenzene and xylene

Result

STOT RE 1, H372 (hearing organs)

STOT RE 2, H373

Aspiration hazard

Product/ingredient name

Result

SECTION 11: Toxicological information

styrene

ASPIRATION HAZARD - Category 1

Reaction mass of ethylbenzene and xylene

ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Not available.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- 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:
respiratory tract irritation
coughing
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

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : Not available.

- General** : Causes damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : Suspected of damaging the unborn child.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

SECTION 11: Toxicological information

Not available.

Conclusion/Summary [Product] : 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.

SECTION 12: Ecological information

12.1 Toxicity

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

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is not classified as hazardous to the environment, but contains substance(s) hazardous to the environment. See section 3 for details.

Product/ingredient name

styrene

Result

Acute - LC50 - Fresh water

US EPA

Daphnia - Water flea - *Daphnia magna*

Age: ≤24 hours

23 mg/l [48 hours]

Effect: Mortality

Acute - EC50 - Fresh water

Algae - Green algae - *Raphidocelis subcapitata*

33 mg/l [96 hours]

Effect: Population

Reaction mass of ethylbenzene and xylene

Acute - LC50

OECD 203

Fish - Trout - *Oncorhynchus mykiss*

2.6 mg/l [96 hours]

Acute - LC50

OECD 202

Daphnia - Daphnia - *Daphnia magna*

1 mg/l [24 hours]

Acute - EC50

OECD 201

Algae - Algae - *Selenastrum capricornutum*

2.2 mg/l [73 hours]

Chronic - NOEC

OECD 301F

Micro-organism - Activated sludge - *Activated sludge*

16 mg/l [28 days]

4,4'-Isopropylidenediphenol, oligomeric
reaction products with 1-chloro-
2,3-epoxypropane

LC50

Fish

2 mg/l [96 hours]

EC50

Daphnia

1.8 mg/l [48 hours]

SECTION 12: Ecological information

	EC50 Algae 11 mg/l [72 hours]
phthalic anhydride	Acute - EC50 - Fresh water Algae - Green algae - <i>Raphidocelis subcapitata</i> Age: 3 to 7 days 147 µg/l [96 hours] Effect: Population
1,4-naphthoquinone	Acute - LC50 - Fresh water OECD 203 Fish - <i>Medaka</i> 0.0448 mg/l [96 hours] Acute - EC50 OECD 202 Daphnia - <i>Daphnia magna</i> 0.026 mg/l [48 hours] EC50 - Fresh water OECD 201 Algae - <i>Pseudokirchneriella subcapitata</i> 0.42 mg/l [72 hours] NOEC - Fresh water OECD Algae - <i>Pseudokirchneriella subcapitata</i> 0.0697 mg/l [72 hours]

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Product/ingredient name	Result
1,4-naphthoquinone	OECD 301F 0% [28 days] - Not readily

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
1,4-naphthoquinone	-	-	Not readily

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
styrene	2.96	13.49	Low
Reaction mass of ethylbenzene and xylene	3.16	-	Low
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	2.64 to 3.78	31	Low
phthalic anhydride	1.6	3.4	Low
1,4-naphthoquinone	1.71	-	Low

12.4 Mobility in soil

Soil/Water partition coefficient

Product/ingredient name	logK _{oc}	K _{oc}
styrene	2.95	896.322
phthalic anhydride	1.56	36.3099
1,4-naphthoquinone	1.81	64.0084

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
styrene	No	No	Yes	Yes	No	No	No
Reaction mass of ethylbenzene and xylene	No	No	No	No	No	No	No
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No	No	No	No	No	No	No
phthalic anhydride	No	No	Yes	No	No	No	Yes
1,4-naphthoquinone	No	No	Yes	No	No	No	Yes

Mobility : Not available.

Conclusion/Summary : The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
styrene	No	No	No	Yes	No	No	No
Reaction mass of ethylbenzene and xylene	No	No	No	No	No	No	No
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No	No	No	No	No	No	No
phthalic anhydride	No	No	No	No	No	No	No
1,4-naphthoquinone	No	No	No	No	No	No	No

Regulation (EC) No. 1272/2008 [CLP]

SECTION 12: Ecological information

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
styrene	No	No	No	Yes	No	No	No
Reaction mass of ethylbenzene and xylene	No	No	No	No	No	No	No
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	No	No	No	No	No	No	No
phthalic anhydride	No	No	No	No	No	No	No
1,4-naphthoquinone	No	No	No	No	No	No	No

Conclusion/Summary : The product does not meet the criteria to be considered as a PBT or vPvB.
Regulation (EC) No. 1272/2008
[CLP]

12.6 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : 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 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.
- Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.
- Disposal considerations** : Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

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.

SECTION 13: Disposal considerations

Disposal considerations : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

Type of packaging	European waste catalogue (EWC)	
CEPE Guidelines	15 01 10*	packaging containing residues of or contaminated by hazardous substances

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

Marine pollutant Not available.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not applicable.

The actual shipping description for this product may vary based several factors including, but not limited to, the volume of material, size of the container, mode of transport and use of exemptions or exceptions found in the applicable regulations. The information provided in Section 14 is one possible shipping description for this product. Consult your shipping specialist or supplier for appropriate assignment information.

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 authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions : Not applicable.
**on the manufacture,
placing on the market
and use of certain
dangerous substances,
mixtures and articles**

Other EU regulations

Explosive precursors : Not applicable.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

Industrial use : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

15.2 Chemical Safety Assessment : No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

CEPE code : 1

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : 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
B = Bioaccumulative
BCF = Bioconcentration Factor
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
M = Mobile
N/A = Not available
P = Persistent
PBT = Persistent, Bioaccumulative and Toxic
PMT = Persistent, Mobile and Toxic

SECTION 16: Other information

PNEC = Predicted No Effect Concentration
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 RRN = REACH Registration Number
 SGG = Segregation Group
 T = Toxic
 vB = Very Bioaccumulative
 vM = Very Mobile
 vP = Very Persistent
 vPvB = Very Persistent and Very Bioaccumulative
 vPvM = Very Persistent and Very Mobile

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

Classification	Justification
Acute Tox. 4, H332	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Repr. 2, H361d	Calculation method
STOT SE 3, H335	Calculation method
STOT RE 1, H372	Calculation method

Full text of abbreviated H statements

H226	Flammable liquid and vapor.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

SECTION 16: Other information

Acute Tox. 1	ACUTE TOXICITY - Category 1
Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 1	AQUATIC HAZARD (LONG-TERM) - Category 1
Aquatic Chronic 2	AQUATIC HAZARD (LONG-TERM) - Category 2
Aquatic Chronic 3	AQUATIC HAZARD (LONG-TERM) - Category 3
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. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 2	TOXIC TO REPRODUCTION - Category 2
Resp. Sens. 1	RESPIRATORY SENSITIZATION - Category 1
Skin Corr. 1C	SKIN CORROSION/IRRITATION - Category 1C
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITIZATION - Category 1
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

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Notice to reader

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