# 1. Product and Company Identification

<table>
<thead>
<tr>
<th>Product Code:</th>
<th>235B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Name:</td>
<td>235 Chemical Resistant Tile Grout</td>
</tr>
<tr>
<td>Trade Name:</td>
<td>235 Chemical Resistant Tile Grout</td>
</tr>
</tbody>
</table>

## 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:** PERS (International) +1 (801) 629-0667

## Intended Use:
- Industrial floor coatings.

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# 2. Hazards Identification

### GHS Classification
- **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
- **Acute Toxicity: Oral, Category 4:** Exclamation point Warning Harmful if swallowed
- **Aquatic Toxicity (Acute), Category 1:** Pollution Warning Very toxic to aquatic life
- **Aquatic Toxicity (Chronic), Category 1:** Pollution Warning Very toxic to aquatic life with long lasting effects
- **Toxic To Reproduction, Category 2:** Health hazard Warning Suspected of damaging fertility or the unborn child

### GHS Hazard Phrases
- H314 - Causes severe skin burns and eye damage.
- H318 - Causes serious eye damage.
- H302 - Harmful if swallowed.
- H400 - Very toxic to aquatic life.
- H410 - Very toxic to aquatic life with long lasting effects.
- H361 - Suspected of damaging fertility or the unborn child.

### GHS Precaution Phrases
- P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
- P264 - Wash hands thoroughly after handling.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P273 - Avoid release to the environment.
- P202 - Do not handle until all safety precautions have been read and understood.
- P281 - Use personal protective equipment as required.

### GHS Response Phrases
- P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. P363 - Wash contaminated clothing before reuse. 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.
P314 - Get medical attention/advice if you feel unwell.
P391 - Collect spillage.

**GHS Storage and Disposal Phrases**
P405 - Store locked up.
P501 - Dispose of contents/container to local, state, and federal authority requirements.

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

**Inhalation**
Corrosive to respiratory tract. May cause respiratory sensitization.

**Skin Contact**
Contact with substance may cause severe burns to skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

**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.

**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. 4-tert-Butylphenol</td>
<td>98-54-4</td>
<td>30 - 45 %</td>
</tr>
<tr>
<td>2. 1,3-Benzenedimethanamine</td>
<td>1477-55-0</td>
<td>20 - 35 %</td>
</tr>
<tr>
<td>3. Trimethylhexamethylene diamine</td>
<td>25620-58-0</td>
<td>20 - 35 %</td>
</tr>
<tr>
<td>4. Diethylenetriamine</td>
<td>111-40-0</td>
<td>5.0 - 15 %</td>
</tr>
<tr>
<td>5. 4,4'-Isopropylidenediphenol</td>
<td>80-05-7</td>
<td>1.0 - 10 %</td>
</tr>
<tr>
<td>6. Phenol, 4-nonyl-, branched</td>
<td>84852-15-3</td>
<td>1.0 - 10 %</td>
</tr>
<tr>
<td>7. 2,4,6-Tris(Dimethylaminomethyl)Phenol</td>
<td>90-72-2</td>
<td>1.0 - 10 %</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
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

**Hazardous Components (Chemical Name)**

<table>
<thead>
<tr>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>ACGIH TWA</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 4-tert-Butylphenol</td>
<td>98-54-4</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>2. 1,3-Benzenedimethanamine</td>
<td>1477-55-0</td>
<td>No data.</td>
<td>CEIL: mg/m3</td>
</tr>
<tr>
<td>4. Diethylenetriamine</td>
<td>111-40-0</td>
<td>No data.</td>
<td>TLV: 1 ppm</td>
</tr>
<tr>
<td>5. 4,4'-Isopropylidenediphenol</td>
<td>80-05-7</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>7. 2,4,6-Tris(Dimethylaminomethyl)Phenol</td>
<td>90-72-2</td>
<td>No data.</td>
<td>No data.</td>
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</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.

**Environmental Exposure Controls**

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

9. Physical and Chemical Properties

**Physical States:**

- [ ] Gas  [X] Liquid  [ ] Solid

**Melting Point:**

NE

**Boiling Point:**

NE

**Decomposition Temperature:**

NE

**Autoignition Pt:**

No data.

**Flash Pt:**

> 200.00 F  Method Used: Closed Cup

**Explosive Limits:**

- LEL: NE  - UEL: NE

**Specific Gravity (Water = 1):**

~ 1.013

**Density:**

~ 8.45 LB/GL

**Vapor Pressure (vs. Air or mm Hg):**

NE

**Vapor Density (vs. Air = 1):**

NE
Evaporation Rate: NE
Solubility in Water: NE

Solubility Notes
Practically insoluble.

Percent Volatile: N.A.
VOC / Volume: NP
HAP / Volume: NP

Saturated Vapor Concentration: NE

Appearance and Odor
Odor: amine-like.
Appearance: Liquid. amber.

## 10. Stability and Reactivity

Stability
Unstable [ ] Stable [ X ]

Reactivity
Avoid: acids, alkalis, oxidizing agents.

### Conditions To Avoid - Instability
Extreme temperatures.

### Incompatibility - Materials To Avoid
Oxidizing agents, Acids, Isocyanates.

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

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
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.

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
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<tr>
<td>1. 4-tert-Butylphenol</td>
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<td>2. 1,3-Benzenedimethanamine</td>
<td>1477-55-0</td>
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<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>3. Trimethylhexamethylenediamine</td>
<td>25620-58-0</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
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<td>4. Diethylenetriamine</td>
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<td>n.a.</td>
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</table>

GHS format
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 Modified Aliphatic Amines) MARINE POLLUTANT.

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: II
Precautionary Label
Corrosive! Damages skin and eyes. May cause respiratory irritation. Harmful if swallowed.

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

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: 1719
Hazard Class: 8 - CORROSIVE
Packing Group: II
MARINE TRANSPORT (IMDG/IMO)

IMDG/IMO Shipping Name: CAUSTIC ALKALI LIQUID, N.O.S. (Contains Modified Aliphatic Amines) 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: Hazard 1719
Class: Packing 8 - CORROSIVE
Group: IMDG EMS II
Number: Marine FA-SB
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>
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<tbody>
<tr>
<td>1. 4-tert-Butylphenol</td>
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<td>No</td>
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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: 09/24/2015