

## Penguard Express CF Comp A

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

#### 1.1 Product identifier

|                                      |                              |
|--------------------------------------|------------------------------|
| <b>Product name</b>                  | : Penguard Express CF Comp A |
| <b>Product code</b>                  | : 29140                      |
| <b>Product description</b>           | : Paint.                     |
| <b>Product type</b>                  | : Liquid.                    |
| <b>Other means of identification</b> | : Not available.             |

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

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

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

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#### 1.4 Emergency telephone number

##### National Poison Information Center

- +90 224 442 82 93 Uludağ Üniversitesi Zehir Danışma Merkezi ([www.uludag.edu.tr/uludag/zehir.html](http://www.uludag.edu.tr/uludag/zehir.html))
- a. ACİL DURUM TELEFONU: Zehirlenme durumlarında gerektiğinde ulusal zehir merkezinin (UZEM) 114 nolu telefonunu arayınız.
- b. ACİL İLK YARDIM MERKEZİ:112
- c. İTFAİYE:110

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

##### Classification according to regulation SEA: RG.-10/12/2020-31330

Flam. Liq. 3, H226  
Skin Irrit. 2, H315  
Eye Dam. 1, H318  
Skin Sens. 1, H317  
Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation SEA: RG.-10/12/2020-31330.

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

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

#### 2.2 Label elements

## SECTION 2: Hazards identification

### Hazard pictograms



### Signal word

: Danger.

### Hazard statements

: H226 - Flammable liquid and vapour.  
 H315 - Causes skin irritation.  
 H317 - May cause an allergic skin reaction.  
 H318 - Causes serious eye damage.  
 H412 - Harmful to aquatic life with long lasting effects.

### Precautionary statements

#### General

: Not applicable.

#### Prevention

: P280 - Wear protective gloves. Wear eye or face protection.  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P273 - Avoid release to the environment.  
 P261 - Avoid breathing spray.

#### Response

: P362 + P364 - Take off contaminated clothing and wash it before reuse.  
 P302 + P352 - IF ON SKIN: Wash with plenty of water.  
 P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.  
 P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 Immediately call a POISON CENTER or doctor.

#### Storage

: Not applicable.

#### Disposal

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

### Hazardous ingredients

: 2,2-bis[4(2,3-epoksi)propoksi]fenil]-propan butan-1-ol  
 hydrocarbons, C9-unsaturated, polymerized  
 Phenol, methylstyrenated  
 Phenol, styrenated  
 2-Propenoic acid, reaction products with pentaerythritol hexamethylene diacrylate  
 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with butyl 2-propenoate, comps. with polyethylene glycol hydrogen maleate C9-11-alkyl ethers maleic anhydride

### Supplemental label elements

: Contains epoxy constituents. May produce an allergic reaction.

### Annex 17 - 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

: 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  | %         | SEA: RG.-10/12/2020-31330  | Type    |
|--|--|-----------|--|---------|
| 2,2-bis[4(2,3-epoksipropoksi)fenil]-propan               | EC: 216-823-5<br>CAS: 1675-54-3                          | ≥10 - ≤23 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1B, H317<br>Aquatic Chronic 2, H411  | [1]     |
| xylene   | EC: 215-535-7<br>CAS: 1330-20-7                          | ≤5        | Flam. Liq. 3, H226<br>Acute Tox. 4, H312<br>Acute Tox. 4, H332<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>STOT SE 3, H335<br>Asp. Tox. 1, H304<br>Aquatic Chronic 3, H412 | [1] [2] |
| butan-1-ol   | EC: 200-751-6<br>CAS: 71-36-3<br>Index:<br>603-004-00-6  | ≤5        | Flam. Liq. 3, H226<br>Acute Tox. 4, H302<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>STOT SE 3, H335<br>STOT SE 3, H336  | [1] [2] |
| benzyl alcohol   | EC: 202-859-9<br>CAS: 100-51-6<br>Index:<br>603-057-00-5 | ≤3        | Acute Tox. 4, H302<br>Acute Tox. 4, H332<br>Eye Irrit. 2, H319   | [1]     |
| 2-methoxy-1-methylethyl acetate                          | EC: 203-603-9<br>CAS: 108-65-6<br>Index:<br>607-195-00-7 | ≤3        | Flam. Liq. 3, H226<br>STOT SE 3, H336  | [1] [2] |
| hydrocarbons, C9-unsaturated, polymerized                | CAS: 71302-83-5  | ≤3        | Skin Sens. 1, H317<br>Aquatic Chronic 3, H412  | [1]     |
| ethylbenzene   | EC: 202-849-4<br>CAS: 100-41-4<br>Index:<br>601-023-00-4 | ≤3        | Flam. Liq. 2, H225<br>Acute Tox. 4, H332<br>STOT RE 2, H373 (hearing organs)<br>Asp. Tox. 1, H304<br>Aquatic Chronic 3, H412   | [1] [2] |
| Solvent naphtha (petroleum), light arom.                 | EC: 265-199-0<br>CAS: 64742-95-6                         | ≤1.7      | Flam. Liq. 3, H226<br>STOT SE 3, H335<br>STOT SE 3, H336<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411   | [1]     |
| Phenol, methylstyrenated                                 | EC: 270-966-8<br>CAS: 68512-30-1                         | <1        | Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Aquatic Chronic 3, H412   | [1]     |
| Phenol, styrenated                                       | EC: 262-975-0<br>CAS: 61788-44-1                         | <1        | Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Aquatic Chronic 2, H411   | [1]     |
| 2-Propenoic acid, reaction products with pentaerythritol | CAS:<br>1245638-61-2                                     | <1        | Acute Tox. 4, H302<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Skin Sens. 1B, H317<br>Aquatic Chronic 2, H411  | [1]     |
| hexamethylene diacrylate                                 | EC: 235-921-9<br>CAS: 13048-33-4                         | ≤0.3      | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319  | [1]     |

### SECTION 3: Composition/information on ingredients

|   |                                |      |  |         |
|---|--------------------------------|------|--|---------|
| 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with butyl 2-propenoate, comps. with polyethylene glycol hydrogen maleate C9-11-alkyl ethers | CAS: 1259547-09-5              | ≤0.3 | Skin Sens. 1, H317<br>Aquatic Chronic 3, H412<br><br>Skin Sens. 1, H317  | [1]     |
| maleic anhydride  | EC: 203-571-6<br>CAS: 108-31-6 | ≤0.1 | Acute Tox. 4, H302<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Resp. Sens. 1, H334<br>Skin Sens. 1A, H317<br>STOT RE 1, H372 (respiratory system) (inhalation)<br>STOT RE 2, H373<br><br><b>See Section 16 for the full text of the H statements declared above.</b> | [1] [2] |

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 or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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

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

## SECTION 4: First aid measures

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

#### 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.

#### Over-exposure signs/symptoms

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

### 4.3 Indication of any immediate medical attention and special treatment needed

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.  
**Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 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.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** : Flammable liquid and vapour. 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 harmful 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  
 halogenated compounds  
 carbonyl halides  
 metal oxide/oxides

### 5.3 Advice for firefighters

## SECTION 5: Firefighting measures

- 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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.

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

### 6.4 Reference to other sections

- : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. 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. 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,

## SECTION 7: Handling and storage

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.

### 7.2 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 oxidising 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

See Technical Data Sheet / packaging for further information.

### Regulation on the prevention of major industrial accidents and reduction of their effects - Reporting thresholds

#### Danger criteria

| Category | Notification and MAPP threshold | Safety report threshold |
|----------|---------------------------------|-------------------------|
| P5c      | 5000 tonne                      | 50000 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

| Product/ingredient name         | Exposure limit values  |
|---------------------------------|--|
| xylene                          | <b>TR ISGGM OEL (Turkey, 12/2013). [Xylene (pure and mixed isomers)] Absorbed through skin.</b><br>TWA: 221 mg/m <sup>3</sup> 8 hours.<br>TWA: 50 ppm 8 hours.<br>STEL: 442 mg/m <sup>3</sup> 15 minutes.<br>STEL: 100 ppm 15 minutes. |
| butan-1-ol                      | <b>ACGIH TLV (United States, 1/2023).</b><br>TWA: 20 ppm 8 hours.  |
| 2-methoxy-1-methylethyl acetate | <b>TR ISGGM OEL (Turkey, 12/2013). Absorbed through skin.</b><br>TWA: 275 mg/m <sup>3</sup> 8 hours.<br>TWA: 50 ppm 8 hours.<br>STEL: 550 mg/m <sup>3</sup> 15 minutes.<br>STEL: 100 ppm 15 minutes.                                   |
| ethylbenzene                    | <b>TR ISGGM OEL (Turkey, 12/2013). Absorbed through skin.</b><br>TWA: 442 mg/m <sup>3</sup> 8 hours.<br>TWA: 100 ppm 8 hours.<br>STEL: 884 mg/m <sup>3</sup> 15 minutes.<br>STEL: 200 ppm 15 minutes.                                  |
| maleic anhydride                | <b>ACGIH TLV (United States, 1/2023). Skin sensitiser. Inhalation sensitiser.</b><br>TWA: 0.01 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction and vapor   |

#### Biological exposure indices

**SECTION 8: Exposure controls/personal protection**

No exposure indices known.

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

**DNELs/DMELs**

| Product/ingredient name                                  | Type | Exposure              | Value               | Population         | Effects  |
|--|------|-----------------------|---------------------|--------------------|----------|
| 2,2-bis[4(2,3-epoksipropoksi)fenil]-propan<br><br>xylene | DNEL | Long term Dermal      | 89.3 µg/kg bw/day   | General population | Systemic |
|  | DNEL | Long term Oral        | 0.5 mg/kg bw/day    | General population | Systemic |
|  | DNEL | Long term Dermal      | 0.75 mg/kg bw/day   | Workers            | Systemic |
|  | DNEL | Long term Inhalation  | 0.87 mg/m³          | General population | Systemic |
|  | DNEL | Long term Inhalation  | 4.93 mg/m³          | Workers            | Systemic |
|  | DNEL | Long term Oral        | 12.5 mg/kg bw/day   | General population | Systemic |
|  | DNEL | Long term Inhalation  | 65.3 mg/m³          | General population | Local    |
|  | DNEL | Long term Inhalation  | 65.3 mg/m³          | General population | Systemic |
|  | DNEL | Long term Dermal      | 125 mg/kg bw/day    | General population | Systemic |
|  | DNEL | Long term Dermal      | 212 mg/kg bw/day    | Workers            | Systemic |
|  | DNEL | Long term Inhalation  | 221 mg/m³           | Workers            | Local    |
|  | DNEL | Long term Inhalation  | 221 mg/m³           | Workers            | Systemic |
|  | DNEL | Short term Inhalation | 260 mg/m³           | General population | Local    |
|  | DNEL | Short term Inhalation | 260 mg/m³           | General population | Systemic |
| butan-1-ol   | DNEL | Short term Inhalation | 442 mg/m³           | Workers            | Local    |
|  | DNEL | Short term Inhalation | 442 mg/m³           | Workers            | Systemic |
|  | DNEL | Long term Oral        | 1.5625 mg/kg bw/day | General population | Systemic |
|  | DNEL | Long term Dermal      | 3.125 mg/kg bw/day  | General population | Systemic |
|  | DNEL | Long term Inhalation  | 55.357 mg/m³        | General population | Systemic |
| benzyl alcohol   | DNEL | Long term Inhalation  | 155 mg/m³           | General population | Local    |
|  | DNEL | Long term Inhalation  | 310 mg/m³           | Workers            | Local    |
|  | DNEL | Long term Oral        | 4 mg/kg bw/day      | General population | Systemic |
|  | DNEL | Long term Dermal      | 4 mg/kg bw/day      | General population | Systemic |
|  | DNEL | Long term Inhalation  | 5.4 mg/m³           | General population | Systemic |
|  | DNEL | Long term Dermal      | 8 mg/kg             | Workers            | Systemic |



**SECTION 8: Exposure controls/personal protection**

|                                 |   |                       |                                  |                                   |                    |          |
|---------------------------------|---|-----------------------|----------------------------------|-----------------------------------|--------------------|----------|
| 2-methoxy-1-methylethyl acetate | DNEL                                      | Short term Oral       | bw/day<br>20 mg/kg               | General population                | Systemic           |          |
|                                 | DNEL                                      | Short term Dermal     | bw/day<br>20 mg/kg               | General population                | Systemic           |          |
|                                 | DNEL                                      | Long term Inhalation  | bw/day<br>22 mg/m <sup>3</sup>   | Workers                           | Systemic           |          |
|                                 | DNEL                                      | Short term Inhalation | 27 mg/m <sup>3</sup>             | General population                | Systemic           |          |
|                                 | DNEL                                      | Short term Dermal     | 40 mg/kg                         | Workers                           | Systemic           |          |
|                                 | DNEL                                      | Short term Inhalation | bw/day<br>110 mg/m <sup>3</sup>  | Workers                           | Systemic           |          |
|                                 | DNEL                                      | Long term Dermal      | 153.5 mg/kg                      | Workers                           | Systemic           |          |
|                                 | DNEL                                      | Long term Inhalation  | bw/day<br>275 mg/m <sup>3</sup>  | Workers                           | Systemic           |          |
|                                 | DNEL                                      | Long term Dermal      | 54.8 mg/kg                       | General population                | Systemic           |          |
|                                 | DNEL                                      | Long term Inhalation  | bw/day<br>33 mg/m <sup>3</sup>   | [Consumers]<br>General population | Systemic           |          |
|                                 | DNEL                                      | Long term Oral        | 1.67 mg/kg                       | General population                | Systemic           |          |
|                                 | DNEL                                      | Long term Inhalation  | bw/day<br>33 mg/m <sup>3</sup>   | [Consumers]<br>General population | Local              |          |
|                                 | DNEL                                      | Long term Inhalation  | 33 mg/m <sup>3</sup>             | General population                | Systemic           |          |
|                                 | DNEL                                      | Long term Oral        | 36 mg/kg                         | General population                | Systemic           |          |
|                                 | hydrocarbons, C9-unsaturated, polymerized | DNEL                  | Long term Inhalation             | bw/day<br>275 mg/m <sup>3</sup>   | Workers            | Systemic |
| DNEL                            |   | Long term Dermal      | 320 mg/kg                        | General population                | Systemic           |          |
| DNEL                            |   | Short term Inhalation | bw/day<br>550 mg/m <sup>3</sup>  | Workers                           | Local              |          |
| DNEL                            |   | Long term Dermal      | 796 mg/kg                        | Workers                           | Systemic           |          |
| DNEL                            |   | Long term Dermal      | bw/day<br>3.5 mg/kg              | Workers                           | Systemic           |          |
| DNEL                            |   | Long term Inhalation  | bw/day<br>1.41 mg/m <sup>3</sup> | Workers                           | Systemic           |          |
| ethylbenzene                    |   | DMEL                  | Long term Inhalation             | 442 mg/m <sup>3</sup>             | Workers            | Local    |
|                                 |   | DMEL                  | Short term Inhalation            | 884 mg/m <sup>3</sup>             | Workers            | Systemic |
|                                 |   | DNEL                  | Long term Oral                   | 1.6 mg/kg                         | General population | Systemic |
|                                 |   | DNEL                  | Long term Inhalation             | bw/day<br>15 mg/m <sup>3</sup>    | General population | Systemic |
|                                 | DNEL                                      | Long term Inhalation  | 77 mg/m <sup>3</sup>             | Workers                           | Systemic           |          |
|                                 | DNEL                                      | Long term Dermal      | 180 mg/kg                        | Workers                           | Systemic           |          |
|                                 | DNEL                                      | Short term Inhalation | bw/day<br>293 mg/m <sup>3</sup>  | Workers                           | Local              |          |
|                                 | Solvent naphtha (petroleum), light arom.  | DNEL                  | Long term Dermal                 | 12.5 mg/kg                        | Workers            | Systemic |
|                                 |   | DNEL                  | Long term Inhalation             | bw/day<br>151 mg/m <sup>3</sup>   | Workers            | Systemic |
|                                 |   | DNEL                  | Long term Dermal                 | 7.5 mg/kg                         | General population | Systemic |

**SECTION 8: Exposure controls/personal protection**

|                          |                   |                      |                         |                                   |          |
|--------------------------|-------------------|----------------------|-------------------------|-----------------------------------|----------|
| Phenol, methylstyrenated | DNEL              | Long term Inhalation | 32 mg/m <sup>3</sup>    | [Consumers]<br>General population | Systemic |
|                          | DNEL              | Long term Oral       | 7.5 mg/kg bw/day        | [Consumers]<br>General population | Systemic |
|                          | DNEL              | Long term Dermal     | 16.4 mg/kg bw/day       | [Consumers]<br>Workers            | Systemic |
|                          | DNEL              | Long term Inhalation | 57 mg/m <sup>3</sup>    | General population                | Systemic |
|                          | DNEL              | Long term Dermal     | 8 mg/kg bw/day          | [Consumers]<br>General population | Systemic |
|                          | DNEL              | Long term Inhalation | 28 mg/m <sup>3</sup>    | [Consumers]<br>General population | Systemic |
|                          | DNEL              | Long term Oral       | 4 mg/kg bw/day          | [Consumers]<br>General population | Systemic |
|                          | DNEL              | Long term Oral       | 0.2 mg/kg bw/day        | [Consumers]<br>General population | Systemic |
|                          | DNEL              | Long term Inhalation | 0.348 mg/m <sup>3</sup> | General population                | Systemic |
|                          | DNEL              | Long term Inhalation | 1.41 mg/m <sup>3</sup>  | Workers                           | Systemic |
| Phenol, styrenated       | DNEL              | Long term Dermal     | 1.67 mg/kg bw/day       | General population                | Systemic |
|                          | DNEL              | Long term Dermal     | 3.5 mg/kg bw/day        | Workers                           | Systemic |
|                          | DNEL              | Long term Oral       | 0.75 mg/kg bw/day       | General population                | Systemic |
|                          | DNEL              | Long term Dermal     | 0.75 mg/kg bw/day       | General population                | Systemic |
|                          | DNEL              | Long term Inhalation | 1.31 mg/m <sup>3</sup>  | General population                | Systemic |
|                          | DNEL              | Long term Dermal     | 2.1 mg/kg bw/day        | Workers                           | Systemic |
| hexamethylene diacrylate | DNEL              | Long term Inhalation | 7.4 mg/m <sup>3</sup>   | Workers                           | Systemic |
|                          | DNEL              | Long term Dermal     | 1.66 mg/kg bw/day       | General population                | Systemic |
|                          | DNEL              | Long term Oral       | 2.1 mg/kg bw/day        | General population                | Systemic |
|                          | DNEL              | Long term Dermal     | 2.77 mg/kg bw/day       | Workers                           | Systemic |
| maleic anhydride         | DNEL              | Long term Inhalation | 7.2 mg/m <sup>3</sup>   | General population                | Systemic |
|                          | DNEL              | Long term Inhalation | 24.5 mg/m <sup>3</sup>  | Workers                           | Systemic |
|                          | DNEL              | Long term Inhalation | 0.05 mg/m <sup>3</sup>  | General population                | Systemic |
|                          | DNEL              | Long term Oral       | 0.06 mg/kg bw/day       | General population                | Systemic |
|                          | DNEL              | Long term Inhalation | 0.08 mg/m <sup>3</sup>  | General population                | Local    |
|                          | DNEL              | Long term Inhalation | 0.081 mg/m <sup>3</sup> | Workers                           | Local    |
|                          | DNEL              | Long term Inhalation | 0.081 mg/m <sup>3</sup> | Workers                           | Systemic |
|                          | DNEL              | Short term Oral      | 0.1 mg/kg bw/day        | General population                | Systemic |
| DNEL                     | Short term Dermal | 0.1 mg/kg            | General                 | Systemic                          |          |

**SECTION 8: Exposure controls/personal protection**

|  |      |                       |                                 |                                  |          |
|--|------|-----------------------|---------------------------------|----------------------------------|----------|
|  | DNEL | Long term Dermal      | bw/day<br>0.1 mg/kg             | population<br>General population | Systemic |
|  | DNEL | Short term Dermal     | bw/day<br>0.2 mg/kg             | Workers                          | Systemic |
|  | DNEL | Long term Dermal      | bw/day<br>0.2 mg/kg             | Workers                          | Systemic |
|  | DNEL | Short term Inhalation | bw/day<br>0.2 mg/m <sup>3</sup> | Workers                          | Local    |
|  | DNEL | Short term Inhalation | 0.2 mg/m <sup>3</sup>           | Workers                          | Systemic |

**PNECs**

| Product/ingredient name                    | Compartment Detail     | Value            | Method Detail |
|--|------------------------|------------------|---------------|
| 2,2-bis[4(2,3-epoksipropoksi)fenil]-propan | Fresh water            | 0.006 mg/l       | -             |
|  | Marine                 | 0.0006 mg/l      | -             |
|  | Sewage Treatment Plant | 10 mg/l          | -             |
|  | Fresh water sediment   | 0.996 mg/l       | -             |
|  | Marine water sediment  | 0.0996 mg/l      | -             |
|  | Soil                   | 0.196 mg/l       | -             |
| xylene                                     | Fresh water            | 0.327 mg/l       | -             |
|  | Marine                 | 0.327 mg/l       | -             |
|  | Sewage Treatment Plant | 6.58 mg/l        | -             |
|  | Fresh water sediment   | 12.46 mg/kg dwt  | -             |
|  | Marine water sediment  | 12.46 mg/kg dwt  | -             |
|  | Soil                   | 2.31 mg/kg dwt   | -             |
| butan-1-ol                                 | Fresh water            | 0.082 mg/l       | -             |
|  | Marine                 | 0.0082 mg/l      | -             |
|  | Sewage Treatment Plant | 2476 mg/l        | -             |
|  | Fresh water sediment   | 0.178 mg/kg dwt  | -             |
|  | Marine water sediment  | 0.0178 mg/kg dwt | -             |
|  | Soil                   | 0.015 mg/kg dwt  | -             |
| benzyl alcohol                             | Fresh water            | 1 mg/l           | -             |
|  | Marine                 | 0.1 mg/l         | -             |
|  | Sewage Treatment Plant | 39 mg/l          | -             |
|  | Fresh water sediment   | 5.27 mg/kg dwt   | -             |
|  | Marine water sediment  | 0.527 mg/kg dwt  | -             |
|  | Soil                   | 0.456 mg/kg dwt  | -             |
| 2-methoxy-1-methylethyl acetate            | Fresh water            | 0.635 mg/l       | -             |
|  | Marine                 | 0.0635 mg/l      | -             |
|  | Sewage Treatment Plant | 100 mg/l         | -             |
|  | Fresh water sediment   | 3.29 mg/kg dwt   | -             |
|  | Marine water sediment  | 0.329 mg/kg dwt  | -             |
|  | Soil                   | 0.29 mg/kg dwt   | -             |
| hydrocarbons, C9-unsaturated, polymerized  | Fresh water            | 54 µg/l          | -             |
|  | Marine                 | 5.4 µg/l         | -             |
|  | Sewage Treatment Plant | 2.2 mg/l         | -             |
|  | Fresh water sediment   | 1584 mg/kg dwt   | -             |
|  | Marine water sediment  | 158 mg/kg dwt    | -             |
|  | Soil                   | 316.7 mg/kg dwt  | -             |
| ethylbenzene                               | Secondary Poisoning    | 200 mg/kg        | -             |
|  | Fresh water            | 0.1 mg/l         | -             |
|  | Marine                 | 0.01 mg/l        | -             |
|  | Sewage Treatment Plant | 9.6 mg/l         | -             |
|  | Fresh water sediment   | 13.7 mg/kg dwt   | -             |
|  | Soil                   | 2.68 mg/kg dwt   | -             |

## SECTION 8: Exposure controls/personal protection

|                          |                        |                |   |
|--------------------------|------------------------|----------------|---|
| Phenol, methylstyrenated | Secondary Poisoning    | 20 mg/kg       | - |
|                          | Fresh water            | 14 µg/l        | - |
|                          | Marine                 | 1.4 µg/l       | - |
|                          | Sewage Treatment Plant | 2.4 mg/l       | - |
|                          | Fresh water sediment   | 52.9 mg/kg dwt | - |
|                          | Marine water sediment  | 5.3 mg/kg dwt  | - |
|                          | Soil                   | 10.5 mg/kg dwt | - |

### 8.2 Exposure controls

#### Appropriate engineering controls

: 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, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

#### Individual protection measures

##### Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

##### Eye/face protection

: Safety eyewear complying to ISO 16321-1:2022 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

#### Skin protection

##### Hand protection

: There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. The breakthrough time must be greater than the end use time of the product. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

**W**ear suitable gloves tested to ISO 374-1:2016.

May be used, gloves(breakthrough time) 4 - 8 hours: neoprene (> 0.35 mm), butyl rubber (> 0.4 mm), PVC (> 0.5 mm)

Recommended, gloves(breakthrough time) > 8 hours: Teflon (> 0.35 mm), 4H/ Silver Shield® (> 0.07 mm), polyvinyl alcohol (PVA) (> 0.3 mm), nitrile rubber (> 0.75 mm), Viton® (> 0.7 mm)

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

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

## SECTION 8: Exposure controls/personal protection

- 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. 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. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- 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

#### Appearance

- Physical state** : Liquid.
- Colour** : Black, Blue., Green., Grey, MCI Base 1, MCI Base 3, Off-white., Red, White., Yellow.
- Odour** : Characteristic.
- Odour threshold** : Not applicable.
- Melting point/freezing point** : Not applicable.
- Initial boiling point and boiling range** : Lowest known value: 119°C (246.2°F) (butan-1-ol). Weighted average: 230.17°C (446.3°F)
- Flammability (solid, gas)** : Not applicable.
- Upper/lower flammability or explosive limits** : 0.8 - 13%
- Flash point** : Closed cup: 29°C (84.2°F)
- Auto-ignition temperature** : Lowest known value: 333°C (631.4°F) (2-methoxy-1-methylethyl acetate).
- Decomposition temperature** : Not available.
- pH** : Not applicable.
- Viscosity** : Not available.
- Solubility(ies)** :

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

- Partition coefficient: n-octanol/ water** : Not available.
- Vapour pressure** : Highest known value: 1.2 kPa (9.3 mm Hg) (at 20°C) (ethylbenzene). Weighted average: 0.27 kPa (2.03 mm Hg) (at 20°C)  
Highest known value: 0.84 (ethylbenzene) Weighted average: 0.5 compared with butyl acetate
- Density** : 1.543 to 1.678 g/cm<sup>3</sup>
- Vapour density** : Highest known value: 11.7 (Air = 1) (epoxy resin (MW ≤ 700)). Weighted average: 8.43 (Air = 1)
- Explosive properties** : Not available.

**SECTION 9: Physical and chemical properties****Oxidising properties** : Not available.**Particle characteristics****Median particle size** : Not applicable.**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity****10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.**10.2 Chemical stability** : 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** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.**10.5 Incompatible materials** : Reactive or incompatible with the following materials:  
oxidising materials**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.**Shelf life at 23 °C** : 24 month(s)**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

| Product/ingredient name                            | Result                  | Species    | Dose        | Exposure |
|--|-------------------------|------------|-------------|----------|
| 2,2-bis[4<br>(2,3-epoksipropoksi)fenil]-<br>propan | LD50 Dermal             | Rabbit     | 20 g/kg     | -        |
| xylene   | LD50 Oral               | Mouse      | 15600 mg/kg | -        |
|  | LC50 Inhalation Vapour  | Rat        | 20 mg/l     | 4 hours  |
|  | LD50 Oral               | Rat        | 4300 mg/kg  | -        |
| butan-1-ol   | TDL <sub>o</sub> Dermal | Rabbit     | 4300 mg/kg  | -        |
|  | LD50 Oral               | Rat        | 790 mg/kg   | -        |
| benzyl alcohol                                     | LD50 Oral               | Rat        | 1230 mg/kg  | -        |
| 2-methoxy-1-methylethyl<br>acetate                 | LD50 Dermal             | Rabbit     | >5 g/kg     | -        |
| hydrocarbons,<br>C9-unsaturated,<br>polymerized    | LD50 Oral               | Rat        | 8532 mg/kg  | -        |
|  | LD50 Dermal             | Rat        | 2000 mg/kg  | -        |
| ethylbenzene                                       | LD50 Oral               | Rat        | 2000 mg/kg  | -        |
|  | LC50 Inhalation Vapour  | Rat - Male | 17.8 mg/l   | 4 hours  |
|  | LD50 Dermal             | Rabbit     | >5000 mg/kg | -        |
| Phenol, styrenated                                 | LD50 Oral               | Rat        | 3500 mg/kg  | -        |
|  | LD50 Dermal             | Rabbit     | >5010 mg/kg | -        |
| hexamethylene diacrylate                           | LD50 Oral               | Rat        | 2500 mg/kg  | -        |
|  | LD50 Oral               | Rat        | 5 g/kg      | -        |
| maleic anhydride                                   | LD50 Oral               | Rat        | 400 mg/kg   | -        |

**Conclusion/Summary** : Not available.**Acute toxicity estimates**

**SECTION 11: Toxicological information**

| Product/ingredient name                                  | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|--|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| Penguard Express CF Comp A                               | 12387.7      | 23060.8        | N/A                      | 305.0                       | 60.0                                |
| xylene   | 4300         | 1100           | N/A                      | 20                          | N/A                                 |
| butan-1-ol   | 500          | N/A            | N/A                      | N/A                         | N/A                                 |
| benzyl alcohol   | 1230         | N/A            | N/A                      | N/A                         | 1.5                                 |
| 2-methoxy-1-methylethyl acetate                          | 8532         | N/A            | N/A                      | N/A                         | N/A                                 |
| ethylbenzene   | 3500         | N/A            | N/A                      | 17.8                        | N/A                                 |
| Phenol, styrenated                                       | 2500         | N/A            | N/A                      | N/A                         | N/A                                 |
| 2-Propenoic acid, reaction products with pentaerythritol | 500          | N/A            | N/A                      | N/A                         | N/A                                 |
| hexane-1,6-diol diacrylate                               | 5000         | N/A            | N/A                      | N/A                         | N/A                                 |
| maleic anhydride   | 400          | N/A            | N/A                      | N/A                         | N/A                                 |

**Irritation/Corrosion**

| Product/ingredient name                                  | Result                 | Species                      | Score | Exposure               | Observation |
|--|------------------------|------------------------------|-------|------------------------|-------------|
| 2,2-bis[4(2,3-epoksi)propoksi]fenil]propan               | Eyes - Severe irritant | Rabbit                       | -     | 24 hours 2 milligrams  | -           |
|  | Skin - Mild irritant   | Rabbit                       | -     | 500 milligrams         | -           |
| xylene   | Eyes - Mild irritant   | Rabbit                       | -     | 87 milligrams          | -           |
|  | Skin - Mild irritant   | Rat                          | -     | 8 hours 60 microliters | -           |
| benzyl alcohol   | Eyes - Mild irritant   | Mammal - species unspecified | -     | -                      | -           |
| Phenol, methylstyrenated                                 | Skin - Mild irritant   | Mammal - species unspecified | -     | -                      | -           |
| Phenol, styrenated                                       | Eyes - Mild irritant   | Rabbit                       | -     | 0.1 Milliliters        | -           |
|  | Skin - Mild irritant   | Mammal - species unspecified | -     | -                      | -           |
| 2-Propenoic acid, reaction products with pentaerythritol | Skin - Mild irritant   | Rabbit                       | -     | 0.5 Milliliters        | -           |
|  | Eyes - Irritant        | Mammal - species unspecified | -     | -                      | -           |
|  | Skin - Mild irritant   | Mammal - species unspecified | -     | -                      | -           |
| hexamethylene diacrylate                                 | Eyes - Mild irritant   | Mammal - species unspecified | -     | -                      | -           |
|  | Skin - Mild irritant   | Mammal - species unspecified | -     | -                      | -           |
| maleic anhydride   | Eyes - Severe irritant | Rabbit                       | -     | 1 Percent              | -           |

**Conclusion/Summary** : Not available.

**Sensitisation**

| Product/ingredient name                    | Route of exposure | Species                      | Result      |
|--|-------------------|------------------------------|-------------|
| 2,2-bis[4(2,3-epoksi)propoksi]fenil]propan | skin              | Mammal - species unspecified | Sensitising |
|  | skin              | Mouse                        | Sensitising |
| hydrocarbons, C9-unsaturated, polymerized  | skin              | Mammal - species unspecified | Sensitising |
| Phenol, methylstyrenated                   | skin              | Mammal - species unspecified | Sensitising |
| Phenol, styrenated                         | skin              | Mammal - species unspecified | Sensitising |

**SECTION 11: Toxicological information**

|  |      |   |             |
|--|------|---|-------------|
| 2-Propenoic acid, reaction products with pentaerythritol hexamethylene diacrylate  | skin | unspecified<br>Mammal - species unspecified | Sensitising |
|  | skin | unspecified<br>Mammal - species unspecified | Sensitising |
| 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with butyl 2-propenoate, comps. with polyethylene glycol hydrogen maleate C9-11-alkyl ethers maleic anhydride | skin | unspecified<br>Mammal - species unspecified | Sensitising |

**Conclusion/Summary** : Not available.

**Mutagenicity**

**Conclusion/Summary** : Not available.

**Carcinogenicity**

**Conclusion/Summary** : Not available.

**Reproductive toxicity**

**Conclusion/Summary** : Not available.

**Teratogenicity**

**Conclusion/Summary** : Not available.

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

| Product/ingredient name                  | Category   | Route of exposure | Target organs                                    |
|--|------------|-------------------|--|
| xylene                                   | Category 3 | -                 | Respiratory tract irritation                     |
| butan-1-ol                               | Category 3 | -                 | Respiratory tract irritation                     |
| 2-methoxy-1-methylethyl acetate          | Category 3 | -                 | Narcotic effects                                 |
| Solvent naphtha (petroleum), light arom. | Category 3 | -                 | Narcotic effects<br>Respiratory tract irritation |
|  | Category 3 | -                 | Narcotic effects                                 |

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

| Product/ingredient name | Category   | Route of exposure | Target organs      |
|-------------------------|------------|-------------------|--------------------|
| ethylbenzene            | Category 2 | -                 | hearing organs     |
| maleic anhydride        | Category 1 | inhalation        | respiratory system |
|                         | Category 2 |                   |                    |

**Aspiration hazard**

| Product/ingredient name                  | Result                         |
|--|--------------------------------|
| xylene                                   | ASPIRATION HAZARD - Category 1 |
| ethylbenzene                             | ASPIRATION HAZARD - Category 1 |
| Solvent naphtha (petroleum), light arom. | ASPIRATION HAZARD - Category 1 |

**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.



## SECTION 11: Toxicological information

### 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** : Not available.
- 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 |
|--|-----------------------------------|----------------------------------|----------|
| 2,2-bis[4(2,3-epoksipropoksi)fenil]-propan | Acute EC50 1.4 mg/l               | Daphnia                          | 48 hours |
|  | Acute LC50 3.1 mg/l               | Fish - pimephales promelas       | 96 hours |
| xylene                                     | Chronic NOEC 0.3 mg/l             | Fish                             | 21 days  |
|  | Acute LC50 8500 µg/l Marine water | Crustaceans - Palaemonetes pugio | 48 hours |
| ethylbenzene                               | Acute LC50 13400 µg/l Fresh water | Fish - Pimephales promelas       | 96 hours |
|  | Acute EC50 7700 µg/l Marine water | Algae - Skeletonema costatum     | 96 hours |
| Solvent naphtha (petroleum), light arom.   | Acute EC50 2.93 mg/l              | Daphnia                          | 48 hours |
|  | Acute LC50 4.2 mg/l               | Fish                             | 96 hours |
| Phenol, styrenated                         | Acute EC50 <10 mg/l               | Daphnia                          | 48 hours |
|  | Acute LC50 <10 mg/l               | Algae                            | 72 hours |
| maleic anhydride                           | Acute EC50 100 mg/l               | Fish                             | 96 hours |
|  | Acute EC50 54 mg/l                | Algae                            | 72 hours |
|  | Acute LC50 25.8 mg/l              | Daphnia                          | 48 hours |
|  | Acute LC50 230 ppm Fresh water    | Fish                             | 96 hours |
|  |                                   | Fish - Gambusia affinis - Adult  | 96 hours |

**SECTION 12: Ecological information**

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

**12.2 Persistence and degradability**

**Conclusion/Summary** : Not available.

| Product/ingredient name                           | Aquatic half-life | Photolysis | Biodegradability |
|---|-------------------|------------|------------------|
| 2,2-bis[4(2,3-epoksipropoksi)fenil]-propan xylene | -                 | -          | Not readily      |
| benzyl alcohol                                    | -                 | -          | Readily          |
| ethylbenzene                                      | -                 | -          | Readily          |
| Solvent naphtha (petroleum), light arom.          | -                 | -          | Not readily      |

**12.3 Bioaccumulative potential**

| Product/ingredient name   | LogP <sub>ow</sub> | BCF         | Potential |
|---|--------------------|-------------|-----------|
| 2,2-bis[4(2,3-epoksipropoksi)fenil]-propan xylene                                 | 2.64 to 3.78       | 31          | low       |
| butan-1-ol  | 3.12               | 8.1 to 25.9 | low       |
| benzyl alcohol  | 1                  | -           | low       |
| 2-methoxy-1-methylethyl acetate   | 0.87               | <100        | low       |
| hydrocarbons, C9-unsaturated, polymerized ethylbenzene                            | 1.2                | -           | low       |
| Solvent naphtha (petroleum), light arom.  | 3.627              | -           | low       |
| Phenol, methylstyrenated  | 3.6                | -           | low       |
| 2-Propenoic acid, reaction products with pentaerythritol hexamethylene diacrylate | -                  | 10 to 2500  | high      |
| maleic anhydride  | 3.627              | -           | low       |
|   | 1.45               | -           | low       |
|   | 2.81               | -           | low       |
|   | -2.78              | -           | low       |

**12.4 Mobility in soil**

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

**Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

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

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

**SECTION 13: Disposal considerations**

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

**13.1 Waste treatment methods****Product**

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

## SECTION 13: Disposal considerations

**Hazardous waste** : Yes.

### Waste list





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

### Packaging

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

**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. Vapour 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 spill material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

|  | ADR/RID  | ADN  | IMDG  | IATA   |
|--|--|--|---|--|
| <b>14.1 UN number</b>                  | UN1263   | UN1263   | UN1263  | UN1263   |
| <b>14.2 UN proper shipping name</b>    | Paint  | Paint  | Paint   | Paint  |
| <b>14.3 Transport hazard class(es)</b> | 3<br> | 3<br> | 3<br> | 3<br> |
| <b>14.4 Packing group</b>              | III  | III  | III   | III  |
| <b>14.5 Environmental hazards</b>      | No.  | Yes.   | No.   | No.  |

### Additional information

**ADR/RID** : **Hazard identification number** 30  
**Tunnel code** (D/E)  
 ADR/RID: Viscous substance. Not goods of class 3, ref. 2.2.3.1.5 (only applicable to receptacles < 450 litre capacity).

**ADN** : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.

**IMDG** : **Emergency schedules** F-E, S-E  
 IMDG: Viscous substance. Transport in accordance with 2.3.2.5 of the IMDG Code (only applicable to receptacles < 450 litre capacity).

**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

#### Turkey Regulation No. 30105, KKDIK

##### Annex 14 - List of substances subject to authorization

###### Annex 14

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

**Annex 17 - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

#### Ozone depleting substances

Not listed.

#### Regulation on the prevention of major industrial accidents and reduction of their effects

This product is controlled under the Regulation on the prevention of major industrial accidents and reduction of their effects.

##### Danger criteria

| Category |
|----------|
| P5c      |

#### EU regulations

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

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

###### Annex XIV

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

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

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

Not listed.

##### Persistent Organic Pollutants

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.

## SECTION 15: Regulatory information

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### 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  
 EUH statement = SEA-specific Hazard statement  
 N/A = Not available  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 SGG = Segregation Group  
 vPvB = Very Persistent and Very Bioaccumulative

### Procedure used to derive the classification according to regulation SEA: RG.-10/12/2020-31330

| Classification   | Justification   |
|--|---|
| Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317<br>Aquatic Chronic 3, H412 | On basis of test data<br>Calculation method<br>Calculation method<br>Calculation method<br>Calculation method |

### Full text of abbreviated H statements

|      |  |
|------|--|
| H225 | Highly flammable liquid and vapour.  |
| H226 | Flammable liquid and vapour.   |
| H302 | Harmful if swallowed.  |
| H304 | May be fatal if swallowed and enters airways.                              |
| H312 | Harmful in contact with skin.  |
| H314 | Causes severe skin burns and eye damage.                                   |
| H315 | Causes skin irritation.  |
| H317 | May cause an allergic skin reaction.                                       |
| H318 | Causes serious eye damage.   |
| H319 | Causes serious eye irritation.   |
| H332 | Harmful if inhaled.  |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335 | May cause respiratory irritation.  |
| H336 | May cause drowsiness or dizziness.   |
| H372 | Causes damage to organs through prolonged or repeated exposure.            |
| H373 | May cause damage to organs through prolonged or repeated exposure.         |
| H411 | Toxic to aquatic life with long lasting effects.                           |
| H412 | Harmful to aquatic life with long lasting effects.                         |

### Full text of classifications [SEA/GHS]

|                   |   |
|-------------------|---|
| 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                 |
| Asp. Tox. 1       | ASPIRATION HAZARD - Category 1                                  |
| Eye Dam. 1        | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1                  |
| Eye Irrit. 2      | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2                  |
| Flam. Liq. 2      | FLAMMABLE LIQUIDS - Category 2                                  |
| Flam. Liq. 3      | FLAMMABLE LIQUIDS - Category 3                                  |
| Resp. Sens. 1     | RESPIRATORY SENSITISATION - Category 1                          |
| Skin Corr. 1B     | SKIN CORROSION/IRRITATION - Category 1B                         |
| Skin Irrit. 2     | SKIN CORROSION/IRRITATION - Category 2                          |
| Skin Sens. 1      | SKIN SENSITISATION - Category 1                                 |
| Skin Sens. 1A     | SKIN SENSITISATION - Category 1A                                |
| Skin Sens. 1B     | SKIN SENSITISATION - Category 1B                                |
| STOT RE 1         | SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1 |
| STOT RE 2         | SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 |

## SECTION 16: Other information

STOT SE 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.