## 1. Product and Company Identification

<table>
<thead>
<tr>
<th>Product Code</th>
<th>633-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Name</td>
<td>633 Epoxy Novolac Coating Hardener - Part B</td>
</tr>
<tr>
<td>Trade Name</td>
<td>Epoxy.com 633 Epoxy Novolac Coating Hardener - Part B</td>
</tr>
</tbody>
</table>

### Manufacturer Information

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Epoxy Systems, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone Number</td>
<td>352-489-1666</td>
</tr>
<tr>
<td>Emergency Contact</td>
<td>PERS (USA) (800)633-8253</td>
</tr>
<tr>
<td>Alternate Emergency Contact</td>
<td>PERS (International) 801-629-0667</td>
</tr>
</tbody>
</table>

### Intended Use

- Industrial floor coatings.

## 2. Hazards Identification

<table>
<thead>
<tr>
<th>GHS Classification</th>
<th>Placard</th>
<th>Key word</th>
<th>GHS hazard phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Sensitization, Category 1A</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation, Category 1B</td>
<td>Corrosive</td>
<td>Danger</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation, Category 1</td>
<td>Corrosive</td>
<td>Danger</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>Acute Toxicity: Oral, Category 4</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>Toxic To Reproduction, Category 2</td>
<td>Health hazard</td>
<td>Warning</td>
<td>Suspected of damaging fertility or the unborn child</td>
</tr>
<tr>
<td>Aquatic Toxicity (Acute), Category 1</td>
<td>Pollution</td>
<td>Warning</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>Aquatic Toxicity (Chronic), Category 1</td>
<td>Pollution</td>
<td>Warning</td>
<td>Very toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

### GHS Hazard Phrases

- H317 - May cause an allergic skin reaction.
- H314 - Causes severe skin burns and eye damage.
- H318 - Causes serious eye damage.
- H302 - Harmful if swallowed.
- H361 - Suspected of damaging fertility or the unborn child.
- H400 - Very toxic to aquatic life.
- H410 - Very toxic to aquatic life with long lasting effects.

### GHS Precaution Phrases

- P261 - Avoid breathing dust/mist/vapors/spray.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P362+364 - Take off contaminated clothing and wash it before reuse.
- P202 - Do not handle until all safety precautions have been read and understood.
- P281 - Use personal protective equipment as required.
- P273 - Avoid release to the environment.

### GHS Response Phrases

- P361 - Remove/Take off immediately all contaminated clothing.
- P302+352 - IF ON SKIN: Wash with plenty of soap and water. P333+313 - If skin irritation or rash occurs, seek medical advice/attention.
- P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present.
and easy to do. Continue rinsing.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P314 - Get medical attention/advice if you feel unwell.
P308+313 - IF exposed or concerned: Get medical attention/advice. 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)
Corrosive! Damages skin and eyes.
Inhalation: Vapors are irritating to the respiratory system, may cause throat pain and cough. Harmful if swallowed. This product may produce corrosive damage to the gastrointestinal tract if it is swallowed. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.

Inhalation
May cause respiratory irritation.

Skin Contact
Causes severe skin irritation. Causes skin burns.

Eye Contact
Corrosive/irritation to eyes. Causes eye burns.

Ingestion
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.

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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. Benzenemethanol</td>
<td>100-51-6</td>
<td>25 - 35 %</td>
</tr>
<tr>
<td>2. Formaldehyde, polymer with benzenamine, hydrogenated</td>
<td>135108-88-2</td>
<td>25 - 35 %</td>
</tr>
<tr>
<td>3. Phenol, 4-nonyl-, branched</td>
<td>84852-15-3</td>
<td>10 - 20 %</td>
</tr>
<tr>
<td>4. Aliphatic Amine</td>
<td>NA 1.0 - 5.0%</td>
<td></td>
</tr>
<tr>
<td>5. Diethylenetriamine</td>
<td>111-40-0</td>
<td>1.0 - 5.0 %</td>
</tr>
<tr>
<td>6. Cyclohexylamine, 4,4’-methylenebis-</td>
<td>1761-71-3</td>
<td>1.0 - 5.0 %</td>
</tr>
<tr>
<td>7. Organic Acid</td>
<td>NA 1.0 - 5.0%</td>
<td></td>
</tr>
<tr>
<td>8. 4,4’-Isopropylidenephenol</td>
<td>80-05-7</td>
<td>1.0 - 5.0 %</td>
</tr>
<tr>
<td>9. 2,4,6-Tris(Dimethylaminomethyl)Phenol</td>
<td>90-72-2</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. Get medical attention immediately.

In Case of Ingestion
If swallowed, wash out mouth with water provided person is conscious. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Get medical attention immediately.

Signs and Symptoms Of Exposure
Eyes: Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Skin: Can cause severe skin burns. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Inhalation: Vapors are irritating to the respiratory system, may cause throat pain and cough.

5. Fire Fighting Measures

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

Fire Fighting Instructions
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Flammable Properties and Hazards
Combustible material: may burn but does not ignite readily.

Hazardous Combustion Products
In a fire, product may produce the following: Carbon monoxide, Aldehydes. Carbon dioxide, Nitrogen oxides, Fire may produce irritating, corrosive and/or toxic gases.

Suitable Extinguishing Media
CO2, dry chemical, dry sand, alcohol-resistant 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
PROEDURE 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 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. Wear all personal protection required in section 8.
Precautions To Be Taken in Storing

Keep container tightly closed in a dry and well-ventilated place. Store away from incompatible material.

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 TLV</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Benzenemethanol</td>
<td>100-51-6</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>3. Phenol, 4-nonyl-, branched</td>
<td>84852-15-3</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>5. Diethylenetriamine</td>
<td>111-40-0</td>
<td>No data.</td>
<td>1 ppm</td>
<td>No data.</td>
</tr>
<tr>
<td>6. Cyclohexylamine, 4,4'-methylenebis-</td>
<td>1761-71-3</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>7. Organic Acid</td>
<td>NA</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>8. 4,4'-Isopropylidenediphenol</td>
<td>80-05-7</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>9. 2,4,6-Tris(Dimethylaminomethyl)Phenol</td>
<td>90-72-2</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>

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.

Work/Hygienic/Maintenance Practices

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

Environmental Exposure Controls

Avoid runoff into storm sewers and ditches which lead to waterways.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical States:</th>
<th>[ ] Gas</th>
<th>[X] 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>
</tbody>
</table>
10. Stability and Reactivity

Stability: Unstable [ ] Stable [ X ]

Reactivity
Avoid: acids, Avoid uncontrolled contact with isocyanates. Avoid: Uncontrolled reactions with epoxies.

Conditions To Avoid - Instability
Extreme temperatures.

Incompatibility - Materials To Avoid

Hazardous Decomposition Or Byproducts
Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide, aldehydes. ammonia. Nitric Acids. Nitrogen oxides.

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

Conditions To Avoid - Hazardous Reactions
Will not undergo hazardous polymerization in normal storage conditions.

11. Toxicological Information

Toxicological Information
May cause sensitization by skin contact.

Chronic Toxicological Effects
Skin sensitization.

Irritation or Corrosion
Corrosive! Damages skin and eyes.

Symptoms related to Toxicological Characteristics
May cause sensitization by skin contact. May cause skin irritation or burns. Can cause eye irritation or burns.

Hazardous Components (Chemical Name)  CAS #  NTP  IARC  ACGIH  OSHA
1. Benzenemethanol  100-51-6  n.a.  n.a.  n.a.  n.a.
2. Formaldehyde, polymer with benzenamine, hydrogenated  135108-88-2  n.a.  n.a.  n.a.  n.a.
12. Ecological Information

General Ecological Information
Avoid release to the environment. Do not empty into drains. 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)

DOT Proper Shipping Name
CAUSTIC ALKALI LIQUID, N.O.S. (Contains Aliphatic Amines, Nonylphenol) MARINE POLLUTANT.

Marine Pollutant(s): Nonylphenol.

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

DOT Hazard Class: 8
DOT Hazard Label: CORROSIVE
UN/NA Number: UN1719
Packing Group: III
Precautionary Label
Corrosive! Damages skin and eyes. May cause sensitization by skin contact. May be harmful if swallowed.

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name
CAUSTIC ALKALI LIQUID, N.O.S. (Contains Aliphatic Amines, Nonylphenol) MARINE POLLUTANT.

Marine Pollutant(s): Nonylphenol.

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

UN Number: 1719
Hazard Class: 8 - CORROSIVE
Packing Group: III

MARINE TRANSPORT (IMDG/IMO)

IMDG/IMO Shipping Name CAUSTIC ALKALI LIQUID, N.O.S. (Contains Aliphatic Amines, Nonylphenol)
MARINE POLLUTANT.

UN Number: 1719
Hazard Class: 8 - CORROSIVE
Packing Group: III
IMDG EMS Number: FA,SB
Marine Pollutant: Yes

15. Regulatory Information

US EPA SARA Title III

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Benzenemethanol</td>
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<td>No</td>
<td>No</td>
<td>No</td>
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<td>No</td>
</tr>
</tbody>
</table>

Regulatory Information

SARA Section 311/312: Acute Health Hazard.

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 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: 06/12/2015