1. Product and Company Identification

Product Code: 830-B  
Product Name: 830 Moisture Vapor Treatment Hardener Part B  
Trade Name: 830 Moisture Vapor Treatment Hardener Part B  

Manufacturer Information

Company Name: Epoxy Systems, Inc.  
20774 W Pennsylvania Ave.  
Dunnellon, FL 34431  

Phone Number: +1 (352-489-1666)  
Emergency Contact: PERS (USA) (800)663-0667  
Alternate Emergency Contact: PERS (International) +1 (801)629-0667  

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>Aquatic Toxicity (Acute), Category 3</td>
<td>none</td>
<td></td>
<td>Harmful to aquatic life</td>
</tr>
<tr>
<td>Aquatic Toxicity (Chronic), Category 3</td>
<td>none</td>
<td></td>
<td>Harmful to aquatic life with long lasting effects</td>
</tr>
<tr>
<td>Acute Toxicity: Skin, Category 4</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>Harmful in contact with skin</td>
</tr>
<tr>
<td>Target Organ Systemic Toxicity (single exposure), Category 3</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>May cause respiratory irritation, or may cause drowsiness and dizziness</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>
</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.
H402 - Harmful to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.
H312 - Harmful in contact with skin.
H335 - May cause respiratory irritation.
H361 - Suspected of damaging fertility or the unborn child.

GHS Precaution Phrases

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P362+364 - Take off contaminated clothing and wash it before reuse.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P273 - Avoid release to the environment.
P271 - Use only outdoors or in a well-ventilated area.

GHS format
P202 - Do not handle until all safety precautions have been read and understood.
P281 - Use personal protective equipment as required.

**GHS Response Phrases**
P302+352 - IF ON SKIN: Wash with plenty of soap and water. P361 - Take off immediately all contaminated clothing. 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. P337+313 - If eye irritation persists, get medical advice/attention.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P313 - Get medical advice/attention.

**GHS Storage and Disposal Phrases**
P501 - Dispose of contents/container to local, state, and federal authority requirements.
P405 - Store locked up.
P403+235 - Store in cool/well-ventilated place.

**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.

### 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. Isophoronediamine</td>
<td>2855-13-2</td>
<td>15 - 25 %</td>
</tr>
<tr>
<td>3. 1,5-Pentanediamine, 2-methyl-</td>
<td>155520-10-2</td>
<td>5.0 - 15 %</td>
</tr>
<tr>
<td>4. Phenol, 4-nonyl-, branched</td>
<td>84852-15-3</td>
<td>1.0 - 9.0 %</td>
</tr>
<tr>
<td>5. Mixed Cyloaliphatic Amines</td>
<td>NA</td>
<td>5.0 - 15 %</td>
</tr>
<tr>
<td>6. 1,5-Pentanediol, 2,4-diethyl-</td>
<td>57987-55-0</td>
<td>5.0 - 10 %</td>
</tr>
<tr>
<td>7. 1,2-Ethanediame, N,N'-Bis(2-aminoethyl)-</td>
<td>112-24-3</td>
<td>1.0 - 5.0 %</td>
</tr>
<tr>
<td>8. 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, 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
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 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

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>
<tr>
<td>Flash Pt:</td>
<td>&gt; 200.00 F</td>
<td>Method Used:</td>
<td>Pensky-Marten Closed Cup</td>
</tr>
<tr>
<td>Explosive Limits:</td>
<td>LEL: NE</td>
<td>UEL: NE</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity (Water = 1):</td>
<td>~ .989</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density:</td>
<td>~ 8.25 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>
<tr>
<td>Vapor Density (vs. Air = 1):</td>
<td>NE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>NE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>No data.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility Notes</td>
<td>Partial solubility.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent Volatile:</td>
<td>N.A.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOC / Volume:</td>
<td>NP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HAP / Volume:</td>
<td>NP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saturated Vapor Concentration:</td>
<td>NE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 10. Stability and Reactivity

<table>
<thead>
<tr>
<th>Stability:</th>
<th>Unstable [ ]</th>
<th>Stable [X]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoid: acids, Avoid uncontrolled contact with isocyanates. Avoid: Uncontrolled reactions with epoxies.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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, aldehydes. 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.

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Benzenemethanol</td>
<td>100-51-6</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>2. Isophoronediamine</td>
<td>2855-13-2</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>3. 1,5-Pentanediame, 2-methyl-</td>
<td>15520-10-2</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>4. Phenol, 4-nonyl-, branched</td>
<td>84852-15-3</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>5. Mixed Cycloaliphatic Amines</td>
<td>NA</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>6. 1,5-Pentanediol, 2,4-diethyl-</td>
<td>57987-55-0</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>7. 1,2-Ethanediame, N,N'-Bis(2-aminoethyl)-</td>
<td>112-24-3</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>8. 2,4,6-Tris(Dimethylaminomethyl)Phenol</td>
<td>90-72-2</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

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. (Modified Cycloaliphatic Amines)
DOT Hazard Class:  8
DOT Hazard Label:  CORROSIVE
UN/NA Number:  UN1719
Packing Group:  II
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. (Modified Cycloaliphatic Amines)
UN Number:  1719
Hazard Class:  8 - CORROSIVE
Packing Group:  II
MARINE TRANSPORT (IMDG/IMO)

IMDG/IMO Shipping Name: CAUSTIC ALKALI LIQUID, N.O.S. (Modified Cycloaliphatic Amines)
UN Number: 1719
Hazard Class: 8 - CORROSIVE
Packing Group: II
IMDG EMS Number: FA,SB
Marine Pollutant: No

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>
<td>100-51-6</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2. Isophoronediamine</td>
<td>2855-13-2</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3. 1,5-Pentanediame, 2-methyl-</td>
<td>15520-10-2</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>4. Phenol, 4-nonyl-, branched</td>
<td>84852-15-3</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>5. Mixed Cycloaliphatic Amines</td>
<td>NA</td>
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<td>90-72-2</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Regulatory Information

SARA Section 311/312: Acute, Chronic 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. DBA Epoxy.com 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.

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