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

1.1. Product identifier
Product form: Mixture
Product name: 180 Karna-Sil Epoxy Primer Part A
Alternate Names: 180 Epoxy Primer Part A

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture: Epoxy Primer

1.3. Details of the supplier of the safety data sheet
KARNAK
330 Central Ave.
Clark, NJ 07066 - USA
T (800) 526-4236

1.4. Emergency telephone number
Emergency Telephone: (Outside the U.S.): (800) 424-9300 / (U.S. and Canada)
Association/Organization: CHEMTREC

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
GHS-US classification
Skin Irritation 2
Eye Irritation 2A
Skin Sensitisation 1

2.2. Label elements
GHS-US labelling
Hazard pictograms (GHS-US):
- GHS07
- GHS08

Signal word (GHS-US): Danger
Hazard statements (GHS-US):
- Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Contains materials suspected of causing cancer (bound in liquid/paint, not airborne dust).

Precautionary statements (GHS-US):
- Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>(CAS No) 1317-65-3</td>
<td>30 - 60</td>
<td>Not classified</td>
</tr>
<tr>
<td>Bisphenol A-epichlorohydrin polymer</td>
<td>(CAS No) 25068-38-8</td>
<td>10 - 45</td>
<td>Skin Irr. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irr. 2A, H319</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Sens. 1, H317</td>
</tr>
<tr>
<td>Titanium dioxide**</td>
<td>(CAS No) 13463-67-7</td>
<td>0.5 - 1.5</td>
<td>Carc. 2**</td>
</tr>
</tbody>
</table>
**SECTION 4: First aid measures**

4.1. **Description of first aid measures**

First-aid measures after inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

First-aid measures after eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. **Most important symptoms and effects, both acute and delayed**

Symptoms/injuries after inhalation: May cause respiratory irritation.

Symptoms/injuries after skin contact: Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause sensitisation by skin contact.

Symptoms/injuries after eye contact: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/injuries after ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

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

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

**SECTION 5: Firefighting measures**

5.1. **Extinguishing media**

Suitable extinguishing media: Treat for surrounding material.

Unsuitable extinguishing media: None known.

5.2. **Special hazards arising from the substance or mixture**

Fire hazard: Products of combustion may include, and are not limited to: oxides of carbon.

5.3. **Advice for firefighters**

Protection during firefighting: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

**SECTION 6: Accidental release measures**

6.1. **Personal precautions, protective equipment and emergency procedures**

General measures: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. **Methods and material for containment and cleaning up**

For containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up: Scoop up material and place in a disposal container. Provide ventilation.
6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling:
- Avoid contact with skin and eyes. Do not swallow. Avoid breathing vapour or mist. Handle and open container with care. When using do not eat, drink or smoke.

Hygiene measures:
- Wash hands before eating, drinking, or smoking. Launder contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions:
- Keep out of the reach of children. Keep container tightly closed and in a well-ventilated place.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Compound</th>
<th>USA ACGIH</th>
<th>USA OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone (1317-65-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>15 mg/m³ (total); 5 mg/m³ (resp)</td>
</tr>
<tr>
<td>Bisphenol A-epichlorohydrin polymer (25068-38-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Titanium dioxide (13463-67-7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>15 mg/m³</td>
</tr>
<tr>
<td>Ethylene oxide (75-21-8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>ACGIH TWA (ppm)</td>
<td>1 ppm</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>1 ppm</td>
</tr>
<tr>
<td>1,4-Dioxane (123-91-1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>ACGIH TWA (ppm)</td>
<td>20 ppm</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>360 mg/m³</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>100 ppm</td>
</tr>
<tr>
<td>Acetaldehyde (75-07-0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>ACGIH Ceiling (ppm)</td>
<td>25 ppm</td>
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<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>360 mg/m³</td>
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<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>200 ppm</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls:
- Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection:
- Wear chemically resistant protective gloves.

Eye protection:
- Safety glasses or goggles are recommended when handling product.

Skin and body protection:
- Wear suitable protective clothing.

Respiratory protection:
- In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls:
- Maintain levels below Community environmental protection thresholds.
Other information: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Viscous.</td>
</tr>
<tr>
<td>Colour</td>
<td>White.</td>
</tr>
<tr>
<td>Odour</td>
<td>Faint aromatic.</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>Relative evaporation rate (butylacetate=1)</td>
<td>No data available.</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available.</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>&gt; 100 °C (&gt; 212 °F)</td>
</tr>
<tr>
<td>Self 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 flammable.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available.</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available.</td>
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<tr>
<td>Relative density</td>
<td>1.405</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available.</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>6500 - 12000 cPs</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

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Oxidizers.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified

VFI-3218 A Side
LD50 oral rat > 2000 mg/kg
## VFI-3218 A Side

<table>
<thead>
<tr>
<th>Compound</th>
<th>LD50 oral rat</th>
<th>LC50 inhalation rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone (1317-65-3)</td>
<td>6450 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Bisphenol A-epichlorohydrin polymer (25068-38-6)</td>
<td>13600 mg/kg</td>
<td>&gt;20mL/kg</td>
</tr>
<tr>
<td>Titanium dioxide (13463-67-7)</td>
<td>&gt;10000 mg/kg</td>
<td>&gt;10000 mg/kg</td>
</tr>
<tr>
<td>Ethylene oxide (75-21-8)</td>
<td>72 mg/kg</td>
<td>800 ppm/4h</td>
</tr>
<tr>
<td>1,4-Dioxane (123-91-1)</td>
<td>4200 mg/kg</td>
<td>48.5 mg/L/4</td>
</tr>
<tr>
<td>Acetaldehyde (75-07-0)</td>
<td>1930 mg/kg</td>
<td>13300 ppm/4h</td>
</tr>
</tbody>
</table>

### Skin corrosion/irritation
- Causes skin irritation.

### Serious eye damage/irritation
- Causes serious eye irritation.

### Respiratory or skin sensitisation
- May cause an allergic skin reaction.

### Germ cell mutagenicity
- Based on available data, the classification criteria are not met.

### Carcinogenicity
- Based on available data, the classification criteria are not met

### IARC group
- Titanium dioxide (13463-67-7) - 2B - Possibly carcinogenic to humans (airborne, unbound particles of respirable size)
- Ethylene oxide (75-21-8) - 1 - Carcinogenic to humans
- National Toxicity Program (NTP) Status - 1 - Evidence of Carcinogenicity, 2 - Known Human Carcinogens

### Reproductive toxicity
- Based on available data, the classification criteria are not met.

### Specific target organ toxicity (single exposure)
- Based on available data, the classification criteria are not met.

### Specific target organ toxicity (repeated exposure)
- Based on available data, the classification criteria are not met.

### Aspiration hazard
- May cause respiratory irritation.

### Symptoms/injuries after inhalation
- Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause sensitisation by skin contact.

### Symptoms/injuries after skin contact
- Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

### Symptoms/injuries after eye contact
- May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

### Symptoms/injuries after ingestion
- May be harmful if swallowed. May cause stomach distress, nausea or vomiting.
SECTION 12: Ecological information

12.1. Toxicity
Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability
VFI-3218 A Side
Persistence and degradability No additional information available.

12.3. Bioaccumulative potential
VFI-3218 A Side
Bioaccumulative potential No additional information available.

12.4. Mobility in soil
VFI-3218 A Side
Ecology - soil No additional information available.

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

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

SECTION 14: Transport information

In accordance with DOT
14.1. UN number
Not applicable
14.2. UN proper shipping name
Not applicable
14.3. Additional information
Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations
All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Ethylene oxide (75-21-8)
Listed on SARA Section 302 (Specific toxic chemical listings)
Listed on SARA Section 313 (Specific toxic chemical listings)
SARA Section 302 Threshold Planning Quantity (TPQ) 1000
SARA Section 313 - Emission Reporting 0.1 %

1,4-Dioxane (123-91-1)
Listed on SARA Section 313 (Specific toxic chemical listings)
SARA Section 313 - Emission Reporting 0.1 %

Acetaldehyde (75-07-0)
Listed on SARA Section 313 (Specific toxic chemical listings)
EPA TSCA Regulatory Flag T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
SARA Section 313 - Emission Reporting 0.1 %

15.2. US State regulations

VFI-3218 A Side
State or local regulations This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
180 EPOXY PRIMER PART A
Safety Data Sheet

SECTION 16: Other information

<table>
<thead>
<tr>
<th>Date of issue</th>
<th>: 12/01/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision Date</td>
<td>: 01/03/2020</td>
</tr>
<tr>
<td>Other information</td>
<td>: None.</td>
</tr>
</tbody>
</table>

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