Raptor Epoxy Primer Hardener (REPH-US)

Safety Data Sheet REPH-US

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 03/03/2017  Version: 1.0

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

1.1. Product identifier

Product form: Mixtures
Product name: Raptor Epoxy Primer Hardener (REPH-US)
Product group: Epoxy hardener
Other means of identification: UP483, UP4831

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

1.3. Details of the supplier of the safety data sheet

Supplier
U-POL US Inc
108 Commerce Way
Stockertown PA 18083 - USA
T 1-800-340-7824 - F 1-800-787-5150
technical.department@u-pol.com - www.u-pol.com

1.4. Emergency telephone number

Emergency number: CHEMTREC - 1-800-424-9300 (UK +44 (0) 1933 230310 (07:30 - 17:00hrs UK time)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification
Flam. Liq. 3  H226
Acute Tox. 4 (Oral)  H302
Acute Tox. 4 (Dermal)  H312
Acute Tox. 4 (Inhalation:dust,mist)  H332
Skin Corr. 1B  H314
Skin Sens. 1  H317
STOT SE 3  H336
STOT SE 3  H335
STOT RE 2  H373

Full text of H statements: see section 16

2.2. Label elements

GHS-US labeling
Hazard pictograms (GHS-US):

<table>
<thead>
<tr>
<th>GHS02</th>
<th>GHS05</th>
<th>GHS07</th>
<th>GHS08</th>
</tr>
</thead>
</table>

Signal word (GHS-US): Danger
Hazard statements (GHS-US):
H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled
H314 - Causes severe skin burns and eye damage
H315 - May cause an allergic skin reaction
H317 - Causes serious eye damage
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US):
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
P260 - Do not breathe fume, vapors, spray
P280 - Wear face protection, protective clothing, protective gloves
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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
P314 - Get medical advice/attention if you feel unwell

2.3. Other hazards
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

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>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-methoxy-2-propanol, monopropylene glycol methyl ether</td>
<td>(CAS No) 107-98-2</td>
<td>23-43</td>
<td>Flam. Liq. 3, H226, Acute Tox. 4 (Dermal), H312, STOT SE 3, H336</td>
</tr>
<tr>
<td>xylene</td>
<td>(CAS No) 1330-20-7</td>
<td>23-43</td>
<td>Flam. Liq. 3, H226, Acute Tox. 4 (Oral), H302, Acute Tox. 4 (Dermal), H312, Acute Tox. 4 (Inhalation:dust,mist), H332, Skin Irrit. 2, H315, Eye Irrit. 2, H319, STOT SE 3, H335, STOT RE 2, H373, Asp. Tox. 1, H304</td>
</tr>
<tr>
<td>Benzyl Alcohol</td>
<td>(CAS No) 100-51-6</td>
<td>5-23</td>
<td>Acute Tox. 4 (Oral), H302, Acute Tox. 4 (Inhalation:dust,mist), H332</td>
</tr>
<tr>
<td>m-Phenylenebis (Methylamine) 1,3 Benzenedithanamine</td>
<td>(CAS No) 1477-55-0</td>
<td>5-23</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-phrases: 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/doctor/physician if you feel unwell.
First-aid measures after skin contact : Rinse skin with water/shower. Remove/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/injuries : May cause drowsiness or dizziness.
Symptoms/injuries after inhalation : May cause respiratory irritation.
Symptoms/injuries after skin contact : Burns. May cause an allergic skin reaction.
Symptoms/injuries after eye contact : Serious damage to eyes.
Symptoms/injuries after ingestion : Burns.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media


5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapor.
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Reactivity : Flammable liquid and vapor.

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 : No open flames, no sparks, and no smoking. Do not breathe fume, vapors. Avoid contact with skin, eyes and clothing.

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 vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Do not breathe fume, spray, vapors. Use only outdoors or in a well-ventilated area. Do not get in eyes, on skin, or on clothing.
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>Chemical</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raptor Epoxy Primer Hardener (REPH-US)</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Benzyl Alcohol (100-51-6)</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>xylene (1330-20-7)</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>m-Phenylenebis (Methylamine) 1,3 Benzenedithanamine (1477-55-0)</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
1-methoxy-2-propanol, monopropylene glycol methyl ether (107-98-2)

<table>
<thead>
<tr>
<th>ACGIH</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### 8.2. Exposure controls

<table>
<thead>
<tr>
<th>Engineering controls</th>
<th>Safety data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate engineering controls</td>
<td>Ensure good ventilation of the work station.</td>
</tr>
<tr>
<td>Hand protection</td>
<td>Protective gloves.</td>
</tr>
<tr>
<td>Eye protection</td>
<td>Safety glasses.</td>
</tr>
<tr>
<td>Skin and body protection</td>
<td>Wear suitable protective clothing.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Wear respiratory protection.</td>
</tr>
<tr>
<td>Environmental exposure controls</td>
<td>Avoid release to the environment.</td>
</tr>
</tbody>
</table>

### 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>Color</td>
<td>amber</td>
</tr>
<tr>
<td>Odor</td>
<td>Amine-like</td>
</tr>
<tr>
<td>Odor 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 (butyl acetate=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>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>0.93 kPa</td>
</tr>
<tr>
<td>Relative vapor 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>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

#### 9.2. Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC content - Actual</td>
<td>651 g/l</td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity
Flammable liquid and vapor.

#### 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: Harmful if swallowed. Dermal: Harmful in contact with skin. Inhalation: dust, mist: Harmful if inhaled.

<table>
<thead>
<tr>
<th>Material</th>
<th>ATE US (oral)</th>
<th>ATE US (dermal)</th>
<th>ATE US (dust, mist)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raptor Epoxy Primer Hardener (REP-US)</td>
<td>1194.886 mg/kg body weight</td>
<td>1614.087 mg/kg body weight</td>
<td>3.585 mg/l/4h</td>
</tr>
<tr>
<td>Benzyl Alcohol (100-51-6)</td>
<td>500.000 mg/kg body weight</td>
<td></td>
<td>1.500 mg/l/4h</td>
</tr>
<tr>
<td>xylenes (1330-20-7)</td>
<td>500.000 mg/kg body weight</td>
<td>1100.000 mg/kg body weight</td>
<td>1.500 mg/l/4h</td>
</tr>
<tr>
<td>m-Phenylenebis (Methylamine) 1,3 Benzenedithanamine (1477-55-0)</td>
<td>500.000 mg/kg body weight</td>
<td>4500.000 ppmV/4h</td>
<td>11.000 mg/l/4h</td>
</tr>
<tr>
<td>1-methoxy-2-propanol, monopropylene glycol methyl ether (107-98-2)</td>
<td></td>
<td></td>
<td>1.500 mg/l/4h</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 sensitization: May cause an allergic skin reaction.
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified

xylene (1330-20-7)
IARC group: 3 - Not classifiable

Reproductive toxicity: Not classified
Specific target organ toxicity – single exposure: May cause drowsiness or dizziness. May cause respiratory irritation.
Specific target organ toxicity – repeated exposure: May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard: Not classified
Symptoms/injuries after inhalation: May cause respiratory irritation.
Symptoms/injuries after skin contact: Burns. May cause an allergic skin reaction.
Symptoms/injuries after eye contact: Serious damage to eyes.
Symptoms/injuries after ingestion: Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. Before neutralisation, the product may represent a danger to aquatic organisms.
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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
Effect on ozone layer : No additional information available
Effect on the global warming : No known effects from this product.

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 vapors may accumulate in the container.

SECTION 14: Transport information

In accordance with DOT
Not regulated for transport

Additional information
Other information : No supplementary information available.

ADR
Transport document description : UN 3470 PAINT, CORROSIVE, FLAMMABLE, 8 (3), II, (D/E)
Packing group (ADR) : II
Class (ADR) : 8 - Corrosive substances
Hazard identification number (Kemler No.) : 83
Classification code (ADR) : CF1
Hazard labels (ADR) : 8 - Corrosive substances
3 - Flammable liquids

Orange plates

Tunnel restriction code (ADR) : D/E
LQ : 1l
Exempted quantities (ADR) : E2

Transport by sea
UN-No. (IMDG) : 3470
Proper Shipping Name (IMDG) : PAINT, CORROSIVE, FLAMMABLE
Class (IMDG) : 8 - Corrosive substances
Packing group (IMDG) : II - substances presenting medium danger

Air transport
UN-No. (IATA) : 3470
Proper Shipping Name (IATA) : Paint, corrosive, flammable
Class (IATA) : 8 - Corrosives
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Packing group (IATA) : II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations
Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

<table>
<thead>
<tr>
<th>Chemical(s)</th>
<th>CAS No</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>xylene</td>
<td>1330-20-7</td>
<td>23 - 43%</td>
</tr>
</tbody>
</table>

Benzyl Alcohol (100-51-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

xylene (1330-20-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

m-Phenylenebis (Methylamine) 1,3 Benzenedithanamine (1477-55-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

1-methoxy-2-propanol, monopropylene glycol methyl ether (107-98-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Benzyl Alcohol (100-51-6)
Listed on the Canadian DSL (Domestic Substances List)

xylene (1330-20-7)
Listed on the Canadian DSL (Domestic Substances List)

m-Phenylenebis (Methylamine) 1,3 Benzenedithanamine (1477-55-0)
Listed on the Canadian DSL (Domestic Substances List)

1-methoxy-2-propanol, monopropylene glycol methyl ether (107-98-2)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Flam. Liq. 3 H226
Acute Tox. 4 (Oral) H302
Acute Tox. 4 (Inhalation:dust,mist) H332
Skin Corr. 1B H314
Eye Dam. 1 H318
Skin Sens. 1 H317
STOT SE 3 H336
STOT SE 3 H335
STOT RE 2 H373

Full text of hazard classes and H-statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

15.2.2. National regulations

15.3. US State regulations
California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information
Full text of H-phrases:

<table>
<thead>
<tr>
<th>H Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H226</td>
<td>Flammable liquid and vapor</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H304</td>
<td>May be fatal if swallowed and enters airways</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin</td>
</tr>
<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>H319</td>
<td>Causes serious eye irritation</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 US UPOL

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