1. Product and Company Identification

Product Code: 1-ESD-LTB
Product Name: 1-ESD 100% Solids Epoxy Ctg Part A (pigmented)
Trade Name: 1-ESD 100% Solids Epoxy Ctg Part A (pigmented)

Manufacturer Information

Company Name: Epoxy Systems, Inc.
20774 W Pennsylvania Ave
Dunnellon, FL

Phone Number: +1 (352) 489-1666
Emergency Contact: PERS (USA) (800)633-8253
Alternate Emergency Contact: PERS (International) +1 (801)629-0667

2. Hazards Identification

GHS Classification
Skin Corrosion/Irritation, Category 2
Serious Eye Damage/Eye Irritation, Category 2B
Skin Sensitization, Category 1B
Aquatic Toxicity (Acute), Category 2
Aquatic Toxicity (Chronic), Category 2

Placard Key word GHS hazard phrase
Exclamation point Warning Causes skin irritation
none Warning Causes eye irritation
Exclamation point Warning May cause an allergic skin reaction
none Toxic to aquatic life
Pollution Toxic to aquatic life with long lasting effects

GHS Hazard Phrases
H315 - Causes skin irritation.
H320 - Causes eye irritation.
H317 - May cause an allergic skin reaction.
H401 - Toxic to aquatic life.
H411 - Toxic to aquatic life with long lasting effects.

GHS Precaution Phrases
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P261 - Avoid breathing dust/mist/vapors/spray.
P262 - Do not get in eyes, on skin, or on clothing.
P362+364 - Take off contaminated clothing and wash it before reuse.
P273 - Avoid release to the environment.

GHS Response Phrases
P302+352 - IF ON SKIN: Wash with plenty of soap and water. P332+313 - If skin irritation occurs, get medical advice/attention.
P362 - Take off contaminated clothing.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+313 - If eye irritation persists, get medical advice/attention.
P304+341 - IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. P314 - Get medical attention/advice if you feel unwell.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P311 - Call a POISON CENTER or doctor/physician.
P391 - Collect spillage.
GHS Storage and Disposal Phrases

P501 - Dispose of contents/container to local, state, and federal authority requirements.

Potential Health Effects (Acute and Chronic)

May cause eye irritation. May cause skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.

Inhalation

May cause respiratory irritation.

Skin Contact

May cause skin irritation. Allergic reactions are possible.

Eye Contact

Causes eye irritation.

Ingestion

May be harmful if swallowed.

Recommended Exposure Limits

Not established.

Medical Conditions Generally Aggravated By Exposure

Skin disorders, Respiratory disorders, Eye disorders, Skin Allergies.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bisphenol-a based epoxy resin</td>
<td>25068-38-6</td>
<td>40 - 60 %</td>
</tr>
<tr>
<td>2. Titanium dioxide</td>
<td>13463-67-7</td>
<td>10 - 20 %</td>
</tr>
<tr>
<td>3. 2,4-Pentanediol, 2-Methyl-</td>
<td>107-41-5</td>
<td>1.0 - 10 %</td>
</tr>
<tr>
<td>4. Oxirane, [2-Methylphenoxymethyl]-</td>
<td>2210-79-9</td>
<td>1.0 - 10 %</td>
</tr>
<tr>
<td>5. Benzenemethanol</td>
<td>100-51-6</td>
<td>1.0 - 10 %</td>
</tr>
<tr>
<td>6. Antimony tin oxide complex</td>
<td>NA</td>
<td>1.0 - 10 %</td>
</tr>
<tr>
<td>7. Silica</td>
<td>7631-86-9</td>
<td>1.0 - 10 %</td>
</tr>
<tr>
<td>8. Iron oxide (Fe2O3)</td>
<td>1309-37-1</td>
<td>0 - 3.0 %</td>
</tr>
<tr>
<td>9. C.I. Pigment Yellow 42</td>
<td>51274-00-1</td>
<td>0 - 3.0 %</td>
</tr>
<tr>
<td>10. Carbon black</td>
<td>1333-86-4</td>
<td>0 - 3.0 %</td>
</tr>
<tr>
<td>11. Phenol, 4-nonyl-, branched</td>
<td>84852-15-3</td>
<td>1.0 - 5.0 %</td>
</tr>
<tr>
<td>12. Tin oxide</td>
<td>18282-10-5</td>
<td>1.0 - 5.0 %</td>
</tr>
</tbody>
</table>

4. First Aid Measures

Emergency and First Aid Procedures

In Case of Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If experiencing respiratory symptoms: Get medical attention immediately.

In Case of Skin Contact

In case of contact, immediately wash skin with soap and copious amounts of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops or persists.

In Case of Eye Contact

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

In Case of Ingestion

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately. Do not induce vomiting. For further assistance, contact your local Poison Control Center.
**5. Fire Fighting Measures**

- **Flash Pt:** > 200.00°C  
  **Method Used:** Pensky-Marten Closed Cup
- **Explosive Limits:**  
  LEL: NE  
  UEL: NE
- **Autoignition Pt:** No data available.

**Fire Fighting Instructions**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

**Flammable Properties and Hazards**

Product is not considered a fire hazard. Closed containers may rupture (due to build up in pressure) when exposed to extreme heat.

**Hazardous Combustion Products**

Hazardous decomposition products formed under fire conditions. Carbon dioxide, Carbon monoxide.

**Suitable Extinguishing Media**

Dry chemical, CO2, water spray or regular foam.

**Unsuitable Extinguishing Media**

Do not use a direct water stream, which may spread fire.

---

**6. Accidental Release Measures**

**Steps To Be Taken In Case Material Is Released Or Spilled**

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL.  
Absorb with sand or vermiculite and place in closed containers for disposal. Ventilate the area.

**Protective Precautions, Protective Equipment and Emergency Procedures**

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves. Where splashing is possible, full chemically resistant protective clothing, and boots are required.

**Environmental Precautions**

Prevent entry into waterways, sewers, basements or confined areas.

---

**7. Handling and Storage**

**Hazard Label Information:**

Avoid contact with skin and eyes. Do not get on skin and clothing. Avoid inhalation of vapor or mist.  
Store in a closed container.

**Precautions To Be Taken in Handling**

Provide adequate ventilation. Do not breathe vapor. Do not get in eyes, on skin or on clothing.

**Precautions To Be Taken in Storing**

Keep container tightly closed in a dry and well-ventilated place.

**Other Precautions**

Wash thoroughly after handling.

---

**8. Exposure Controls/Personal Protection**

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>ACGIH TWA</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bisphenol-a based epoxy resin</td>
<td>25068-38-6</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>2. Titanium dioxide</td>
<td>13463-67-7</td>
<td>PEL: 15 (dust) mg/m3</td>
<td>TLV: 10 mg/m3</td>
<td>No data.</td>
</tr>
<tr>
<td>3. 2,4-Pentanediol, 2-Methyl-</td>
<td>107-41-5</td>
<td>No data.</td>
<td>TLV: 25 ppm</td>
<td>CEIL: 121 mg/m3</td>
</tr>
<tr>
<td>4. Oxirane, [(2-Methylphenoxy)methyl]-</td>
<td>2210-79-9</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
1-ESD 100% Solids Epoxy Ctg Part A
(pigmented)

Hazardous Components (Chemical Name) | CAS # | OSHA PEL | ACGIH TWA | Other Limits
--- | --- | --- | --- | ---
5. Benzenemethanol | 100-51-6 | No data. | No data. | No data.
7. Silica | 7631-86-9 | No data. | No data. | No data.
8. Iron oxide (Fe2O3) | 1309-37-1 | PEL: 10 mg/m3 | TLV: 5 mg/m3 (dust & fume) | No data.
9. C.I. Pigment Yellow 42 | 51274-00-1 | No data. | No data. | No data.
10. Carbon black | 1333-86-4 | PEL: 3.5 mg/m3 | No data. | No data.
12. Tin oxide | 18282-10-5 | No data. | No data. | No data.

Environmental Exposure Controls

Work/Hygienic/Maintenance Practices

Protective Equipment Summary - Hazard Label Information:
Neoprene gloves  Safety glasses, or goggles.  Impervious clothing.  Chemical resistant boots

Respiratory Equipment (Specify Type)
Normally when good engineering controls are used, no respiratory protection is needed. However, if cured product is abraded by sanding or grinding use a NIOSH approved air-purifying respirator. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Eye Protection
Safety glasses, or goggles.

Protective Gloves
Nitrile rubber and Neoprene are recommended.

Other Protective Clothing
Where splashing is possible, full chemically resistant protective clothing, safety glasses or face shield and boots are required.

Engineering Controls (Ventilation etc.)
Good general ventilation should be sufficient to control airborne levels. Safety shower and eye bath.

Environmental Exposure Controls
Avoid runoff into storm sewers and ditches which lead to waterways. May be hazardous to the environment if released in large quantities.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical States:</th>
<th>Gas</th>
<th>Liquid</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Point:</td>
<td>NE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>NE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature:</td>
<td>NE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autoignition Pt:</td>
<td>No data.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Pt:</td>
<td>&gt; 200.00 C Method Used: Pensky-Marten Closed Cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive Limits:</td>
<td>LEL: NE UEL: NE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Gravity (Water = 1):</td>
<td>~ 1.333 - 1.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density:</td>
<td>~ 11.12 - 11.6 LB/GL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure (vs. Air or mm Hg):</td>
<td>NE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Bisphenol-a based epoxy resin
   CAS #: 25068-38-6
   NTP: n.a.
   IARC: n.a.
   ACGIH: n.a.
   OSHA: n.a.

2. Titanium dioxide
   CAS #: 13463-67-7
   NTP: 2B
   IARC: A4
   ACGIH: n.a.
   OSHA: n.a.

3. 2,4-Pentanediol, 2-Methyl-
   CAS #: 107-41-5
   NTP: No
   IARC: No
   ACGIH: No
   OSHA: No

4. Oxirane, [(2-Methylphenoxymethyl)-
   CAS #: 2210-79-9
   NTP: n.a.
   IARC: n.a.
   ACGIH: n.a.
   OSHA: n.a.

5. Benzenemethanol
   CAS #: 100-51-6
   NTP: n.a.
   IARC: n.a.
   ACGIH: n.a.
   OSHA: n.a.

6. Antimony tin oxide complex
   CAS #: n.a.
   NTP: n.a.
   IARC: n.a.
   ACGIH: n.a.
   OSHA: n.a.

7. Silica
   CAS #: 7631-86-9
   NTP: Known
   IARC: 3
   ACGIH: n.a.
   OSHA: n.a.

8. Iron oxide (Fe2O3)
   CAS #: 1309-37-1
   NTP: 3
   IARC: A4
   ACGIH: n.a.
   OSHA: n.a.

9. C.I. Pigment Yellow 42
   CAS #: 51274-00-1
   NTP: n.a.
   IARC: n.a.
   ACGIH: n.a.
   OSHA: n.a.

Vapor Density (vs. Air = 1): NE
Evaporation Rate: NE
Solubility in Water: ~
Solubility Notes
   Practically insoluble.
Percent Volatile: 0.0 % by volume.
VOC / Volume: NP
HAP / Volume: NP
Saturated Vapor Concentration: NE

10. Stability and Reactivity

Stability: Unstable [ ] Stable [ X ]

Reactivity
   Avoid: acids, alkalis, oxidizing agents.

Conditions To Avoid - Instability
   Extreme temperatures.

Incompatibility - Materials To Avoid
   Avoid strong acids, bases, and oxidizing agents.

Hazardous Decomposition Or Byproducts
   Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide.

Possibility of Hazardous Polymerization:
   Will occur [ ] Will not occur [ X ]

11. Toxicological Information

Toxicological Information
   May cause sensitization by skin contact.

Chronic Toxicological Effects
   Skin sensitization.

Irritation or Corrosion
   Skin Irritation. Irritating to eyes.

Symptoms related to Toxicological Characteristics
   May cause redness, rash on skin.
12. Ecological Information

General Ecological Information
Avoid release to the environment. May be hazardous to the environment if released in large quantities.

Results of PBT and vPvB assessment
No data available.

Persistence and Degradability
Not readily biodegradable.

Bioaccumulative Potential
No data available.

Mobility in Soil
not reported, unknown.

13. Disposal Considerations

Waste Disposal Method
Incinerate or dispose of unused material, residues and containers in a licensed facility in accordance with all applicable local, state and federal regulations. Do not discharge substance/product into sewage system.

14. Transport Information

LAND TRANSPORT (US DOT)

<table>
<thead>
<tr>
<th>DOT Proper Shipping Name</th>
<th>DOT Hazard Class:</th>
<th>DOT Hazard Label:</th>
<th>UN/NA Number:</th>
<th>Packing Group:</th>
<th>Precautionary Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Non-Bulk)</td>
<td>9</td>
<td>CLASS 9</td>
<td>UN3082</td>
<td>III</td>
<td>Avoid skin and eye contact. May cause eye and skin irritation. May cause skin sensitization. Wear protective equipment and clothing. Always read MSDS/SDS before use.</td>
</tr>
</tbody>
</table>

(Air Transport (ICAO/IATA)

<table>
<thead>
<tr>
<th>ICAO/IATA Shipping Name</th>
<th>(Non-Bulk)</th>
<th>Not Regulated.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Bulk)</td>
<td></td>
<td>Environmentally hazardous substance, liquid, n.o.s. (Epoxy Resin) MARINE POLLUTANT.</td>
</tr>
</tbody>
</table>

NOTE: Marine Pollutants - DOT requirements specific to Marine Pollutants do not apply to non-bulk packagings transported by motor vehicles, rail cars or aircraft.

(Non-Bulk) Not Regulated.

(Air Transport (ICAO/IATA)

<table>
<thead>
<tr>
<th>ICAO/IATA Shipping Name</th>
<th>(Non-Bulk)</th>
<th>Not Regulated.</th>
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<tbody>
<tr>
<td>(Bulk)</td>
<td></td>
<td>Environmentally hazardous substance, liquid, n.o.s. (Epoxy Resin) MARINE POLLUTANT.</td>
</tr>
</tbody>
</table>

NOTE: Marine Pollutants - DOT requirements specific to Marine Pollutants do not apply to non-bulk packagings transported by motor vehicles, rail cars or aircraft.
UN Number: 3082
Hazard Class: 9 - CLASS 9
Packing Group: III

MARINE TRANSPORT (IMDG/IMO)
IMDG/IMO Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Epoxy Resin) MARINE POLLUTANT.

Note: The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. Shipment compliance is the responsibility of the person offering the product for transport.

UN Number: 3082
Hazard Class: 9 - CLASS 9
Packing Group: III
IMDG MFAG Number: FA, SF
Marine Pollutant: Yes

15. Regulatory Information

Regulatory Information
SARA 302 Extremely Hazardous Substances: None.

SARA Section 311/312: Acute Health Hazard.

SARA 313 Toxic Chemicals: None.

CERCLA Reportable Quantity: None.

16. Other Information

CA=CIRCA NA=NOT AVAILABLE NE=NOT ESTABLISHED NR=NOT REGULATED NP= NOT APPLICABLE PR=PROPRIETARY TS=TRADE SECRET ?=UNKNOWN.

Company Policy or Disclaimer
The information contained in this MSDS is taken from sources believed to be accurate as of the date hereof; however the Epoxy Systems, Inc. makes no expressed or implied warranty in respect to the accuracy of the information or the suitability of the recommendations, and assumes no liabilities to any user thereof.

Revision Date: 11/23/2015