

watco[®] SAFETY DATA SHEET

Resiflow Chemical Grade - Resin

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

1.1 Product identifier

Product name : Resiflow Chemical Grade - Resin
Product description : Paint.
Product type : Liquid.

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

| Identified uses | |
|---|--------|
| Industrial uses Consumer uses Professional uses | |
| Uses advised against | Reason |
| None identified. | - |

1.3 Details of the supplier of the safety data sheet

Watco UK Limited
 Watco House
 Filmer Grove
 Godalming
 Surrey
 GU7 3AL
 Telephone no.: +44 (0) 1483 425000 (08:00 - 18:00 MON-FRI)
 Fax no.: +44 (0) 1483 428888

e-mail address of person responsible for this SDS : rpmeurohas@ro-m.com

1.4 Emergency telephone number

Supplier

Telephone number : +44 (0) 207 858 1228
Hours of operation : 24 / 7

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Irrit. 2, H315
 Eye Irrit. 2, H319
 Skin Sens. 1, H317
 Aquatic Chronic 2, H411


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

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

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

2.2 Label elements

SECTION 2: Hazards identification

| | | |
|---|---|---|
| Hazard pictograms | : |  |
| Signal word | : | Warning |
| Hazard statements | : | Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects. |
| <u>Precautionary statements</u> | | |
| General | : | P102 - Keep out of reach of children. P103 - Read label before use. P101 - If medical advice is needed, have product container or label at hand. |
| Prevention | : | P280 - Wear protective gloves and eye protection: - nitrile rubber gloves and Safety glasses with side shields. P273 - Avoid release to the environment. |
| Response | : | P302 - IF ON SKIN: P352 - Wash with plenty of soap and water. P333 - If skin irritation or rash occurs: P313 - Get medical attention. P305 - IF IN EYES: P351 - Rinse cautiously with water for several minutes. P338 - Remove contact lenses, if present and easy to do. Continue rinsing. P391 - Collect spillage. |
| Storage | : | Not applicable. |
| Disposal | : | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Hazardous ingredients | : | bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700 bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700 |
| Supplemental label elements | : | Contains epoxy constituents. May produce an allergic reaction. |
| Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles | : | Not applicable. |
| <u>Special packaging requirements</u> | | |
| 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 : None known.

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

SECTION 3: Composition/information on ingredients**3.2 Mixtures**

: Mixture

| Product/ingredient name | Identifiers | % | Classification | |
|--|---|-----------|--|------|
| | | | Regulation (EC) No. 1272/2008 [CLP] | Type |
| bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700 | EC: 500-033-5 CAS: 25068-38-6 Index: 603-074-00-8 | ≥10 - ≤25 | 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 | CAS: 28064-14-4 | ≥10 - ≤25 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 | [1] |
| Oxirane, mono[(C10-16-alkyloxy) methyl] derivs. | EC: 268-358-2 CAS: 68081-84-5 | ≤5 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 | [1] |
| 1,4-bis(2, 3-epoxypropoxy)butane | EC: 219-371-7 CAS: 2425-79-8 Index: 603-072-00-7 | ≤5 | Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 | [1] |
| 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 | ≤3 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 | [1] |
| hydrocarbons, aromatic, C9 | REACH #: 01-2119455851-35 EC: 918-668-5 Index: 649-356-00-4 | ≤3 | Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066 | [1] |
| bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700 | EC: 500-006-8 CAS: 28064-14-4 | ≤3 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 | [1] |
| Phenol, methylstyrenated | REACH #: 01-2119555274-38 EC: 270-966-8 CAS: 68512-30-1 | ≤1 | Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412 | [1] |
| Pine Oil | EC: 616-792-1 CAS: 8002-09-3 | ≤0,3 | Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above. | [1] |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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

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

[5] Substance of equivalent concern

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

SECTION 4: First aid measures**4.1 Description of first aid measures**

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

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

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

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

Ingestion may cause nausea, diarrhea and vomiting.

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

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

Based on the properties of epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitiser and a severe irritant. It contains epoxy based reactive diluents which are moderate to severely irritating to eyes, mucous membrane and skin and are strong sensitisers. Repeated skin contact may lead to irritation and to hyper-sensitivity, possibly with cross-sensitisation to other epoxies. Single oral exposure to doses of the epoxy based reactive diluents at or close to the lethal dose has been shown to cause transient neurotoxic effects in animals in some cases. However, uptake through skin and by inhalation has not caused such effects in animals. Prolonged exposure to high concentration may cause adverse effects in target organs such as liver and kidney.

Contains bisphenol-A-epoxy resin, avg.mol.wght. \leq 700, bisphenol-F-epoxy resin, avg.mol.wght. \leq 700, oxirane, mono[(C13-15-alkyloxy)methyl] derivatives, 1,4-bis(2,3-epoxypropoxy)butane, phenol/methyl-styrenated petroleum resin, Pine Oil. May produce an allergic reaction.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.

SECTION 4: First aid measures

- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

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

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Recommended: alcohol-resistant foam, 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** : 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 dioxide
carbon monoxide
sulfur oxides
halogenated compounds
metal oxide/oxides

5.3 Advice for firefighters

- 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. 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.
- Additional information** : No unusual hazard if involved in a fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

SECTION 6: Accidental release measures

6.2 Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance.

7.1 Precautions for safe handling : Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Put on appropriate personal protective equipment (see Section 8).
Never use pressure to empty. Container is not a pressure vessel.
Always keep in containers made from the same material as the original one.
Comply with the health and safety at work laws.
Do not allow to enter drains or watercourses.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Seveso Directive - Reporting thresholds (in tonnes)

Danger criteria

| Category | Notification and MAPP threshold | Safety report threshold |
|--|---------------------------------|-------------------------|
| E2: Hazardous to the aquatic environment - Chronic 2 | 200 | 500 |

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

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

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|---|------|-----------------------|------------------------|---------------------------|----------|
| bisphenol-A-epoxy resin avg.mol.wght. ≤ 700 | DNEL | Short term Dermal | 8,3 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Inhalation | 12,3 mg/m 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 | Human via the environment | Systemic |
| | DNEL | Short term Inhalation | 0,75 mg/m ³ | Human via the environment | Systemic |
| | DNEL | Short term Oral | 0,75 mg/kg bw/day | Human via the environment | Systemic |
| | DNEL | Long term Dermal | 3,6 mg/kg bw/day | Human via the environment | Systemic |
| | DNEL | Long term Inhalation | 0,75 mg/m ³ | Human via the environment | Systemic |
| | DNEL | Long term Oral | 0,75 mg/kg bw/day | Human via the environment | Systemic |

PNECs

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|---|------------------------|----------------|---------------|
| bisphenol-A-epoxy resin avg.mol.wght. ≤ 700 | Fresh water | 3 µg/l | - |
| | Marine | 0,3 µg/l | - |
| | Sewage Treatment Plant | 10 mg/l | - |
| | Fresh water sediment | 0,5 mg/kg dwt | - |
| | Marine water sediment | 0,5 mg/kg dwt | - |
| | Sediment | 0,05 mg/kg dwt | - |

8.2 Exposure controls

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

SECTION 8: Exposure controls/personal protection

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: safety glasses with side-shields. (EN 166)

Skin protection

Hand protection

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

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

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

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

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

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

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

- Gloves** : For prolonged or repeated handling, use the following type of gloves:

Recommended: > 8 hours (breakthrough time): gloves : nitrile rubber (0.5mm)

The recommendation for the type or types of glove to use when handling this product is based on information from the following source:

EN 374-3 : 2003

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: 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** : 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: organic vapour (Type A) and particulate filter (as filter combination A-P2) (EN 140)

- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Various
- Odour** : Mild.
- Odour threshold** : Not available.

SECTION 9: Physical and chemical properties

| | |
|---|------------------|
| pH | : Not available. |
| Melting point/freezing point | : Not available. |
| Initial boiling point and boiling range | : Not available. |
| Flash point | : Not available. |
| Evaporation rate | : Not available. |
| Flammability (solid, gas) | : Not available. |
| Upper/lower flammability or explosive limits | : Not available. |
| Vapour pressure | : Not available. |
| Vapour density | : Not available. |
| Relative density | : 1,71 |
| Solubility(ies) | : Not available. |
| Partition coefficient: n-octanol/ water | : Not available. |
| Auto-ignition temperature | : Not available. |
| Decomposition temperature | : Not available. |
| Viscosity | : Not available. |
| Explosive properties | : Not available. |
| Oxidising 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: oxidising 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, CO ₂ and smoke can be generated. |

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

SECTION 11: Toxicological information

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|-------------|---------|-------------|----------|
| bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700 | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Mouse | 20000 mg/kg | - |
| | LD50 Oral | Rat | 13600 mg/kg | - |
| Oxirane, mono[(C10-16-alkyloxy)methyl] derivs. 1,4-bis(2,3-epoxypropoxy) butane | LD50 Oral | Rat | >5000 mg/kg | - |
| | LD50 Dermal | Rabbit | 1130 mg/kg | - |
| | LD50 Dermal | Rat | >2000 mg/kg | - |
| bisphenol-A-epoxy resin avg.mol.wght. ≤ 700 | LD50 Oral | Rat | 1134 mg/kg | - |
| | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Mouse | 20 g/kg | - |
| hydrocarbons, aromatic, C9 | LD50 Oral | Rat | 30 g/kg | - |
| | LD50 Oral | Mouse | 8400 mg/kg | - |
| | LD50 Oral | Rat | 8400 mg/kg | - |
| bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700 | LD50 Oral | Rat | >5000 mg/kg | - |
| | LD50 Dermal | Rat | >2000 mg/kg | - |
| | LD50 Oral | Rat | >3600 mg/kg | - |
| Phenol, methylstyrenated | LD50 Dermal | Rabbit | 5 g/kg | - |
| | LD50 Oral | Rat | 2,1 g/kg | - |
| Pine Oil | LD50 Dermal | Rabbit | 5 g/kg | - |
| | LD50 Oral | Rat | 2,1 g/kg | - |

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

Acute toxicity estimates

Not available.

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|--|--------------------------|---------|-------|--------------------------|-------------|
| bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700 | Eyes - Mild irritant | Rabbit | - | 100 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 microliters | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 2 milligrams | - |
| bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700 1,4-bis(2,3-epoxypropoxy) butane | Skin - Mild irritant | Rabbit | - | 24 hours 500 microliters | - |
| | Eyes - Moderate irritant | Rabbit | - | 100 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 10 milligrams | - |
| bisphenol-A-epoxy resin avg. mol.wght. ≤ 700 | Skin - Oedema | Rabbit | 1 | 4 hours | - |
| | Skin - Erythema/Eschar | Rabbit | 1,5 | 4 hours | - |
| | Skin - Mild irritant | Rabbit | - | 4 hours | - |
| | Eyes - Irritant | Rabbit | - | - | - |
| | Eyes - Mild irritant | Rabbit | - | 100 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 microliters | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 2 milligrams | - |
| hydrocarbons, aromatic, C9 | Eyes - Mild irritant | Rabbit | - | 24 hours 100 microliters | - |
| Pine Oil | Skin - Severe irritant | Rabbit | - | 24 hours 500 milligrams | - |

Conclusion/Summary

Skin : Causes skin irritation.

SECTION 11: Toxicological information**Eyes** : Causes serious eye irritation.**Respiratory** : Based on available data, the classification criteria are not met.**Sensitisation**

| Product/ingredient name | Route of exposure | Species | Result |
|--|-------------------|--------------------------|----------------------------|
| bisphenol-A-epoxy resin avg. mol.wght. ≤ 700 | skin | Mouse | Sensitising |
| bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700 | skin skin | Guinea pig Guinea pig | Sensitising Sensitising |

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

| Product/ingredient name | Test | Experiment | Result |
|----------------------------|----------|-------------------|----------|
| hydrocarbons, aromatic, C9 | OECD 471 | Subject: Bacteria | Negative |

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

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|------------------------|--------------|-------------|--------------------------|
| bisphenol-A-epoxy resin avg. mol.wght. ≤ 700 | Negative - Oral - TDLo | Rat - Female | >1000 mg/kg | 2 years; 7 days per week |
| | Negative - Oral - TDLo | Mouse - Male | >100 mg/kg | 2 years; 3 days per week |

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

| Product/ingredient name | Maternal toxicity | Fertility | Developmental toxin | Species | Dose | Exposure |
|--|-------------------|-----------|---------------------|------------------------------|------------------------------|-----------------|
| bisphenol-A-epoxy resin avg. mol.wght. ≤ 700 | - | Negative | - | Rat | Oral: 750 mg/kg | 7 days per week |
| hydrocarbons, aromatic, C9 | - | - | Negative | Mammal - species unspecified | Route of exposure unreported | - |

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

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|-------------------|-----------------|------------|-----------------|
| bisphenol-A-epoxy resin avg. mol.wght. ≤ 700 | Negative - Oral | Rat - Female | >540 mg/kg | 7 days per week |
| | Negative - Dermal | Rabbit - Female | >300 mg/kg | 7 days per week |

Conclusion/Summary : Based on available data, the classification criteria are not met.**Specific target organ toxicity (single exposure)**

| Product/ingredient name | Category | Route of exposure | Target organs |
|----------------------------|------------|-------------------|---|
| hydrocarbons, aromatic, C9 | Category 3 | Not applicable. | Respiratory tract irritation and Narcotic effects |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

SECTION 11: Toxicological information

| Product/ingredient name | Result |
|--|--|
| hydrocarbons, aromatic, C9 Pine Oil | ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 |

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

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|--------------------------|---------|------------|-----------------------------|
| bisphenol-A-epoxy resin avg. mol.wght. ≤ 700 | Sub-chronic NOAEL Oral | Rat | 50 mg/kg | - |
| | Sub-chronic LOEL Oral | Rat | 250 mg/kg | - |
| | Sub-chronic LOEL Oral | Rat | 1000 mg/kg | - |
| | Sub-chronic NOAEL Dermal | Rat | 100 mg/kg | 90 days; 5 days per week |
| | Sub-chronic NOEL Dermal | Rat | 10 mg/kg | 90 days; 5 days per week |

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

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

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

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 classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

| Product/ingredient name | Result | Species | Exposure |
|---|----------------------------|-------------------------------|----------|
| bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700 | Acute EC50 1,4 to 1,7 mg/l | Daphnia spec. | 48 hours |
| | Acute IC50 >42,6 mg/l | Algae | 18 hours |
| bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700 | Acute LC50 3,1 mg/l | Fish | 96 hours |
| | Acute EC50 3,5 mg/l | Daphnia spec. | 48 hours |
| 1,4-bis(2,3-epoxypropoxy) butane | Acute LC50 5,7 mg/l | Fish | 96 hours |
| | Acute EC50 75 mg/l | Daphnia spec. - Daphnia magna | 24 hours |
| bisphenol-A-epoxy resin avg. mol.wght. ≤ 700 | Acute LC50 24 mg/l | Fish - Brachydanio rerio | 96 hours |
| | Acute EC50 2,1 mg/l | Daphnia spec. | 48 hours |

SECTION 12: Ecological information

| | | | |
|---|--|---|----------------------------------|
| bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700 | Acute LC50 1,3 mg/l Chronic NOEC 0,3 mg/l Acute EC50 3,5 mg/l | Fish Daphnia spec. Daphnia spec. | 96 hours 21 days 48 hours |
| Pine Oil | Acute LC50 5,7 mg/l Acute EC50 24,5 ppm Fresh water Acute LC50 18,35 ppm Fresh water | Fish Daphnia spec. - Daphnia magna Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours 48 hours 96 hours |

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

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|-----------|---------------------------------------|------|----------|
| bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700 | OECD 302B | 12 % - Not readily - 28 days | - | - |
| bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700 | OECD 301B | 10 to 16 % - Not readily - 28 days | - | - |
| bisphenol-A-epoxy resin avg. mol.wght. ≤ 700 | OECD 301B | 6 to 12 % - Not readily - 28 days | - | - |
| bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700 | OECD 301F | 5 % - Not readily - 28 days | - | - |
| | OECD 301B | 10 to 16 % - Not readily - 28 days | - | - |
| | OECD 301B | 10 to 16 % - Not readily - 28 days | - | - |

Conclusion/Summary : Based on available data, the classification criteria are not met. This product has not been tested for biodegradation.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|-------------------|------------|------------------|
| bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700 | - | - | Not readily |
| bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700 | - | - | Not readily |
| bisphenol-A-epoxy resin avg. mol.wght. ≤ 700 | - | - | Not readily |
| hydrocarbons, aromatic, C9 | - | - | Readily |
| bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700 | - | - | Not readily |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---|--------------------|-----|-----------|
| bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700 | 2.64 to 3.78 | 31 | low |
| Oxirane, mono[(C10-16-alkyloxy)methyl] derivs. | >3 | - | low |
| 1,4-bis(2,3-epoxypropoxy) butane | -0,269 | - | low |
| bisphenol-A-epoxy resin avg. mol.wght. ≤ 700 | 2.64 to 3.78 | 31 | low |
| hydrocarbons, aromatic, C9 | 3.7 to 4.5 | - | high |
| Phenol, methylstyrenated | 3,627 | - | low |

12.4 Mobility in soil

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

Mobility : Not available.

SECTION 12: Ecological information

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

The information in this section contains generic advice and guidance.

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

Disposal considerations : Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

European waste catalogue (EWC)

The European Waste Catalogue classification of this product, when disposed of as waste, is:

| Waste code | Waste designation |
|------------|---|
| 08 01 11* | waste paint and varnish containing organic solvents or other hazardous substances |

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.









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

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

SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|-----------------------|---------|---------|---------|---------|
| 14.1 UN number | UN 3082 | UN 3082 | UN 3082 | UN 3082 |
| | | | | |

SECTION 14: Transport information

| | | | | |
|--|--|--|---|--|
| 14.2 UN proper shipping name | Environmentally hazardous substance, liquid, n.o.s. [bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700, bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700] | Environmentally hazardous substance, liquid, n.o.s. [bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700, bisphenol-F-epoxy resin avg.mol.wght. ≤ 700] | Environmentally hazardous substance, liquid, n.o.s. Marine pollutant [bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700, bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700] | Environmentally hazardous substance, liquid, n.o.s. [bisphenol-A-epoxy resin, avg.mol.wght. ≤ 700, bisphenol-F-epoxy resin, avg.mol.wght. ≤ 700] |
| 14.3 Transport hazard class(es) | 9   | 9   | 9   | 9   |
| 14.4 Packing group | III | III | III | III |
| 14.5 Environmental hazards | Yes. | Yes. | Yes. | Yes. |
| 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: 450 L Packaging instructions: 964 Cargo Aircraft Only Quantity limitation: 450 L Packaging instructions: 964 Limited Quantities - Passenger Aircraft Quantity limitation: 30 Kg Packaging instructions: Y 964 |

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

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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

[Annex XIV - List of substances subject to authorisation](#)

[Annex XIV](#)

None of the components are listed.

[Substances of very high concern](#)

None of the components are listed.

SECTION 15: Regulatory information

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 : The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

VOC for Ready-for-Use Mixture : IIA/j. Two-pack reactive performance coatings for specific end use such as floors. EU limit value for this product : 500g/l (2010.) This product contains a maximum of 35 g/l VOC.

Europe inventory : All components are listed or exempted.

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category

E2: Hazardous to the aquatic environment - Chronic 2

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

References : EH40/2005 Workplace exposure limits
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2015/830

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

CN code : 3209 90 00

International lists

National inventory

Australia : At least one component is not listed.

Canada : Not determined.

China : At least one component is not listed.

Japan : **Japan inventory (ENCS)**: At least one component is not listed.
Japan inventory (ISHL): Not determined.

SECTION 15: Regulatory information

| | |
|--------------------------|--|
| Malaysia | : Not determined. |
| New Zealand | : At least one component is not listed. |
| Philippines | : Not determined. |
| Republic of Korea | : Not determined. |
| Taiwan | : At least one component is not listed. |
| Turkey | : Not determined. |
| United States | : All components are listed or exempted. |

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

SECTION 16: Other information

Indicates information that has changed from previously issued version.

| | |
|-----------------------------------|--|
| Abbreviations and acronyms | : ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number vPvB = Very Persistent and Very Bioaccumulative |
|-----------------------------------|--|

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

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

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

| | | |
|--|--|---|
| Full text of abbreviated H statements | : H226 H304 H312 H315 H317 H319 H332 H335 H336 H411 H412 | Flammable liquid and vapour. May be fatal if swallowed and enters airways. Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects. |
|--|--|---|

| | | |
|---|--|--|
| Full text of classifications [CLP/GHS] | : Acute Tox. 4, H312 Acute Tox. 4, H332 Aquatic Chronic 2, H411 Aquatic Chronic 3, H412 Asp. Tox. 1, H304 EUH066 Eye Irrit. 2, H319 Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335 STOT SE 3, H336 | ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 LONG-TERM AQUATIC HAZARD - Category 2 LONG-TERM AQUATIC HAZARD - Category 3 ASPIRATION HAZARD - Category 1 Repeated exposure may cause skin dryness or cracking. SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITISATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3 |
|---|--|--|

SECTION 16: Other information**Date of printing** : 27/04/2017**Date of issue/ Date of revision** : 27/04/2017**Date of previous issue** : 27/04/2017**Version** : 2.1**Notice to reader**

The information in this Safety Data Sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.