

SAFETY DATA SHEET



Epoxy HR Comp B

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

1.1 Product identifier

Product name : Epoxy HR Comp B
Product code : 1506
Product description : Hardener.
Product type : Liquid.
Other means of identification : Not available.

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

Use in coatings - Industrial use
Use in coatings - Professional use

1.3 Details of the supplier of the safety data sheet

Jotun A/S
P.O.Box 2021
3202 Sandefjord
Norway

Tel: + 47 33 45 70 00
Fax: +47 33 45 72 42
E-mail: SDSJotun@jotun.no

1.4 Emergency telephone number

Norwegian National Poison Centre: +47 22 59 13 00

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, H302
Skin Corr. 1B, H314
Eye Dam. 1, H318
Skin Sens. 1, H317
STOT RE 2, H373 (kidneys)
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

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SECTION 2: Hazards identification

| | | |
|---|---|---|
| Hazard pictograms | : |  |
| Signal word | : | Danger. |
| Hazard statements | : | H302 - Harmful if swallowed. H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H373 - May cause damage to organs through prolonged or repeated exposure. (kidneys) H411 - Toxic to aquatic life with long lasting effects. |
| <u>Precautionary statements</u> | | |
| General | : | Not applicable. |
| Prevention | : | P280 - Wear protective gloves, protective clothing and eye or face protection. P273 - Avoid release to the environment. P260 - Do not breathe vapour or spray. P270 - Do not eat, drink or smoke when using this product. |
| Response | : | P391 - Collect spillage. P304 + P310 - IF INHALED: Immediately call a POISON CENTER or doctor. P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. P363 - Wash contaminated clothing before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor. |
| Storage | : | Not applicable. |
| Disposal | : | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Hazardous ingredients | : | Formaldehyde, polymer with benzenamine, hydrogenated m-xylene-alpha,alpha'-diamine cyclohexanamine, 4,4'-methylenebis- |
| Supplemental label elements | : | Not applicable. |
| 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 | | |
| 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. |

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SECTION 2: Hazards identification

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

| Product/ingredient name | Identifiers | % | Classification | Specific Conc. Limits, M-factors and ATEs | Type |
|---|--|-----------|---|---|---------|
| Formaldehyde, polymer with benzenamine, hydrogenated | REACH #: 01-2119541673-38 EC: 603-894-6 CAS: 135108-88-2 | ≥25 - ≤50 | Acute Tox. 3, H301 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373 (kidneys) (oral) Aquatic Chronic 3, H412 | ATE [Oral] = 300 mg/kg | [1] |
| benzyl alcohol | REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5 | ≥25 - ≤48 | Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319 | ATE [Oral] = 1230 mg/kg ATE [Inhalation (vapours)] = 11 mg/l | [1] |
| Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis (methylamine) | REACH #: Polymer EC: 500-137-0 CAS: 57214-10-5 | ≤10 | Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | M [Acute] = 1 M [Chronic] = 1 | [1] |
| m-xylene-alpha,alpha'-diamine | REACH #: 01-2119480150-50 EC: 216-032-5 CAS: 1477-55-0 | ≤6.8 | Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Aquatic Chronic 3, H412 EUH071 | ATE [Oral] = 980 mg/kg ATE [Inhalation (vapours)] = 11 mg/l | [1] [2] |
| cyclohexanamine, 4,4'-methylenebis- | REACH #: 01-2119541673-38 EC: 217-168-8 CAS: 1761-71-3 | ≤5 | Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT RE 2, H373 (liver) | ATE [Oral] = 500 mg/kg | [1] |
| salicylic acid | REACH #: 01-2119486984-17 EC: 200-712-3 CAS: 69-72-7 | <3 | Acute Tox. 4, H302 Eye Dam. 1, H318 Repr. 2, H361d See Section 16 for the full text of the H statements declared above. | ATE [Oral] = 500 mg/kg | [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

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

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SECTION 4: First aid measures

4.1 Description of first aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- 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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

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, CO₂, powders, water spray.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

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

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SECTION 5: Firefighting measures

5.3 Advice for firefighters

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 vapour or mist. Refer to protective measures listed in sections 7 and 8.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : 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 material 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 vapours in air and avoid vapour 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

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

7.2 Conditions for safe storage, including any incompatibilities

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SECTION 7: Handling and storage

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**Danger criteria**

| Category | Notification and MAPP threshold | Safety report threshold |
|----------|---------------------------------|-------------------------|
| E2 | 200 tonne | 500 tonne |

See Technical Data Sheet / packaging for further information.

7.3 Specific end use(s)**Recommendations** : Not available.**Industrial sector specific solutions** : Not available.**SECTION 8: Exposure controls/personal protection**

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

8.1 Control parameters**Occupational exposure limits**

| Product/ingredient name | Exposure limit values |
|-------------------------------|--|
| m-xylene-alpha,alpha'-diamine | FOR-2011-12-06-1358 (Norway, 12/2022). CEIL: 0.1 mg/m ³ |

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 | Type | Exposure | Value | Population | Effects |
|--|------|-----------------------|-----------------------|--------------------|----------|
| Formaldehyde, polymer with benzenamine, hydrogenated | DNEL | Long term Inhalation | 0.2 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 2 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Inhalation | 2 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Dermal | 6 mg/kg bw/day | Workers | Systemic |
| benzyl alcohol | DNEL | Long term Oral | 4 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 4 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 5.4 mg/m ³ | General population | Systemic |
| | DNEL | Long term Dermal | 8 mg/kg | Workers | Systemic |

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SECTION 8: Exposure controls/personal protection

| | | | | | | |
|-------------------------------|-------------------------------------|-----------------------|--------------------------------|-----------------------------------|----------|----------|
| m-xylene-alpha,alpha'-diamine | DNEL | Short term Oral | bw/day 20 mg/kg | General population | Systemic | |
| | DNEL | Short term Dermal | bw/day 20 mg/kg | General population | Systemic | |
| | DNEL | Long term Inhalation | bw/day 22 mg/m ³ | Workers | Systemic | |
| | DNEL | Short term Inhalation | 27 mg/m ³ | General population | Systemic | |
| | DNEL | Short term Dermal | 40 mg/kg bw/day | Workers | Systemic | |
| | DNEL | Short term Inhalation | 110 mg/m ³ | Workers | Systemic | |
| | DNEL | Long term Inhalation | 0.2 mg/m ³ | Workers | Local | |
| | DNEL | Long term Dermal | 0.33 mg/ kg bw/day | Workers | Systemic | |
| | cyclohexanamine, 4,4'-methylenebis- | DNEL | Long term Inhalation | 1.2 mg/m ³ | Workers | Systemic |
| | | DNEL | Short term Dermal | 0.63 mg/ kg bw/day | Workers | Systemic |
| DNEL | | Short term Inhalation | 1.5 mg/m ³ | Workers | Systemic | |
| DNEL | | Long term Dermal | 0.21 mg/ kg bw/day | Workers | Systemic | |
| DNEL | | Long term Inhalation | 0.5 mg/m ³ | Workers | Systemic | |
| DNEL | | Long term Dermal | 0.125 mg/ kg bw/day | Workers | Systemic | |
| DNEL | | Long term Oral | 0.125 mg/ kg bw/day | General population [Consumers] | Systemic | |
| DNEL | | Long term Dermal | 0.053 mg/ kg bw/day | Workers | Systemic | |
| salicylic acid | | DNEL | Long term Inhalation | 0.13 mg/m ³ | Workers | Systemic |
| | | DNEL | Long term Dermal | 2.3 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Oral | 1 mg/kg bw/day | General population | Systemic | |
| | DNEL | Long term Dermal | 1 mg/kg bw/day | General population | Systemic | |
| | DNEL | Short term Oral | 4 mg/kg bw/day | General population | Systemic | |
| | DNEL | Long term Inhalation | 4 mg/m ³ | General population | Systemic | |
| | DNEL | Long term Inhalation | 5 mg/m ³ | Workers | Local | |
| | DNEL | Long term Inhalation | 5 mg/m ³ | Workers | Systemic | |

PNECs

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|-------------------------|-------------------------------------|-----------------|---------------|
| benzyl alcohol | Fresh water | 1 mg/l | - |
| | Marine | 0.1 mg/l | - |
| | Sewage Treatment Plant | 39 mg/l | - |
| | Fresh water sediment | 5.27 mg/kg dwt | - |
| | Marine water sediment | 0.527 mg/kg dwt | - |
| | Soil | 0.456 mg/kg dwt | - |
| | cyclohexanamine, 4,4'-methylenebis- | Fresh water | 0.008 mg/l |
| Marine | | 0.0008 mg/l | - |

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SECTION 8: Exposure controls/personal protection

| | | | |
|--|------------------------|-----------------|---|
| | Sewage Treatment Plant | 80 mg/l | - |
| | Fresh water sediment | 0.39 mg/kg dwt | - |
| | Marine water sediment | 0.039 mg/kg dwt | - |
| | Soil | 0.072 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.

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 to ISO 16321-1:2022 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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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

Wear suitable gloves tested to ISO 374-1:2016.

Recommended, gloves(breakthrough time) > 8 hours: Viton® (> 0.7 mm), 4H/Silver Shield® (> 0.07 mm), neoprene (> 0.35 mm)

May be used, gloves(breakthrough time) 4 - 8 hours: butyl rubber (> 0.4 mm), nitrile rubber (> 0.75 mm), PVC (> 0.5 mm)

For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.

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 fibres or of high-temperature-resistant synthetic fibres.

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 a respirator according to EN 140. Use respiratory mask with charcoal and dust filter when spraying this product, according to EN 14387 (as filter combination A2-P2). In confined spaces, use compressed-air or fresh-air respiratory equipment. When use of roller or brush, consider use of charcoalfilter.

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SECTION 8: Exposure controls/personal protection

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 propertiesAppearance

| | |
|--|---|
| Physical state | : Liquid. |
| Colour | : Colourless. |
| Odour | : Characteristic. |
| Odour threshold | : Not applicable. |
| Melting point/freezing point | : Not applicable. |
| Initial boiling point and boiling range | : Lowest known value: 205.3°C (401.5°F) (benzyl alcohol). Weighted average: 230.7°C (447.3°F) |
| Flammability | : Not applicable. |
| Lower and upper explosion limit | : 1.3 - 13% |
| Flash point | : Closed cup: 102°C |
| Auto-ignition temperature | : Not applicable. |
| Decomposition temperature | : Not available. |
| pH | : Not applicable. |
| Viscosity | : Kinematic (40°C): >20.5 mm ² /s |
| Solubility in water | : Cold water Not soluble hot water Not soluble |
| Partition coefficient: n-octanol/water | : Not available. |
| Vapour pressure | : Highest known value: 0.007 kPa (0.05 mm Hg) (at 20°C) (benzyl alcohol). Weighted average: 0.003 kPa (0.02 mm Hg) (at 20°C) |
| Evaporation rate | : 0.007 (benzyl alcohol) compared with butyl acetate |
| Density | : 1.07 g/cm ³ |
| Vapour density | : Highest known value: 3.7 (Air = 1) (benzyl alcohol). |
| Explosive properties | : Not available. |
| Oxidising properties | : Not available. |
| <u>Particle characteristics</u> | |
| Median particle size | : Not applicable. |

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. |

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SECTION 10: Stability and reactivity

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

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|-----------|---------|------------|----------|
| Formaldehyde, polymer with benzenamine, hydrogenated | LD50 Oral | Rat | 300 mg/kg | - |
| benzyl alcohol | LD50 Oral | Rat | 1230 mg/kg | - |
| m-xylene-alpha,alpha'-diamine | LD50 Oral | Rat | 980 mg/kg | - |

Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|--|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| Epoxy HR Comp B | 544.5 | N/A | N/A | 24.6 | N/A |
| formaldehyde, polymer with benzenamine, hydrogenated | 300 | N/A | N/A | N/A | N/A |
| benzyl alcohol | 1230 | N/A | N/A | 11 | N/A |
| m-xylene-alpha,alpha'-diamine | 980 | N/A | N/A | 11 | N/A |
| cyclohexanamine, 4,4'-methylenebis- | 500 | N/A | N/A | N/A | N/A |
| salicylic acid | 500 | N/A | N/A | N/A | N/A |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|------------------------|------------------------------|-------|-------------------------|-------------|
| benzyl alcohol | Eyes - Mild irritant | Mammal - species unspecified | - | - | - |
| m-xylene-alpha,alpha'-diamine | Eyes - Severe irritant | Rabbit | - | 24 hours 50 µg | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 750 µg | - |
| cyclohexanamine, 4,4'-methylenebis-salicylic acid | Eyes - Severe irritant | Rabbit | - | 24 hours 10 microliters | - |
| | Eyes - Mild irritant | Mammal - species unspecified | - | - | - |
| | Skin - Mild irritant | Mammal - species unspecified | - | - | - |

Sensitisation

| Product/ingredient name | Route of exposure | Species | Result |
|-------------------------------------|-------------------|------------------------------|-------------|
| m-xylene-alpha,alpha'-diamine | skin | Mammal - species unspecified | Sensitising |
| cyclohexanamine, 4,4'-methylenebis- | skin | Mammal - species unspecified | Sensitising |

Mutagenicity

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

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SECTION 11: Toxicological information

| Product/ingredient name | Maternal toxicity | Fertility | Developmental toxin | Species | Dose | Exposure |
|-------------------------|-------------------|-----------|---------------------|---------|-----------------|----------|
| salicylic acid | - | - | Positive | Rat | Oral: 150 mg/kg | - |

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

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

Specific target organ toxicity (repeated exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|--|--------------------------|-------------------|------------------|
| Formaldehyde, polymer with benzenamine, hydrogenated cyclohexanamine, 4,4'-methylenebis- | Category 2 Category 2 | oral - | kidneys liver |

Aspiration hazard

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

11.2 Information on other hazards**11.2.1 Endocrine disrupting properties**

Not available.

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

| Product/ingredient name | Result | Species | Exposure |
|---|---------------------------------|--|----------|
| Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis (methylamine) | Acute LC50 25.9 mg/l | Fish | 96 hours |
| m-xylene-alpha,alpha'-diamine | Acute EC50 12 mg/l | Algae | 72 hours |
| cyclohexanamine, 4,4'-methylenebis- | Acute EC50 6.84 mg/l | Daphnia | 48 hours |
| salicylic acid | Acute IC50 140 mg/l | Algae | 72 hours |
| | Acute LC50 46 mg/l | Fish | 96 hours |
| | Acute LC50 32 µg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Chronic NOEC 1 mg/l Fresh water | Daphnia - Daphnia longispina - Neonate | 21 days |

Conclusion/Summary : This material is toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

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SECTION 12: Ecological information

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------------------|-------------------|------------|------------------|
| benzyl alcohol | - | - | Readily |
| cyclohexanamine, 4,4'-methylenebis- | - | - | Not readily |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--|--------------------|------------|-----------|
| formaldehyde, polymer with benzenamine, hydrogenated | - | 209 to 219 | low |
| benzyl alcohol | 0.87 | <100 | low |
| m-xylene-alpha,alpha'-diamine | 0.18 | 2.69 | low |
| cyclohexanamine, 4,4'-methylenebis- | 2.03 | - | low |
| salicylic acid | 2.21 to 2.26 | - | low |

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

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

13.1 Waste treatment methods**Product**

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

Hazardous waste : Yes.

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:

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SECTION 13: Disposal considerations

| Waste code | Waste designation |
|------------|---|
| 08 01 11* | Waste paint and varnish containing organic solvents or other dangerous 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.

| 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 spilt 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 | UN2735 | UN2735 | UN2735 | UN2735 |
| 14.2 UN proper shipping name | Polyamines, liquid, corrosive, n.o.s. (m-xylene-alpha,alpha'-diamine, cyclohexanamine, 4,4'-methylenebis-) | Polyamines, liquid, corrosive, n.o.s. (m-xylene-alpha,alpha'-diamine, cyclohexanamine, 4,4'-methylenebis-) | Polyamines, liquid, corrosive, n.o.s. (m-xylene-alpha,alpha'-diamine, cyclohexanamine, 4,4'-methylenebis-). Marine pollutant (Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis (methylamine)) | Polyamines, liquid, corrosive, n.o.s. (m-xylene-alpha,alpha'-diamine, cyclohexanamine, 4,4'-methylenebis-) |
| 14.3 Transport hazard class(es) | 8   | 8   | 8   | 8  |
| 14.4 Packing group | II | II | II | II |
| 14.5 Environmental hazards | Yes. | Yes. | Yes. | Yes. The environmentally hazardous substance mark is not required. |

Additional information

ADR/RID : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Hazard identification number 80

Tunnel code (E)

ADN : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

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SECTION 14: Transport information

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-A, S-B
Segregation Group: 18 - Alkalis

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

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

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

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.

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 : Not available.

VOC for Ready-for-Use Mixture : Not available.

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product may add to the calculation for determining whether a site is within the scope of the Seveso Directive on major accident hazards.

National regulations

*Epoxy HR Comp B***SECTION 15: Regulatory information**

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.

Norway

Product registration number : 92641

International regulations**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

Montreal Protocol

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.

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
 N/A = Not available
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number
 SGG = Segregation Group
 vPvB = Very Persistent and Very Bioaccumulative

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

| Classification | Justification |
|---------------------------|--------------------|
| Acute Tox. 4, H302 | Calculation method |
| Skin Corr. 1B, H314 | Calculation method |
| Eye Dam. 1, H318 | Calculation method |
| Skin Sens. 1, H317 | Calculation method |
| STOT RE 2, H373 (kidneys) | Calculation method |
| Aquatic Chronic 2, H411 | Calculation method |

Full text of abbreviated H statements

*Epoxy HR Comp B***SECTION 16: Other information**

| | |
|--------|--|
| H301 | Toxic if swallowed. |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H361d | Suspected of damaging the unborn child. |
| 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. |
| EUH071 | Corrosive to the respiratory tract. |

Full text of classifications [CLP/GHS]

| | |
|-------------------|---|
| Acute Tox. 3 | ACUTE TOXICITY - Category 3 |
| Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| Aquatic Acute 1 | SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 |
| Aquatic Chronic 1 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 |
| Aquatic Chronic 2 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 |
| Aquatic Chronic 3 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 |
| Eye Dam. 1 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 |
| Eye Irrit. 2 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 |
| Repr. 2 | REPRODUCTIVE TOXICITY - Category 2 |
| Skin Corr. 1B | SKIN CORROSION/IRRITATION - Category 1B |
| Skin Corr. 1C | SKIN CORROSION/IRRITATION - Category 1C |
| Skin Sens. 1 | SKIN SENSITISATION - Category 1 |
| Skin Sens. 1B | SKIN SENSITISATION - Category 1B |
| STOT RE 2 | SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 |

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