

# SAFETY DATA SHEET

## EPILUX 86 HARDENER

### Section 1. Identification

**Product identifier** : EPILUX 86 HARDENER  
**Product code** : FEP860000XXX  
**Other means of identification** : Not available.  
**Product type** : Liquid.

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

##### Identified uses

Not applicable.

##### Uses advised against

Not applicable.

**Supplier's details** : Berger Paints Singapore Pte Ltd  
22 Benoi Sector, Singapore - 629854  
Email: Berger@bergeronline.com.sg  
Tele: +65 6801 7000  
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**Emergency telephone number (with hours of operation)** : Tele: +65 9636 4852

### Section 2. Hazards identification

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 3  
ACUTE TOXICITY (oral) - Category 4  
ACUTE TOXICITY (dermal) - Category 4  
ACUTE TOXICITY (inhalation) - Category 2  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
AQUATIC HAZARD (ACUTE) - Category 1  
AQUATIC HAZARD (LONG-TERM) - Category 2  
Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 29.5%  
Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 29.5%  
Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 67.9%  
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 6.6%

#### GHS label elements, including precautionary statements

##### Hazard pictograms



##### Signal word

: Danger

## Section 2. Hazards identification

- Hazard statements** : H226 - Flammable liquid and vapor.  
 H302 + H312 - Harmful if swallowed or in contact with skin.  
 H315 - Causes skin irritation.  
 H319 - Causes serious eye irritation.  
 H330 - Fatal if inhaled.  
 H400 - Very toxic to aquatic life.  
 H411 - Toxic to aquatic life with long lasting effects.
- Precautionary statements**
- Prevention** : P280 - Wear protective gloves and protective clothing. Wear eye or face protection.  
 P284 - In case of inadequate ventilation wear respiratory protection.  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P241 - Use explosion-proof electrical, ventilating or lighting equipment.  
 P242 - Use non-sparking tools.  
 P243 - Take action to prevent static discharges.  
 P273 - Avoid release to the environment.  
 P260 - Do not breathe vapor.  
 P270 - Do not eat, drink or smoke when using this product.  
 P264 - Wash thoroughly after handling.
- Response** : P391 - Collect spillage.  
 P304 + P340, P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.  
 P362 + P364 - Take off contaminated clothing and wash it before reuse.  
 P302 + P312, P352 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. 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.  
 P337 + P313 - If eye irritation persists: Get medical advice or attention.
- Storage** : P391 - Collect spillage.  
 P304 + P340, P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.  
 P362 + P364 - Take off contaminated clothing and wash it before reuse.  
 P302 + P312, P352 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. 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.  
 P337 + P313 - If eye irritation persists: Get medical advice or attention.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

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

## Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

| Ingredient name                       | %         | CAS number |
|---------------------------------------|-----------|------------|
| benzyl alcohol                        | ≥25 - ≤50 | 100-51-6   |
| phenol                                | ≤10       | 108-95-2   |
| 2,4,6-tris(dimethylaminomethyl)phenol | ≤10       | 90-72-2    |
| xylene                                | ≤8        | 1330-20-7  |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

## Section 3. Composition/information on ingredients

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

**Chemical formula** : Not applicable.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Fatal if inhaled.
- Skin contact** : Harmful in contact with skin. Causes skin irritation.
- Ingestion** : Harmful if swallowed.

#### Over-exposure signs/symptoms

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

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

- 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.

## Section 4. First aid measures

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very toxic to aquatic life. 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  
nitrogen oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

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

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

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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.

## Section 6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

| Ingredient name | Exposure limits                                                                                                                                                                                                                                              |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| phenol          | <b>Workplace Safety and Health Act (Singapore, 2/2006).</b><br>PEL (long term): 5 ppm 8 hours.<br>PEL (long term): 19 mg/m <sup>3</sup> 8 hours.                                                                                                             |
| xylene          | <b>Workplace Safety and Health Act (Singapore, 2/2006). [Xylene]</b><br>PEL (long term): 100 ppm 8 hours.<br>PEL (long term): 434 mg/m <sup>3</sup> 8 hours.<br>PEL (short term): 651 mg/m <sup>3</sup> 15 minutes.<br>PEL (short term): 150 ppm 15 minutes. |

#### Biological exposure indices

No exposure indices known.

## Section 8. Exposure controls/personal protection

|                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Appropriate engineering controls</b>      | : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.                                                                                                                                                                                                                          |
| <b>Environmental exposure controls</b>       | : 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.                                                                                                                                                                                                                                                                               |
| <b><u>Individual protection measures</u></b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Hygiene measures</b>                      | : 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.                                                                                                                                                                                                                |
| <b>Eye/face protection</b>                   | : 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.                                                                                                                                                                                                                                                         |
| <b><u>Skin protection</u></b>                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Hand protection</b>                       | : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. |
| <b>Body protection</b>                       | : 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.                                                                                                                                                                                    |
| <b>Other skin protection</b>                 | : 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.                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Respiratory protection</b>                | : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.                                                                                                                                                                                                                                                                                                                           |

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

|                                                                |                  |
|----------------------------------------------------------------|------------------|
| <b>Physical state</b>                                          | : Liquid.        |
| <b>Color</b>                                                   | : Not available. |
| <b>Odor</b>                                                    | : Not available. |
| <b>Odor threshold</b>                                          | : Not available. |
| <b>pH</b>                                                      | : Not available. |
| <b>Melting point/freezing point</b>                            | : Not available. |
| <b>Boiling point, initial boiling point, and boiling range</b> | : Not available. |

## Section 9. Physical and chemical properties and safety characteristics

**Flash point** : Closed cup: 37°C (98.6°F)

**Flammability** : Not available.

**Lower and upper explosion limit/flammability limit** : Not available.

**Vapor pressure** :

| Ingredient name                              | Vapor Pressure at 20°C |        |          | Vapor pressure at 50°C |     |        |
|----------------------------------------------|------------------------|--------|----------|------------------------|-----|--------|
|                                              | mm Hg                  | kPa    | Method   | mm Hg                  | kPa | Method |
| xylene                                       | 6.7                    | 0.89   | EU A.4   |                        |     |        |
| phenol                                       | 0.15001                | 0.02   |          |                        |     |        |
| 2,4,6-tris(dimethylaminomethyl)phenol        | 0.056                  | 0.0075 |          |                        |     |        |
| benzyl alcohol                               | 0.05                   | 0.0067 | OECD 104 |                        |     |        |
| 3-aminomethyl-3,5,5-trimethylcyclohexylamine | 0.01178                | 0.0016 |          |                        |     |        |

**Relative vapor density** : Not available.

**Relative density** : Not available.

**Density** : 1.01 g/cm<sup>3</sup> [25°C (77°F)]

**Solubility in water** : Not available.

**Miscible with water** : No.

**Partition coefficient: n-octanol/water** : Not applicable.

**Auto-ignition temperature** :

| Ingredient name                       | °C  | °F    | Method  |
|---------------------------------------|-----|-------|---------|
| 2,4,6-tris(dimethylaminomethyl)phenol | 382 | 719.6 | EU A.15 |
| xylene                                | 432 | 809.6 |         |
| benzyl alcohol                        | 436 | 816.8 |         |
| phenol                                | 715 | 1319  |         |

**Decomposition temperature** : Not available.

**Viscosity** : Not available.

### Particle characteristics

**Median particle size** : Not applicable.

## Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

**Incompatible materials** : Reactive or incompatible with the following materials:  
oxidizing materials

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 10. Stability and reactivity

**SADT** : Not available.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

| Product/ingredient name                       | Result                | Species | Dose                  | Exposure |
|-----------------------------------------------|-----------------------|---------|-----------------------|----------|
| benzyl alcohol                                | LD50 Dermal           | Rabbit  | 2000 mg/kg            | -        |
|                                               | LD50 Oral             | Rat     | 1230 mg/kg            | -        |
| phenol                                        | LC50 Inhalation Vapor | Rat     | 316 mg/m <sup>3</sup> | 4 hours  |
|                                               | LD50 Dermal           | Rabbit  | 630 mg/kg             | -        |
|                                               | LD50 Dermal           | Rat     | 669 mg/kg             | -        |
|                                               | LD50 Oral             | Rat     | 317 mg/kg             | -        |
| 2,4,6-tris<br>(dimethylaminomethyl)<br>phenol | LD50 Dermal           | Rat     | 1280 mg/kg            | -        |
|                                               | LD50 Oral             | Rat     | 1200 mg/kg            | -        |
| xylene                                        | LC50 Inhalation Gas.  | Rat     | 5000 ppm              | 4 hours  |
|                                               | LD50 Oral             | Rat     | 4300 mg/kg            | -        |

#### Irritation/Corrosion

| Product/ingredient name                       | Result                   | Species | Score | Exposure           | Observation |
|-----------------------------------------------|--------------------------|---------|-------|--------------------|-------------|
| benzyl alcohol                                | Skin - Mild irritant     | Man     | -     | 48 hours 16 mg     | -           |
|                                               | Skin - Moderate irritant | Pig     | -     | 100 %              | -           |
|                                               | Skin - Moderate irritant | Rabbit  | -     | 24 hours 100 mg    | -           |
| phenol                                        | Eyes - Mild irritant     | Rabbit  | -     | 0.5 minutes 5 mg   | -           |
|                                               | Eyes - Severe irritant   | Rabbit  | -     | 5 mg               | -           |
|                                               | Skin - Mild irritant     | Rabbit  | -     | 100 mg             | -           |
|                                               | Skin - Severe irritant   | Pig     | -     | 0.5 minutes 400 uL | -           |
| 2,4,6-tris<br>(dimethylaminomethyl)<br>phenol | Skin - Severe irritant   | Rabbit  | -     | 535 mg             | -           |
|                                               | Eyes - Severe irritant   | Rabbit  | -     | 24 hours 50 ug     | -           |
|                                               | Skin - Mild irritant     | Rat     | -     | 0.025 MI           | -           |
|                                               | Skin - Severe irritant   | Rabbit  | -     | 24 hours 2 mg      | -           |
| xylene                                        | Skin - Severe irritant   | Rat     | -     | 0.25 MI            | -           |
|                                               | Eyes - Mild irritant     | Rabbit  | -     | 87 mg              | -           |
|                                               | Eyes - Severe irritant   | Rabbit  | -     | 24 hours 5 mg      | -           |
|                                               | Skin - Mild irritant     | Rat     | -     | 8 hours 60 uL      | -           |
|                                               | Skin - Moderate irritant | Rabbit  | -     | 100 %              | -           |
|                                               | Skin - Moderate irritant | Rabbit  | -     | 24 hours 500 mg    | -           |

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Reproductive toxicity

Not available.

#### Teratogenicity

## Section 11. Toxicological information

Not available.

### Specific target organ toxicity (single exposure)

| Product/ingredient name | Category   | Route of exposure | Target organs                |
|-------------------------|------------|-------------------|------------------------------|
| xylene                  | Category 3 | -                 | Respiratory tract irritation |

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

| Product/ingredient name | Result                         |
|-------------------------|--------------------------------|
| 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** : Fatal if inhaled.  
**Skin contact** : Harmful in contact with skin. Causes skin irritation.  
**Ingestion** : Harmful if swallowed.

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

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

### 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.

**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Reproductive toxicity** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### 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) |
|---------------------------------------|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| EPILUX 86 HARDENER                    | 1217.5       | 1768.4         | 26740.8                  | 1.2                        | N/A                                 |
| benzyl alcohol                        | 1230         | 2000           | N/A                      | N/A                        | N/A                                 |
| phenol                                | 317          | 630            | N/A                      | 0.316                      | N/A                                 |
| 2,4,6-tris(dimethylaminomethyl)phenol | 1200         | 1280           | N/A                      | N/A                        | N/A                                 |
| xylene                                | 4300         | 1100           | 5000                     | N/A                        | N/A                                 |

## Section 12. Ecological information

### Toxicity

| Product/ingredient name  | Result                                                                 | Species                                                                                                                 | Exposure             |
|--------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------|
| benzyl alcohol<br>phenol | Acute LC50 10 ppm Fresh water                                          | Fish - <i>Lepomis macrochirus</i>                                                                                       | 96 hours             |
|                          | Acute EC50 36 mg/l Marine water                                        | Algae - <i>Hormosira banksii</i> - Gamete                                                                               | 72 hours             |
|                          | Acute EC50 10 ppm Marine water                                         | Algae - <i>Macrocystis pyrifera</i> - Young                                                                             | 4 days               |
|                          | Acute EC50 94 mg/l Fresh water                                         | Aquatic plants - <i>Lemna aequinoctialis</i>                                                                            | 96 hours             |
|                          | Acute EC50 4200 µg/l Fresh water<br>Acute LC50 800 µg/l Marine water   | Daphnia - <i>Daphnia magna</i><br>Crustaceans - <i>Archaeomysis kokuboi</i> - Juvenile (Fledgling, Hatchling, Weanling) | 48 hours<br>48 hours |
| xylene                   | Acute LC50 1.75 µg/l Fresh water<br>Chronic NOEC 16 µg/l Marine water  | Fish - <i>Cyprinus carpio</i> - Larvae<br>Algae - <i>Hormosira banksii</i> - Gamete                                     | 96 hours<br>72 hours |
|                          | Chronic NOEC 1.5 mg/l Fresh water<br>Chronic NOEC 118 µg/l Fresh water | Daphnia - <i>Daphnia magna</i><br>Fish - <i>Oncorhynchus mykiss</i>                                                     | 21 days<br>90 days   |
|                          | Acute LC50 8500 µg/l Marine water                                      | Crustaceans - <i>Palaemonetes pugio</i>                                                                                 | 48 hours             |
|                          | Acute LC50 13400 µg/l Fresh water                                      | Fish - <i>Pimephales promelas</i>                                                                                       | 96 hours             |
|                          |                                                                        |                                                                                                                         |                      |

### Persistence/degradability

Not available.

### Bioaccumulative potential

| Product/ingredient name               | LogP <sub>ow</sub> | BCF         | Potential |
|---------------------------------------|--------------------|-------------|-----------|
| benzyl alcohol                        | 0.87               | -           | Low       |
| phenol                                | 1.47               | 647         | High      |
| 2,4,6-tris(dimethylaminomethyl)phenol | 0.219              | -           | Low       |
| xylene                                | 3.12               | 8.1 to 25.9 | Low       |

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

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

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

|                                    | UN                                                                                       | IMDG                                                                                                                                                                            | IATA                                                                                     | ADR/RID                                                                                                                                                                             | ADN                                                                                                                                                                                 |
|------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>UN number</b>                   | UN1263                                                                                   | UN1263                                                                                                                                                                          | UN1263                                                                                   | UN1263                                                                                                                                                                              | UN1263                                                                                                                                                                              |
| <b>UN proper shipping name</b>     | PAINT                                                                                    | PAINT                                                                                                                                                                           | PAINT                                                                                    | PAINT                                                                                                                                                                               | PAINT                                                                                                                                                                               |
| <b>Transport hazard class (es)</b> | 3<br> | 3<br><br> | 3<br> | 3<br><br> | 3<br><br> |
| <b>Packing group</b>               | III                                                                                      | III                                                                                                                                                                             | III                                                                                      | III                                                                                                                                                                                 | III                                                                                                                                                                                 |
| <b>Environmental hazards</b>       | Yes. The environmentally hazardous substance mark is not required.                       | Yes.                                                                                                                                                                            | Yes. The environmentally hazardous substance mark is not required.                       | Yes.                                                                                                                                                                                | Yes.                                                                                                                                                                                |

### Additional information

**IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

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

**ADR/RID** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.  
**Tunnel code** (D/E)

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

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

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

## Section 15. Regulatory information

### [Singapore - hazardous chemicals under government control](#)

| Ingredient name | Status |
|-----------------|--------|
| Phenol          | Listed |

### [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.

### [Inventory list](#)

|                                |                                                                                                                             |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>Australia</b>               | : Not determined.                                                                                                           |
| <b>Canada</b>                  | : Not determined.                                                                                                           |
| <b>China</b>                   | : All components are listed or exempted.                                                                                    |
| <b>Eurasian Economic Union</b> | : <b>Russian Federation inventory</b> : All components are listed or exempted.                                              |
| <b>Japan</b>                   | : <b>Japan inventory (CSCL)</b> : All components are listed or exempted.<br><b>Japan inventory (ISHL)</b> : Not determined. |
| <b>New Zealand</b>             | : All components are listed or exempted.                                                                                    |
| <b>Philippines</b>             | : All components are listed or exempted.                                                                                    |
| <b>Republic of Korea</b>       | : Not determined.                                                                                                           |
| <b>Taiwan</b>                  | : All components are listed or exempted.                                                                                    |
| <b>Thailand</b>                | : All components are listed or exempted.                                                                                    |
| <b>Turkey</b>                  | : All components are listed or exempted.                                                                                    |
| <b>United States</b>           | : Not determined.                                                                                                           |
| <b>Viet Nam</b>                | : All components are listed or exempted.                                                                                    |

## Section 16. Other information

### [History](#)

**Date of printing** : 12/1/2024

**Date of issue/Date of revision** : 12/1/2024

**Date of previous issue** : 10/5/2017

**Version** : 4.1

**Key to abbreviations** :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- SGG = Segregation Group
- UN = United Nations

## Section 16. Other information

### Procedure used to derive the classification

| Classification                                   | Justification         |
|--------------------------------------------------|-----------------------|
| FLAMMABLE LIQUIDS - Category 3                   | On basis of test data |
| ACUTE TOXICITY (oral) - Category 4               | Calculation method    |
| ACUTE TOXICITY (dermal) - Category 4             | Calculation method    |
| ACUTE TOXICITY (inhalation) - Category 2         | Calculation method    |
| SKIN CORROSION/IRRITATION - Category 2           | Calculation method    |
| SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A | Calculation method    |
| AQUATIC HAZARD (ACUTE) - Category 1              | Calculation method    |
| AQUATIC HAZARD (LONG-TERM) - Category 2          | Calculation method    |

**References** : Not available.

Indicates information that has changed from previously issued version.

### Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.