# SAFETY DATA SHEET

Blackfriar Epoxy Floor Primer Activator

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

### 1.1 Product identifier

**Product name** : Blackfriar Epoxy Floor Primer Activator

**Product description** : Paint Hardener.

**Product type** : Liquid.

**UFI** : 4AC1-D0YH-P008-HUCF

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

| Identified uses |
|---|
| Consumer<br>Industrial<br>Professional |

| Uses advised against | Reason |
|---|---|
| None identified. | - |

### 1.3 Details of the supplier of the safety data sheet

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Tor Coatings Limited
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Telephone no.: +44 (0) 191 4106611
Fax no.: +44 (0) 191 4920125
enquiries@tor-coatings.com

**e-mail address of person responsible for this SDS** : rpmeurohas@rustoleum.eu

### 1.4 Emergency telephone number

**National advisory body/Poison Centre**

**Supplier**

Telephone number United Kingdom: Great Britain : +44 870 8200418 / +44 2038073798

Hours of operation : 24 / 7

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

**Classification according to UK CLP/GHS**

Skin Irrit. 2, H315
Eye Dam. 1, H318
Skin Sens. 1, H317
Aquatic Chronic 2, H411

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 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.

# SECTION 2: Hazards identification

## 2.2 Label elements

**Hazard pictograms** :

**Signal word** : Danger

**Hazard statements** : H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H411 - Toxic to aquatic life with long lasting effects.

**Precautionary statements**

**General** : P103 - Read carefully and follow all instructions.
P102 - Keep out of reach of children.
P101 - If medical advice is needed, have product container or label at hand.

**Prevention** : P280 - Wear protective gloves. Wear eye or face protection.
P273 - Avoid release to the environment.

**Response** : P391 - Collect spillage.
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** : 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol
1,4-bis(2,3-epoxypropoxy)butane

**Supplemental label elements** : EUH205 - Contains epoxy constituents. May produce an allergic reaction.

**Supplemental label elements : Detergents - Regulation (EC) No 907/2006** : Not applicable.

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

**Special packaging requirements**

**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.

**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 | Type |
|---|---|---|---|---|
| 2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bisoxirane | REACH #: 01-2119456619-26<br>EC: 216-823-5<br>CAS: 1675-54-3<br>Index: 603-073-00-2 | ≥50 - ≤75 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1, H317<br>Aquatic Chronic 2, H411 | [1] |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | REACH #: 01-2119454392-40<br>EC: 500-006-8<br>CAS: 9003-36-5 | ≥25 - ≤50 | Skin Irrit. 2, H315<br>Skin Sens. 1A, H317<br>Aquatic Chronic 2, H411 | [1] |
| 1,4-bis(2,3-epoxypropoxy)butane | REACH #: 01-2119494060-45<br>EC: 219-371-7<br>CAS: 2425-79-8<br>Index: 603-072-00-7 | ≥10 - ≤25 | Acute Tox. 4, H302<br>Acute Tox. 4, H312<br>Acute Tox. 4, H332<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317<br>Aquatic Chronic 3, H412<br>**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

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

# SECTION 4: First aid measures

## 4.1 Description of first aid measures

**Eye contact** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

**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.

**Skin contact** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

## SECTION 4: First aid measures

Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. 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** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

### 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 combustion products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds

### 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 British standard BS 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. Do not breathe 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".

## 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. 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.

## 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

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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.

## 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. 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. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# SECTION 7: Handling and storage

## Seveso Directive - Reporting thresholds

### Danger criteria

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

### 7.3 Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

# SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS 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, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | DNEL | Short term Dermal | 83 mg/cm² | Workers | Local |
| | DNEL | Long term Dermal | 104,15 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 29,39 mg/m³ | Workers | Systemic |
| | DNEL | Long term Dermal | 62,5 mg/kg bw/day | General population [Consumers] | Systemic |
| | DNEL | Long term Inhalation | 8,7 mg/m³ | General population [Consumers] | Systemic |
| | DNEL | Long term Oral | 6,25 mg/kg bw/day | General population [Consumers] | Systemic |

#### PNECs

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|---|---|---|---|
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | Fresh water | 0,003 mg/l | - |
| | Marine water | 0,0003 mg/l | - |
| | Sewage Treatment Plant | 10 mg/l | - |
| | Fresh water sediment | 0,294 mg/kg dwt | - |
| | Marine water sediment | 0,0294 mg/kg dwt | - |
| | Soil | 0,237 mg/kg dwt | - |

# SECTION 8: Exposure controls/personal protection

## 8.2 Exposure controls

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**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. Use eye protection according to EN 166. 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. Recommended: safety glasses with side-shields.

**Skin 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.

**Hand protection** : 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. > 8 hours (breakthrough time): 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: EN374. 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: 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** : 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.

**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

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

## 9.1 Information on basic physical and chemical properties

**Physical state** : Liquid.

**Colour** : Colourless.

**Odour** : Not available.

**Odour threshold** : Not available.

**Melting point/freezing point** : Not available.

**Initial boiling point and boiling range** : Not relevant due to nature of the product.

**Flammability (solid, gas)** : Not available.

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

**Flash point** : Closed cup: 93°C (199,4°F) [Literature]

**Auto-ignition temperature** : Not relevant due to nature of the product.

**Decomposition temperature** : Not available.

**pH** : Not applicable.

**pH : Justification** : Product is non-soluble (in water).

**Viscosity** : Dynamic (room temperature): 520 mPa·s [ICI Rotothinner]
Kinematic (room temperature): 460 $mm^2/s$ [calculated.]
Kinematic (40°C): Not available. [calculated.]

**Solubility(ies)** :

| Media | Result |
|---|---|
| cold water | Not soluble |
| hot water | Not soluble |

**Solubility in water** : Not available.

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

**Vapour pressure** :

| | Vapour Pressure at 20˚C | | | Vapour pressure at 50˚C | | |
|---|---|---|---|---|---|---|
| Ingredient name | mm Hg | kPa | Method | mm Hg | kPa | Method |
| 1,4-bis(2,3-epoxypropoxy)butane | <18,75 | <2,5 | | | | |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | 0,62 | 0,083 | | | | |

**Evaporation rate** : Not available.

**Relative density** : Not available.

**Density** : 1,13 g/cm³ [DIN 53217]

**Vapour density** : Not available.

**Explosive properties** : No unusual hazard if involved in a fire.

**Oxidising properties** : Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

## 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** : The product is stable.

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

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : No specific data.

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

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity**

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| 2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bisoxirane | LD50 Dermal | Rabbit | 20 g/kg | - |
| 1,4-bis(2,3-epoxypropoxy) butane | LD50 Dermal | Rabbit | 1130 mg/kg | - |
| | LD50 Dermal | Rat | >2000 mg/kg | - |
| | LD50 Oral | Rat | 1134 mg/kg | - |
| | LD50 Oral | Rat | 1410 mg/kg | - |

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

**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) |
|---|---|---|---|---|---|
| Blackfriar Epoxy Floor Primer Activator | 9450,0 | 9416,7 | N/A | 91,7 | 12,5 |
| 2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)]bisoxirane | N/A | 20000 | N/A | N/A | N/A |
| 1,4-bis(2,3-epoxypropoxy)butane | 1134 | 1130 | N/A | 11 | 1,5 |

**Irritation/Corrosion**

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| 2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bisoxirane | Eyes - Severe irritant | Rabbit | - | 24 hours 2 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 500 milligrams | - |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | Skin - Erythema/Eschar | Rabbit | 0,7 | 4 hours | 72 hours |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 microliters | - |
| 1,4-bis(2,3-epoxypropoxy) butane | Eyes - Moderate irritant | Rabbit | - | 100 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 10 milligrams | - |

**Skin** : Causes skin irritation.

## SECTION 11: Toxicological information

**Eyes** : Causes serious eye damage.

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

**Respiratory or skin sensitization**

| Product/ingredient name | Route of exposure | Species | Result |
|---|---|---|---|
| 2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bisoxirane | skin | Guinea pig | Sensitising |
| | skin | Mouse | Sensitising |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | skin | Guinea pig | Sensitising |

**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 |
|---|---|---|---|
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | OECD 476 | Experiment: In vitro<br>Subject: Mammalian-Animal | Positive |
| | OECD 471 | Subject: Bacteria | Positive |
| | OECD 474 | Subject: Mammalian-Animal | Negative |

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

**Carcinogenicity**

**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 |
|---|---|---|---|---|---|---|
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | Negative | - | - | Rat | Oral: 540 mg/kg | - |

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

**Teratogenicity**

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| 2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bisoxirane | Positive - Dermal | Rabbit | 300 mg/kg | 1 days per week |
| | Positive - Oral | Rabbit | 180 mg/kg | 1 days per week |
| | Positive - Oral | Rat | 180 mg/kg | 1 days per week |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | Negative - Route of exposure unreported | Rabbit - Female | >300 mg/kg | - |
| | Positive - Dermal | Rabbit | 300 mg/kg | 6 hours; 7 days per week |
| | Positive - Dermal | Rabbit | 100 mg/kg | 6 hours; 7 days per week |

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

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

## SECTION 11: Toxicological information

Not available.

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye damage.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Causes skin irritation. May cause an allergic skin reaction.

**Ingestion** : No known significant effects or critical hazards.

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

**Eye contact** : Adverse symptoms may include the following:
pain
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

### 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

Not available.

**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.

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

**Other information** : Not available.

# SECTION 12: Ecological information

## 12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | Acute EC50 1,8 mg/l | Algae | 72 hours |
| | Acute EC50 2 mg/l | Daphnia spec. | 24 hours |
| | Acute EC50 1,6 mg/l | Daphnia spec. | 48 hours |
| | Acute IC50 >100 mg/l | Bacteria | 3 hours |
| | Acute LC50 0,55 mg/l | Fish | 96 hours |
| | Acute LC50 2 mg/l | Fish | 96 hours |
| | Chronic NOEC 0,3 mg/l | Daphnia spec. | 21 days |
| 1,4-bis(2,3-epoxypropoxy) butane | Acute EC50 75 mg/l | Daphnia spec. - *Daphnia magna* | 24 hours |
| | Acute LC50 24 mg/l | Fish - *Brachydanio rerio* | 96 hours |
| | Chronic NOEC 80 mg/l | Algae - Algae | 72 hours |

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

## 12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|---|---|---|---|
| 2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bisoxirane | OECD 301B | 6 to 12 % - Not readily - 28 days | - | - |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | OECD 301B | 16 % - Not readily - 28 days | - | - |
| | - | 0 % - Not readily - 28 days | - | - |

**Conclusion/Summary** : This product has not been tested for biodegradation.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|---|---|---|
| 2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bisoxirane | - | - | Not readily |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | - | - | Not readily |

## 12.3 Bioaccumulative potential

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| 2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bisoxirane | 3,84 | 3 to 31 | Low |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | 2,7 | 150 | Low |
| 1,4-bis(2,3-epoxypropoxy) butane | -0,269 | - | Low |

## 12.4 Mobility in soil

**Soil/water partition coefficient ($K_{OC}$)** : Not available.

**Mobility** : Nonvolatile liquid.

## SECTION 12: Ecological information

### 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 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.

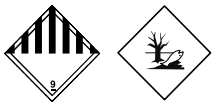
**Hazardous waste** : Yes.

**Waste catalogue**

| Waste code | Waste designation |
|---|---|
| 08 01 11* | waste paint and varnish containing organic solvents or other 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** | UN3082 | UN3082 | UN3082 | UN3082 |
| **14.2 UN proper shipping name** | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PAINT) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PAINT) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PAINT) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PAINT) |
| **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** | This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of | This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of | This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of | This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of |

## SECTION 14: Transport information

| | | | | |
|---|---|---|---|---|
| | 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.<br>**Hazard identification number** 90<br>**Limited quantity** 5L<br>**Special provisions** 274, 335, 375, 601<br>**Tunnel code** (-) | 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.<br>**Special provisions** 274, 335, 375, 601<br>**Remarks** : ≤ 5L: Limited Quantity | 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.<br>**Emergency schedules** F-A, S-F<br>**Special provisions** 274, 335, 375, 969<br>**Remarks** : ≤ 5L: Limited Quantity - IMDG 3.4 | 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.<br>**Quantity limitation** Passenger and Cargo Aircraft: 450 L. Packaging instructions: 964. Cargo Aircraft Only: 450 L. Packaging instructions: 964. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y964.<br>**Special provisions** A97, A158, A197, A215 |

**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 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

#### UK (GB)/REACH

##### Annex XIV - List of substances subject to authorisation

###### Annex XIV

None of the components are listed above the relevant limit.

##### Substances of very high concern

None of the components are listed above the relevant limit.

#### Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

| Product/ingredient name | % | Designation [Usage] |
|---|---|---|
| Blackfriar Epoxy Floor Primer Activator | ≥90 | 3 |

**Labelling** : 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 : 140g/l (2010.)
This product contains a maximum of 65 g/l VOC.

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

## SECTION 15: Regulatory information

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

**Ozone depleting substances**

Not listed.

**Prior Informed Consent (PIC)**

Not listed.

**Persistent Organic Pollutants**

Not listed.

**Seveso Directive**

This product is controlled under the Seveso Directive.

**Danger criteria**

| Category |
| --- |
| E2 |

**EU regulations**

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

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

**CN code** : 3208 90 91 00

**Inventory list**

**Australia** : All components are listed or exempted.

**Canada** : All components are listed or exempted.

**China** : All components are listed or exempted.

**Eurasian Economic Union** : **Russian Federation inventory**: Not determined.

**Japan** : **Japan inventory (CSCL)**: All components are listed or exempted.
**Japan inventory (ISHL)**: Not determined.

**New Zealand** : All components are listed or exempted.

**Philippines** : All components are listed or exempted.

**Republic of Korea** : All components are listed or exempted.

**Taiwan** : All components are listed or exempted.

## SECTION 15: Regulatory information

**Thailand** : Not determined.

**Turkey** : All components are listed or exempted.

**United States** : All components are active or exempted.

**Viet Nam** : Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments are still required.

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate
GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = GB 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**

| Classification | Justification |
|---|---|
| Skin Irrit. 2, H315 | Calculation method |
| Eye Dam. 1, H318 | Calculation method |
| Skin Sens. 1, H317 | Calculation method |
| Aquatic Chronic 2, H411 | Calculation method |

**Full text of abbreviated H statements**

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

**Full text of classifications**

| | |
|---|---|
| Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| 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 |
| Skin Irrit. 2 | SKIN CORROSION/IRRITATION - Category 2 |
| Skin Sens. 1 | SKIN SENSITISATION - Category 1 |
| Skin Sens. 1A | SKIN SENSITISATION - Category 1A |

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**Notice to reader**

## SECTION 16: Other information

**IMPORTANT NOTE: 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 information contained in this data sheet (as may be amended from time to time) is not intended to be exhaustive and is presented in good faith and believed to be correct as of the date on which it is prepared. It is the user's responsibility to verify that this data sheet is current prior to using the product to which it relates. Persons using the information must make their own determinations as to the suitability of the relevant product for their purposes prior to use. Where those purposes are other than as specifically recommended in this safety data sheet, then the user uses the product at their own risk.**

**MANUFACTURER'S DISCLAIMER: the conditions, methods and factors affecting the handling, storage, application, use and disposal of the product are not under the control and knowledge of the manufacturer. Therefore the manufacturer does not assume responsibility for any adverse events which may occur in the handling, storage, application, use, misuse or disposal of the product and, so far as permitted by applicable law, the manufacturer expressly disclaims liability for any and all loss, damages and/or expenses arising out of or in any way connected to the storage, handling, use or disposal of the product. Safe handling, storage, use and disposal are the responsibility of the users. Users must comply with all applicable health and safety laws.**

**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.**