1. Product and Company Identification

Product Code: 224B
Product Name: 224 Tile Grout - Part B
Trade Name: 224 Tile Grout - Part B

Manufacturer Information

Company Name: Epoxy Systems, Inc.
Address: 20774 W Pennsylvania Ave.
Dunnellon, Florida 34421

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

2. Hazards Identification

GHS Classification

| Acute Toxicity: Inhalation, Category 4 | Exclamation point | Warning | Harmful if inhaled Harmful if swallowed |
| Acute Toxicity: Oral, Category 4 | Exclamation point | Warning | swallowed Harmful in contact with skin |
| Acute Toxicity: Skin, Category 4 | Exclamation point | Warning | Causes severe skin burns and eye damage causes serious eye damage |

Skin Corrosion/Irritation, Category 1A

| Corrosive | Danger | Causes severe skin burns and eye damage |

Serious Eye Damage/Eye Irritation, Category 1

| Corrosive | Danger | Causes serious eye damage |

Target Organ Systemic Toxicity (single exposure), Category 3

| Exclamation point | Warning | May cause respiratory irritation, or may cause drowsiness and dizziness |

GHS Hazard Phrases

H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H335 - May cause respiratory irritation.
H302+332 - Harmful if swallowed or if inhaled.

GHS Precaution Phrases

P281 - Use personal protective equipment as required.
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.
P285 - In case of inadequate ventilation wear respiratory protection.
P273 - Avoid release to the environment.

GHS Response Phrases

P302+352 - IF ON SKIN: Wash with plenty of soap and water. P333+313 - If skin irritation or rash occurs, seek medical advice/attention. P363 - Wash contaminated clothing before reuse.
P304+341 - IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. P342+311 - If experiencing respiratory symptoms call a POISON CENTER or doctor/physician.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P313 - Get medical advice/attention.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P310 - Immediately call a POISON CENTER or doctor/physician.
GHS Storage and Disposal Phrases
P501 - Dispose of contents/container to local, state, and federal authority requirements.
P405 - Store locked up.

Potential Health Effects (Acute and Chronic)
May cause skin irritation or burns. May cause respiratory tract irritation. Can cause severe eye irritation.

Inhalation
Can cause severe respiratory irritation.

Skin Contact
Causes skin burns, irritation and possible allergic reaction.

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

Ingestion
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. Aspiration hazard if swallowed. Can enter lungs and cause damage.

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. Modified Polyamine</td>
<td>NA</td>
<td>40 - 55 %</td>
</tr>
<tr>
<td>2. Fatty acids, tall-oil, reaction products with diethylene triamine, di-Me sulfate and propylene oxide</td>
<td>68953-36-6</td>
<td>30 - 40 %</td>
</tr>
<tr>
<td>3. Diethylenetriamine</td>
<td>111-40-0</td>
<td>5.0 - 15 %</td>
</tr>
<tr>
<td>4. 4,4'-Isopropyliden diphenol</td>
<td>80-05-7</td>
<td>1.0 - 5.0 %</td>
</tr>
<tr>
<td>5. Tetraethylenepentamine</td>
<td>112-57-2</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
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**
- Read product SDS and all labels before use. Follow all MSDS/label precautions even after container is emptied because they may retain product residues.

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. Modified Polyamine</td>
<td>NA</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>2. Fatty acids, tall-oil, reaction products withdiethylenetriamine, di-Me sulfates and propyleneoxide</td>
<td>68953-36-6</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>
Hazardous Components (Chemical Name) | CAS # | OSHA PEL | ACGIH TLV | Other Limits
--- | --- | --- | --- | ---
3. Diethylenetriamine | 111-40-0 | No data. | 1 ppm | No data.
4. 4,4'-Isopropylidenediphenol | 80-05-7 | No data. | No data. | No data.
5. Tetraethylenepentamine | 112-57-2 | No data. | No data. | No data.

### 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 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>~ .982</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density:</td>
<td>~ 8.2 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>Slightly Soluble.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent Volatile:</td>
<td>N.A.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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: acids, alkalis, oxidizing agents.

Hazardous Decomposition Or Byproducts
Carbon dioxide, Carbon monoxide, Nitrogen oxides, aldehydes, nitrosamines, ammonia.

Possibility of Hazardous Polymerization:
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
No data available.

Irritation or Corrosion
Corrosive! Damages skin and eyes.

Symptoms related to Toxicological Characteristics
Skin: Contact with substance may cause severe burns to skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Eyes: Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Permanent eye damage including blindness could result.
Inhalation: Inhalation of vapors/fumes causes respiratory irritation with throat discomfort, coughing or difficulty breathing.

Sensitization
May cause sensitization by skin contact.

<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. Modified Polyamine</td>
<td>NA</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<td>68953-36-6</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<td>111-40-0</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>4. 4,4'-Isopropylidenediphenol</td>
<td>80-05-7</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>5. Tetraethylenepentamine</td>
<td>112-57-2</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
Incorporate 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 Polyamine)
- DOT Hazard Class: 8
- DOT Hazard Label: CORROSIVE
- UN/NA Number: UN1719
- Packing Group: III
- Precautionary Label: Corrosive! Damages skin and eyes. 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.

AIR TRANSPORT (ICAO/IATA)
- ICAO/IATA Shipping Name: CAUSTIC ALKALI LIQUID, N.O.S. (Modified Polyamine)
- UN Number: 1719
- Hazard Class: 8 - CORROSIVE
- Packing Group: III

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

15. Regulatory Information

Regulatory Information
SARA 302 Extremely Hazardous Substances: None.

SARA 313 Toxic Chemicals: None.

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. 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: 06/30/2015