MATERIAL SAFETY DATA SHEET

Product Name:  Magnesium Sulfate Injection, USP

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Manufacturer Name  Hospira, Inc.
And Address  275 North Field Drive
Lake Forest, Illinois  60045
USA
Emergency Telephone  CHEMTREC:  800 424-9300
Hospira, Inc.
224 212-2055
Product Name  Magnesium Sulfate Injection, USP; Magnesium Sulfate in 5% Dextrose Injection; Magnesium Sulfate Solution
Synonyms  None

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name  Magnesium Sulfate Heptahydrate
Chemical Formula  MgO₄S

<table>
<thead>
<tr>
<th>Component</th>
<th>Approximate Percent by Weight</th>
<th>CAS Number</th>
<th>RTECS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Sulfate</td>
<td>33</td>
<td>7487-88-9</td>
<td>OM4508000</td>
</tr>
<tr>
<td>Water</td>
<td>67</td>
<td>7732-18-5</td>
<td>ZC0110000</td>
</tr>
</tbody>
</table>

3. HAZARD INFORMATION

Emergency Overview  In clinical use, this material is used as an anticonvulsant. It may cause a laxative effect on the gastrointestinal tract if ingested. Possible target organs include the gastrointestinal tract, nervous system, cardiovascular system and heart.

Occupational Exposure Potential  Information on the absorption of this compound via ingestion, inhalation or skin contact is not available. Avoid liquid aerosol generation and skin contact.

Signs and Symptoms  No signs or symptoms from occupational exposure are known. Clinical data suggest the following: vomiting, diarrhea, abdominal pain, and electrolytes imbalances.

Medical Conditions Aggravated by Exposure  Hypersensitivity to the material and/or similar materials. Pre-existing ailments in the following organs: nervous system, gastrointestinal system, cardiovascular system.
Product Name: Magnesium Sulfate Injection, USP

4. FIRST AID MEASURES

Eye Contact: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Skin Contact: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Inhalation: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Ingestion: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

5. FIRE FIGHTING MEASURES

Flammability: Non-flammable.

Fire & Explosion Hazard: None

Extinguishing Media: Use extinguishing media appropriate for primary cause of fire.

Special Fire Fighting Procedures: No special provisions required beyond normal fire fighting equipment such as flame and chemical resistant clothing and self contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Spill Cleanup and Disposal Absorb with suitable material and clean affected area with soap and water. Dispose of materials according to the applicable federal, state, or local regulations.

7. HANDLING AND STORAGE

Handling: No special handling required.

Storage: No special storage required for hazard control. For product protection store at controlled room temperature of 15-30°C (59-86°F).

Special Precautions: Protect from freezing and extreme heat.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA-PEL</th>
<th>ACGIH-TLV</th>
<th>Hospira EEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Sulfate</td>
<td>8 hr TWA: Not Established</td>
<td>8 hr TWA: Not Established</td>
<td>8 hr TWA: Not Established</td>
</tr>
</tbody>
</table>

Notes: OSHA PEL: US Occupational Safety and Health Administration – Permissible Exposure Limit
ACGIH TLV: American Conference of Governmental Industrial Hygienists – Threshold Limit Value.
EEL: Employee Exposure Limit.
TWA: 8 hour Time Weighted Average.
STEL: 15-minute Short Term Exposure Limit.
Product Name: Magnesium Sulfate Injection, USP

Respiratory Protection  
Respiratory protection is not needed during normal product use.

Skin Protection  
If solution contact with unprotected skin is likely, use of impervious gloves is a prudent practice.

Eye Protection  
Eye protection is not required during expected product use conditions but may be warranted should a splash potential exist.

Engineering Controls  
Engineering controls are not needed during normal product use conditions.

9. PHYSICAL/CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/Physical State</td>
<td>Clear solution</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Vapor Density (Air=1)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water</td>
</tr>
<tr>
<td>pH</td>
<td>3.5–7.0</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Chemical Stability  
Stable under standard use and storage conditions.

Incompatibilities  
Not Determined

Hazardous Decomposition Products  
Toxic fumes of sulfur oxides

Hazardous Polymerization  
Not Determined.

11. TOXICOLOGICAL INFORMATION:

Acute Toxicity – Oral:

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>Percent</th>
<th>Test Type</th>
<th>Value</th>
<th>Units</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Sulfate</td>
<td>100</td>
<td>LD50</td>
<td>5000</td>
<td>mg/kg</td>
<td>Mice</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3000</td>
<td></td>
<td>Rabbits</td>
</tr>
</tbody>
</table>

LD50 is the dosage producing 50% mortality.
Product contains approximately 33% Magnesium Sulfate.

Mutagenicity  
Not Determined

Target Organ Effects  
In clinical use target organ effects include the gastrointestinal tract, nervous system, cardiovascular system.
Product Name: Magnesium Sulfate Injection, USP

12. ECOLOGICAL INFORMATION:

Aquatic Toxicity  Not Available

13. DISPOSAL CONSIDERATIONS:

Waste Disposal  Disposal should be performed in accordance with the federal, state or local regulatory requirements.

Container Handling and Disposal  Dispose of container and unused contents in accordance with federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

DOT  Not Regulated

Notes: DOT - US Department of Transportation Regulations

15. REGULATORY INFORMATION

TSCA Status  Not Regulated
CERCLA Status  Not Regulated
SARA Status  Not Regulated
RCRA Status  Not Regulated
PROP 65 (Calif.)  Not Regulated

Notes: TSCA Toxic Substance Control Act
CERCLA, US EPA law, Comprehensive Environmental Response, Compensation, and Liability Act
SARA Superfund Amendments and Reauthorization Act
RCRA US EPA, Resource Conservation and Recovery Act
Prop 65, California Proposition 65

16. OTHER INFORMATION:

MSDS Coordinator  Global Occupational Toxicology
Date Prepared  September 15, 2005
Date Revised  October 21, 2008

Disclaimer: The information and recommendations contained herein are based upon tests believed to be reliable. However, Hospira does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. Hospira assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.