**RAPTOR EPOXY PRIMER HARDENER**

**Safety Data Sheet**

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SDS Ref. (EU): REP/1

Date of issue: 12/01/2017  Revision date: 28/11/2018  Supersedes: 12/01/2017  Version: 1.1

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

**1.1. Product identifier**

Product form: Mixture

Trade name: RAPTOR EPOXY PRIMER HARDENER

Product code: REP/1LK, REP/5LK, RC/EP5LK

Product group: Epoxy hardener

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

**1.2.1. Relevant identified uses**

Industrial/Professional use spec: For professional use only

Function or use category: Hardener (Crosslinker)

**1.2.2. Uses advised against**

No additional information available

**1.3. Details of the supplier of the safety data sheet**

U-POL LIMITED

Denington Road, Wellingborough

Northants. NN8 2QH - UK

T +44 (0) 1933 230310

technical.department@u-pol.com - www.u-pol.com

**1.4. Emergency telephone number**

Emergency number: CHEMTREC - +44 (0) 870 8200418 (24 hrs)

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**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

<table>
<thead>
<tr>
<th>Country</th>
<th>Organisation/Company</th>
<th>Address</th>
<th>Emergency number</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td>National Poisons Information Centre Beaumont Hospital</td>
<td>PO Box 1297 Beaumont Road 9 Dublin</td>
<td>+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)</td>
<td>In Northern Ireland, contact your local GP or pharmacist during normal hours (<a href="http://www.gpoutofhours.hscni.net">www.gpoutofhours.hscni.net</a>)</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>NHS England, Scotland &amp; Wales</td>
<td>-</td>
<td>Call 111 or a Doctor</td>
<td></td>
</tr>
</tbody>
</table>

**Adverse physicochemical, human health and environmental effects**

Flammable liquid and vapour. May cause damage to organs through prolonged or repeated exposure. May cause drowsiness or dizziness. Harmful if inhaled. Harmful if swallowed. May cause respiratory irritation. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage.

**2.2. Label elements**

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

<table>
<thead>
<tr>
<th>Hazard pictograms (CLP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHS02</td>
</tr>
<tr>
<td>GHS05</td>
</tr>
<tr>
<td>GHS07</td>
</tr>
<tr>
<td>GHS08</td>
</tr>
</tbody>
</table>

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Signal word (CLP): Danger
Hazardous ingredients: xylene; m-phenylenebis(methylamine); 1-methoxy-2-propanol; benzyl alcohol
Hazard statements (CLP):
- H226 - Flammable liquid and vapour.
- H302+H332 - Harmful if swallowed or if inhaled.
- H314 - Causes severe skin burns and eye damage.
- H317 - May cause an allergic skin reaction.
- H335 - May cause respiratory irritation.
- H336 - May cause drowsiness or dizziness.
- H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements (CLP):
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P260 - Do not breathe fume, vapours, spray.
- P280 - Wear face protection, protective clothing, protective gloves.
- P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305 - IF IN EYES: Rinse first with plenty of water and if necessary take medical advice.
- P312 - Call a doctor if you feel unwell.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients
3.1. Substances
Not applicable
3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-methoxy-2-propanol</td>
<td>(CAS-No.) 107-98-2 (EC-No.) 203-539-1 (EC Index-No.) 603-064-00-3</td>
<td>25 - 50</td>
<td>Flam. Liq. 3, H226 STOT SE 3, H336</td>
</tr>
<tr>
<td>xylene</td>
<td>(CAS-No.) 1330-20-7 (EC-No.) 215-535-7 (EC Index-No.) 601-022-00-9</td>
<td>25 - 50</td>
<td>Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315</td>
</tr>
<tr>
<td>benzyl alcohol</td>
<td>(CAS-No.) 100-51-6 (EC-No.) 202-859-9 (EC Index-No.) 603-057-00-5</td>
<td>5 - 10</td>
<td>Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332</td>
</tr>
<tr>
<td>m-phenylenebis(methylamine)</td>
<td>(CAS-No.) 1477-55-0 (EC-No.) 216-032-5</td>
<td>5 - 10</td>
<td>Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

SECTION 4: First aid measures
4.1. Description of first aid measures
First-aid measures general: Call a physician immediately.
First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact: Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion: Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects after inhalation: May cause drowsiness or dizziness.
Symptoms/effects after skin contact: May cause respiratory irritation.
Symptoms/effects after eye contact: Burns. May cause an allergic skin reaction.
Symptoms/effects after ingestion: Burns.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

5.2. Special hazards arising from the substance or mixture
Fire hazard: Flammable liquid and vapour.
Hazardous decomposition products in case of fire: Toxic fumes may be released.

5.3. Advice for firefighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Emergency procedures: Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe vapours, fume, spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Do not breathe vapours, spray, fume. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.

Hygiene measures: Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures: Ground/bond container and receiving equipment.
Storage conditions: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>xylene (1330-20-7)</th>
<th>EU</th>
<th>Local name</th>
<th>Xylene, mixed isomers, pure</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>IOELV TWA (mg/m³)</td>
<td>221 mg/m³</td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>IOELV TWA (ppm)</td>
<td>50 ppm</td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>IOELV STEL (mg/m³)</td>
<td>442 mg/m³</td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>IOELV STEL (ppm)</td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>Notes</td>
<td>Skin</td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>Regulatory reference</td>
<td>COMMISSION DIRECTIVE 2000/39/EC</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>Local name</td>
<td>Xylene, mixed isomers</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>OEL (8 hours ref) (mg/m³)</td>
<td>221 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>OEL (8 hours ref) (ppm)</td>
<td>50 ppm</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>OEL (15 min ref) (mg/m3)</td>
<td>442 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>
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#### xylene (1330-20-7)

<table>
<thead>
<tr>
<th>Country</th>
<th>Local name</th>
<th>OEL (15 min ref) (ppm)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td></td>
<td>100 ppm</td>
<td>Sk (Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body), IOELV (Indicative Occupational Exposure Limit Values)</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Local name</td>
<td>WEL TWA (mg/m³)</td>
<td>220 mg/m³</td>
</tr>
<tr>
<td>United Kingdom</td>
<td></td>
<td>WEL TWA (ppm)</td>
<td>50 ppm</td>
</tr>
<tr>
<td>United Kingdom</td>
<td></td>
<td>WEL STEL (mg/m³)</td>
<td>441 mg/m³</td>
</tr>
<tr>
<td>United Kingdom</td>
<td></td>
<td>WEL STEL (ppm)</td>
<td>100 ppm</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Remark (WEL)</td>
<td></td>
<td>Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)</td>
</tr>
</tbody>
</table>

#### m-phenylenebis(methylamine) (1477-55-0)

<table>
<thead>
<tr>
<th>Country</th>
<th>Local name</th>
<th>OEL (8 hours ref) (mg/m³)</th>
<th>Remar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td></td>
<td>0.1 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

#### 1-methoxy-2-propanol (107-98-2)

<table>
<thead>
<tr>
<th>Country</th>
<th>Local name</th>
<th>EU IOELV TWA (mg/m³)</th>
<th>EU IOELV TWA (ppm)</th>
<th>EU IOELV STEL (mg/m³)</th>
<th>EU IOELV STEL (ppm)</th>
<th>EU Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td></td>
<td>375 mg/m³</td>
<td>100 ppm</td>
<td>568 mg/m³</td>
<td>150 ppm</td>
<td>Skin</td>
</tr>
</tbody>
</table>

### m-Xylene α,α'-diamine (m-phenylenebis(methylamine))

#### 1-Methoxypropanol-2

<table>
<thead>
<tr>
<th>Country</th>
<th>Local name</th>
<th>EU IOELV TWA (mg/m³)</th>
<th>EU IOELV TWA (ppm)</th>
<th>EU IOELV STEL (mg/m³)</th>
<th>EU IOELV STEL (ppm)</th>
<th>EU Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td></td>
<td>375 mg/m³</td>
<td>100 ppm</td>
<td>568 mg/m³</td>
<td>150 ppm</td>
<td>Skin</td>
</tr>
</tbody>
</table>

### Propylene glycol monomethyl ether

<table>
<thead>
<tr>
<th>Country</th>
<th>Local name</th>
<th>EU Notes (IE)</th>
<th>EU Regulatory reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td></td>
<td>IOELV (Indicative Occupational Exposure Limit Values)</td>
<td>Code of Practice for the Chemical Agents Regulations 2018</td>
</tr>
</tbody>
</table>

### 1-Methoxypropan-2-ol

<table>
<thead>
<tr>
<th>Country</th>
<th>Local name</th>
<th>EU Notes (IE)</th>
<th>EU Regulatory reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td></td>
<td>IOELV (Indicative Occupational Exposure Limit Values)</td>
<td>Code of Practice for the Chemical Agents Regulations 2018</td>
</tr>
</tbody>
</table>

#### EU Regulatory reference

- COMMISSION DIRECTIVE 2000/39/EC
- Code of Practice for the Chemical Agents Regulations 2018

#### EH40/2005 (Third edition, 2018), HSE
8.2. Exposure controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

- **Hand protection:**
  - Protective gloves

- **Eye protection:**
  - Safety glasses

- **Skin and body protection:**
  - Wear suitable protective clothing

- **Respiratory protection:**
  - [In case of inadequate ventilation] wear respiratory protection.

**Environmental exposure controls:**
Avoid release to the environment.

---

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>amber.</td>
</tr>
<tr>
<td>Odour</td>
<td>Alike</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>pH solution</td>
<td>&gt; 7.5</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>≈ 13</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>24 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>0.93 kPa</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.96</td>
</tr>
<tr>
<td>Solubility</td>
<td>Immiscible with water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>≈</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

#### 9.2. Other information

- **VOC content:** 651 g/l

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

- Flammable liquid and vapour.

#### 10.2. Chemical stability

- Stable at ambient temperature and under normal conditions of use.

#### 10.3. Possibility of hazardous reactions

- No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid


#### 10.5. Incompatible materials

- No additional information available

#### 10.6. Hazardous decomposition products

- Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide.
**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

- **Acute toxicity (oral)**: Oral: Harmful if swallowed.
- **Acute toxicity (dermal)**: Not classified
- **Acute toxicity (inhalation)**: Inhalation: dust, mist: Harmful if inhaled.

<table>
<thead>
<tr>
<th>ATE CLP (oral)</th>
<th>1194.886 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE CLP (dermal)</td>
<td>2750.12 mg/kg</td>
</tr>
<tr>
<td>ATE CLP (vapours)</td>
<td>69.07 mg/l</td>
</tr>
<tr>
<td>ATE CLP (dust, mist)</td>
<td>15.7 mg/l</td>
</tr>
</tbody>
</table>

**benzyl alcohol (100-51-6)**

<table>
<thead>
<tr>
<th>LD50 oral rat</th>
<th>1620 mg/kg bw/day (Rat, Male, Experimental value, Oral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 2000 mg/kg (Rabbit, Inconclusive, insufficient data, Dermal)</td>
</tr>
<tr>
<td>LC50 inhalation rat</td>
<td>&gt; 4.178 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male/female, Experimental value, Inhalation (aerosol))</td>
</tr>
</tbody>
</table>

**xylene (1330-20-7)**

<table>
<thead>
<tr>
<th>LD50 oral rat</th>
<th>3523 mg/kg bodyweight (Equivalent or similar to EU Method B.1: Acute Toxicity (Oral), Rat, Male, Experimental value, Oral, 14 day(s))</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 2000 mg/kg bodyweight (Other, 24 h, Rat, Male/female, Experimental value, Dermal)</td>
</tr>
</tbody>
</table>

**1-methoxy-2-propanol (107-98-2)**

<table>
<thead>
<tr>
<th>LD50 oral rat</th>
<th>4016 mg/kg bodyweight (EU Method B.1 tris: Acute oral toxic – Acute toxic class method, Rat, Male/female, Experimental value, Oral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 2000 mg/kg bodyweight (Other, 24 h, Rat, Male/female, Experimental value, Dermal)</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**: Causes severe skin burns and eye damage.

**Serious eye damage/irritation**: Causes serious eye damage.

**Respiratory or skin sensitisation**: May cause an allergic skin reaction.

**Germ cell mutagenicity**: Not classified

**Carcinogenicity**: Not classified

**SECTION 12: Ecological information**

**12.1. Toxicity**

**Ecology - general**: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. Before neutralisation, the product may represent a danger to aquatic organisms.

- **Acute aquatic toxicity**: Not classified
- **Chronic aquatic toxicity**: Not classified

**benzyl alcohol (100-51-6)**

<table>
<thead>
<tr>
<th>LC50 fish 1</th>
<th>460 mg/l (EPA OPP 72-1, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value, Nominal concentration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50 Daphnia 1</td>
<td>230 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Fresh water, Experimental value, GLP)</td>
</tr>
<tr>
<td>ErC50 (algae)</td>
<td>770 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)</td>
</tr>
</tbody>
</table>
# RAPTOR EPOXY PRIMER HARDENER
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**xylene (1330-20-7)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>2.6 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static renewal, Fresh water, Read-across, Lethal)</td>
</tr>
<tr>
<td>ErC50 (algae)</td>
<td>4.36 mg/l (OECD 201: Alga, Growth Inhibition Test, 73 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)</td>
</tr>
</tbody>
</table>

**1-methoxy-2-propanol (107-98-2)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>&gt;= 1000 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Nominal concentration)</td>
</tr>
<tr>
<td>ErC50 (algae)</td>
<td>&gt; 1000 mg/l (Other, 168 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)</td>
</tr>
</tbody>
</table>

### 12.2. Persistence and degradability
#### benzyl alcohol (100-51-6)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradable in the soil. Readily biodegradable in water.</td>
</tr>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
<td>1.6 g O₂/g substance</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>2.4 g O₂/g substance</td>
</tr>
<tr>
<td>ThOD</td>
<td>2.5 g O₂/g substance</td>
</tr>
</tbody>
</table>

**xylene (1330-20-7)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradable in the soil. Readily biodegradable in water.</td>
</tr>
</tbody>
</table>

**1-methoxy-2-propanol (107-98-2)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradable in the soil. Readily biodegradable in water.</td>
</tr>
<tr>
<td>ThOD</td>
<td>1.95 g O₂/g substance</td>
</tr>
</tbody>
</table>

#### 12.3. Bioaccumulative potential

**benzyl alcohol (100-51-6)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>1 - 1.1 (Experimental value, 20 °C)</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Low potential for bioaccumulation (Log Kow &lt; 4).</td>
</tr>
</tbody>
</table>

**xylene (1330-20-7)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish 1</td>
<td>7.2 - 25.9 (56 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Read-across)</td>
</tr>
<tr>
<td>Log Pow</td>
<td>3.2 (Read-across, 20 °C)</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Low potential for bioaccumulation (BCF &lt; 500).</td>
</tr>
</tbody>
</table>

**1-methoxy-2-propanol (107-98-2)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish 1</td>
<td>1 (Pimephales promelas)</td>
</tr>
<tr>
<td>Log Pow</td>
<td>&lt; 1 (Experimental value, Equivalent or similar to OECD 117, 20 °C)</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Not bioaccumulative.</td>
</tr>
</tbody>
</table>

#### 12.4. Mobility in soil

**benzyl alcohol (100-51-6)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>39 mN/m (20 °C)</td>
</tr>
<tr>
<td>Ecology - soil</td>
<td>No (test) data on mobility of the substance available.</td>
</tr>
</tbody>
</table>

**xylene (1330-20-7)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>28.01 - 29.76 mN/m (25 °C)</td>
</tr>
<tr>
<td>Log Koc</td>
<td>2.73 (log Koc, Equivalent or similar to OECD 121, Read-across)</td>
</tr>
<tr>
<td>Ecology - soil</td>
<td>Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.</td>
</tr>
</tbody>
</table>
12.5. Results of PBT and vPvB assessment

Component

<table>
<thead>
<tr>
<th>Substance/Mixture</th>
<th>PBT Criteria</th>
<th>vPvB Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>xylene (1330-20-7)</td>
<td>This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII</td>
<td>This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII</td>
</tr>
<tr>
<td>1-methoxy-2-propanol (107-98-2)</td>
<td>This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII</td>
<td>This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII</td>
</tr>
<tr>
<td>benzyl alcohol (100-51-6)</td>
<td>This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII</td>
<td>This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII</td>
</tr>
</tbody>
</table>

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods: Dispose of contents/container in accordance with licensed collector’s sorting instructions.

Additional information: Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>3470</td>
<td>3470</td>
<td>3470</td>
<td>3470</td>
<td>3470</td>
</tr>
</tbody>
</table>

### 14.2. UN proper shipping name

<table>
<thead>
<tr>
<th>Substance/Mixture</th>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>xylene (1330-20-7)</td>
<td>UN 3470 PAINT, CORROSIVE, FLAMMABLE, 8 (3), II, (D/E)</td>
<td>UN 3470 Paint, corrosive, flammable, 8 (3), II</td>
<td>UN 3470 Paint, corrosive, flammable, 8 (3), II</td>
<td>UN 3470 PAINT, CORROSIVE, FLAMMABLE, 8 (3), II</td>
<td>UN 3470 PAINT, CORROSIVE, FLAMMABLE, 8 (3), II</td>
</tr>
<tr>
<td>1-methoxy-2-propanol (107-98-2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>benzyl alcohol (100-51-6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 14.3. Transport hazard class(es)

<table>
<thead>
<tr>
<th>Class</th>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>8 (3)</td>
<td>8 (3)</td>
<td>8 (3)</td>
<td>8 (3)</td>
<td>8 (3)</td>
</tr>
</tbody>
</table>

### 14.4. Packing group

<table>
<thead>
<tr>
<th>Packing Group</th>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td></td>
</tr>
</tbody>
</table>

### 14.5. Environmental hazards

- Dangerous for the environment: No
- Marine pollutant: No
- Dangerous for the environment: No
- Dangerous for the environment: No
- Dangerous for the environment: No

No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

- Classification code (ADR): CF1
- Special provisions (ADR): 163, 367
- Limited quantities (ADR): 1l
- Excepted quantities (ADR): E2
- Packing instructions (ADR): P001, IBC02
- Mixed packing provisions (ADR): MP15
Portable tank and bulk container instructions (ADR):
- T7

Portable tank and bulk container special provisions (ADR):
- TP2, TP8, TP28

Tank code (ADR):
- L4BN

Vehicle for tank carriage:
- FL

Transport category (ADR):
- 2

Special provisions for carriage - Operation (ADR):
- S2

Hazard identification number (Temler No.):
- 83

Orange plates:
- 

Tunnel restriction code (ADR):
- D/E

EAC code:
- •3W

APP code:
- A(fl)

Transport by sea:
- Special provisions (IMDG):
  - 163, 367
- Packing instructions (IMDG):
  - P001
- IBC packing instructions (IMDG):
  - IBC02
- Tank instructions (IMDG):
  - T7
- Tank special provisions (IMDG):
  - TP2, TP8, TP28
- EmS-No. (Fire):
  - F-E
- EmS-No. (Spillage):
  - S-C
- Stowage category (IMDG):
  - B
- Stowage and handling (IMDG):
  - SW2
- Properties and observations (IMDG):
  - Miscibility with water depends upon the composition. Corrosive contents cause burns to skin, eyes and mucous membranes.

Air transport:
- PCA Excepted quantities (IATA):
  - E2
- PCA Limited quantities (IATA):
  - Y840
- PCA limited quantity max net quantity (IATA):
  - 0.5L
- PCA packing instructions (IATA):
  - 851
- PCA max net quantity (IATA):
  - 1L
- CAO packing instructions (IATA):
  - 855
- CAO max net quantity (IATA):
  - 30L
- Special provisions (IATA):
  - A72, A192
- ERG code (IATA):
  - 8F

Inland waterway transport:
- Classification code (ADN):
  - CF1
- Special provisions (ADN):
  - 163, 367
- Limited quantities (ADN):
  - 1 L
- Excepted quantities (ADN):
  - E2
- Equipment required (ADN):
  - PP, EP, EX, A
- Ventilation (ADN):
  - VE01
- Number of blue cones/lights (ADN):
  - 1

Rail transport:
- Classification code (RID):
  - CF1
- Special provisions (RID):
  - 163, 367
- Limited quantities (RID):
  - 1 L
- Excepted quantities (RID):
  - E2
- Packing instructions (RID):
  - P001, IBC02
- Mixed packing provisions (RID):
  - MP15
- Portable tank and bulk container instructions (RID):
  - T7
- Portable tank and bulk container special provisions (RID):
  - TP2, TP8, TP28
- Tank codes for RID tanks (RID):
  - L4BN
- Transport category (RID):
  - 2
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

SECTION 15: Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations
The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Substance</th>
<th>Hazard Class/Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAPTOR EPOXY PRIMER HARDENER - xylene - 1-methoxy-2-propanol</td>
<td>1-methoxy-2-propanol - benzyl alcohol</td>
</tr>
</tbody>
</table>

3(a) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F

<table>
<thead>
<tr>
<th>Substance</th>
<th>Hazard Class/Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAPTOR EPOXY PRIMER HARDENER - xylene - 1-methoxy-2-propanol</td>
<td>Hazard class 4.1</td>
</tr>
</tbody>
</table>

3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10

<table>
<thead>
<tr>
<th>Substance</th>
<th>Hazard Class/Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAPTOR EPOXY PRIMER HARDENER - xylene - m-phenylenebis(methylamine) - benzyl alcohol</td>
<td>m-phenylenebis(methylamine)</td>
</tr>
</tbody>
</table>

3(c) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1

<table>
<thead>
<tr>
<th>Substance</th>
<th>Hazard Class/Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>xylene - 1-methoxy-2-propanol</td>
<td>Hazard class 4.1</td>
</tr>
</tbody>
</table>

Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

VOC content : 651 g/l

15.1.2. National regulations
No additional information available

15.2. Chemical safety assessment
No chemical safety assessment has been carried out

SECTION 16: Other information

<table>
<thead>
<tr>
<th>Full text of H- and EUH-statements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Dermal)</td>
</tr>
<tr>
<td>Acute Tox. 4 (Inhalation)</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
</tr>
<tr>
<td>Aquatic Chronic 3</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
</tr>
<tr>
<td>Flam. Liq. 3</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
</tr>
<tr>
<td>STOT SE 3</td>
</tr>
<tr>
<td>H226</td>
</tr>
<tr>
<td>H302</td>
</tr>
</tbody>
</table>
**RAPTOR EPOXY PRIMER HARDENER**

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

<table>
<thead>
<tr>
<th>H312</th>
<th>Harmful in contact with skin.</th>
</tr>
</thead>
<tbody>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness.</td>
</tr>
<tr>
<td>H373</td>
<td>May cause damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

**SDS EU (REACH Annex II)**

For professional use only.

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