1. IDENTIFICATION OF SUBSTANCE

<table>
<thead>
<tr>
<th>Name:</th>
<th>MAGNESIUM SULFATE INJECTION 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer:</td>
<td>Department of Pharmacy Duke University Medical Center Box 3089 Durham, NC 27710 919-684-5125</td>
</tr>
<tr>
<td>Information Department:</td>
<td>Occupational and Environmental Safety Office Duke University Medical Center Box 3914 Durham, NC 27710 919-684-5996</td>
</tr>
<tr>
<td>Emergency Information:</td>
<td>Regional Poison Control Center 800-848-6946</td>
</tr>
</tbody>
</table>

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Characterization/Description: | Magnesium sulfate solution |
| Synonym(s): | Epsom salts |

<table>
<thead>
<tr>
<th>Dangerous Components (CAS#, Hazardous Chemical, Percent):</th>
</tr>
</thead>
<tbody>
<tr>
<td>7487-88-9 Magnesium sulfate</td>
</tr>
<tr>
<td>108-95-2 Phenol</td>
</tr>
<tr>
<td>7732-18-5 Water and saline</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>Hazard Description:</th>
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<tbody>
<tr>
<td>Magnesium sulfate is moderately toxic by ingestion, intraperitoneal, and subcutaneous routes. (Hazard description based on concentrated constituents; this product is an aqueous solution.)</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>NFPA Ratings (scale 0-4):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
</tr>
<tr>
<td>Fire:</td>
</tr>
<tr>
<td>Reactivity:</td>
</tr>
</tbody>
</table>
### TRADE NAME: MAGNESIUM SULFATE INJECTION 10%

#### 4. FIRST AID MEASURES

**Inhalation:**

Remove victim to fresh air. Give oxygen or artificial respiration if necessary.

**Skin Contact:**

IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. Seek medical attention if warranted.

**Eye Contact:**

First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

**Ingestion:**

DO NOT INDUCE VOMITING. Magnesium sulfate can cause excessive bowel movement if swallowed.

If the victim is conscious and not convulsing, rinse out the mouth with water. Give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. IMMEDIATELY transport the victim to a hospital.

If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open, and lay the victim on his/her side with the head lower than the body. Transport the victim IMMEDIATELY to a hospital.
TRADE NAME: MAGNESIUM SULFATE INJECTION 10%

5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Agents:**
Use appropriate extinguishing media for surrounding fire.

**Protective Equipment:**
Self-contained breathing apparatus and protective equipment for fire fighting.

6. ACCIDENTAL RELEASE MEASURES

**Personnel Precautions:**
Wear gloves (disposable surgical) and eye protection (chemical splash goggles).

**Environmental Precautions:**
None necessary under normal conditions of use.

**Measures for Cleaning/Collection:**
Use absorbent paper to pick up all liquid spill material. Seal the absorbent paper, as well as contaminated clothing, in a vapor-tight plastic bag for eventual disposal. Wash all contaminated surfaces with a soap and water solution.

7. HANDLING AND STORAGE

**Handling:**
Wear PPE when handling this material. Wash hands after handling.

**Storage:**
Store in a cool, dry, well-ventilated location.
8. **EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**Engineering Controls:**
None necessary under conditions of normal use.

**Control Parameters:**

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Limit</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium sulfate</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Phenol</td>
<td>5 ppm (skin)</td>
<td>ACGIH TLV-TWA</td>
</tr>
</tbody>
</table>

**Personal Protective Equipment:**

**Respiratory Protection**
None necessary under conditions of normal use.

**Skin Protection**
Wear disposable surgical gloves when using this chemical. If this chemical comes into contact with your gloves, or if a tear/puncture develops, remove gloves at once and wash hands.

**Eye Protection**
Splash-proof safety goggles should be worn while handling this chemical.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State:** Liquid

**pH:** 5-7

**Boiling/Freezing Points (°C):**
Approx. same as water.

**Flashpoint (°C):** N/A

**Autoignition Temperature (°C):** N/A

**Explosion Properties:** N/A

**Vapor Pressure (mm Hg):** N/A

**Vapor Density (air = 1):** N/A

**Specific Gravity (water = 1):**
Approx. same as water.

**Solubility:** Soluble in water (aqueous solution).
### TRADE NAME: MAGNESIUM SULFATE INJECTION 10%

#### 10. STABILITY AND REACTIVITY

**General:** This product is stable.

**Materials to Avoid:** A potentially explosive reaction may occur when magnesium sulfate is heated with ethoxyethynyl alcohols.

**Hazardous Decomposition Products.** When heated to decomposition, product may emit toxic fumes of SO\(_x\).

#### 11. TOXICOLOGICAL INFORMATION

**Acute Toxicity:** Magnesium sulfate is moderately toxic by ingestion, intraperitoneal, and subcutaneous routes. The oral TD\(_{LO}\) for magnesium sulfate is 428 mg/kg (human).

**Signs/Symptoms of Overexposure:** Magnesium sulfate can cause excessive bowel movement if swallowed.

**Chronic Toxicity:** This product is not considered a carcinogen by NTP, IARC or OSHA. Magnesium sulfate is an experimental teratogen.

#### 12. ECOLOGICAL EFFECTS

None anticipated under normal conditions of use.

#### 13. DISPOSAL CONSIDERATIONS

Dispose of all waste and contaminated materials associated with this chemical as specified by existing local, state and federal regulations concerning hazardous waste disposal. Contact the Occupational and Environmental Safety Office for specific guidance.

#### 14. TRANSPORT INFORMATION

**Proper shipping name (DOT):** Not regulated by this mode of transportation.

#### 15. REGULATORY INFORMATION

Magnesium sulfate is reported in EPA TSCA Inventory.

#### 16. OTHER INFORMATION

This information is based on our present knowledge; however this shall not constitute a guarantee for any specific product features. No toxicity data are available on this specific formulation; this health hazard assessment is based on information that is available for its components.