1. Product and Company Identification

Product Code: 231-B  
Product Name: 231 Water Emulsion Primer/Sealer Hardener - Part B  
Trade Name: 231 Water Emulsion Primer/Sealer 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) 633-8253  
Alternate Emergency Contact: PERS (International) +1 (801) 629 0667  

2. Hazards Identification

GHS Classification  
Skin Sensitization, Category 1B  
Skin Corrosion/Irritation, Category 1B  
Serious Eye Damage/Eye Irritation, Category 1  
Acute Toxicity: Oral, Category 4

Placard  
Key word  
GHS hazard phrase

Exclamation point  Warning  May cause an allergic skin reaction
Corrosive  Danger  Causes severe skin burns and eye damage
Corrosive  Danger  Causes serious eye damage
Exclamation point  Warning  Harmful if swallowed

GHS Hazard Phrases

H317 - May cause an allergic skin reaction.  
H314 - Causes severe skin burns and eye damage.  
H302 - Harmful if swallowed.  
H335 - May cause respiratory irritation.

GHS Precaution Phrases

P262 - Do not get in eyes, on skin, or on clothing.  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

GHS Response Phrases

P302 - IF ON SKIN: P362 - Take off contaminated clothing. P353 - Rinse skin with water/shower. 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.  
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P311 - Call a POISON CENTER or doctor/physician.  
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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.
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>Aliphatic Polyamine (Trade Secret)</td>
<td>NA</td>
<td>20 - 30 %</td>
</tr>
<tr>
<td>2-Propenenitrile, reaction products with 3-amino-1,5,5-trimethylcyclohexanemethanamine</td>
<td>90530-15-7</td>
<td>1.0 - 10 %</td>
</tr>
<tr>
<td>Isophoronediamine</td>
<td>2855-13-2</td>
<td>1.0 - 5.0 %</td>
</tr>
<tr>
<td>1,3-Benzenedimethanamine</td>
<td>1477-55-0</td>
<td>1.0 - 5.0 %</td>
</tr>
</tbody>
</table>

4. First Aid Measures

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:** > 212.00 °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**
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**
In a fire, product may produce the following: Carbon monoxide, Carbon dioxide, Fire may produce irritating, corrosive and/or toxic gases.

**Suitable Extinguishing Media**
Dry chemical, CO2 or water spray.

**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. Keep from freezing.

**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. Aliphatic Polyamine (Trade Secret)</td>
<td>NA</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>2. 2-Propenenitrile, reaction products with 3-amino-1,5,5-trimethylcyclohexanemethanamine</td>
<td>90530-15-7</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>4. 1,3-Benzenedimethanamine</td>
<td>1477-55-0</td>
<td>No data.</td>
<td>CEIL: mg/m3</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>
<tr>
<td>Flash Pt:</td>
<td>&gt; 212.00 F</td>
<td>Method Used: Pensky-Marten Closed Cup</td>
<td></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>~ 1.03 - 1.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density:</td>
<td>~ 8.60 - 8.65 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 NE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Soluble</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>&gt; 40.0 % by weight.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent Volatile:</td>
<td>NP</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>NE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saturated Vapor Concentration:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. Stability and Reactivity

Stability: Unstable [ ] Stable [ X ]

Reactivity
Avoid: acids, isocyanates and epoxides.

Conditions To Avoid - Instability
Extreme temperatures.

Incompatibility - Materials To Avoid
Avoid: acids, Isocyanates.

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

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
Contact can cause reddening, swelling, rash, scaling, or blistering.

<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. Aliphatic Polyamine (Trade Secret)</td>
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<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<td>2. 2-Propenenitrile, reaction products with 3-amino-1,5,5-trimethylcyclohexanemethanamine</td>
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<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>3. Isophoronediamine</td>
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<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<td>4. 1,3-Benzenedimethanamine</td>
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<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: Amines, Liquid, Corrosive n.o.s. (Modified Polyamine) MARINE POLLUTANT.

DOT Hazard Class: 8
DOT Hazard Label: CORROSIVE
UN/NA Number: UN2735
Packing Group: III
Precautionary Label: Corrosive! Damages skin and eyes. May cause sensitization by skin contact. May be harmful if swallowed. Vapors may be harmful to the respiratory tract.

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name: Amines, Liquid, Corrosive n.o.s. (Modified Polyamine) MARINE POLLUTANT.

UN Number: 2735
Hazard Class: 8 - CORROSIVE
Packing Group: III

MARINE TRANSPORT (IMDG/IMO)

IMDG/IMO Shipping Name: Amines, Liquid, Corrosive n.o.s. (Modified Polyamine) MARINE POLLUTANT.

UN Number: Hazard 2735
Class: Packing 8 - CORROSIVE
Group: IMDG EMS III
Number: Marine FA,SB
Pollutant: Yes

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.

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>
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<tr>
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<td>No</td>
<td>No</td>
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</tbody>
</table>

Regulatory Information

SARA 302 Extremely Hazardous Substances: None.

SARA Section 311/312: Acute, Chronic 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: 10/12/2015