Material Safety Data Sheet
Magnesium sulfate heptahydrate

ACC# 13525

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Magnesium sulfate heptahydrate  
**Catalog Numbers:** AC9680280, S73060, S8067-3, S800671, S800673, BP213-1, M63-3, M63-50, M63-500, M67-10, M67-3, M67-50, M6750LC, M80-212, M80-50, M80-500, M82-12, M82-212, M82-50, M82-500, NC9140197, NC9521651, NC9738719, NC9996593, XXM63300LB, XXM63PD275LB

**Synonyms:**  
**Company Identification:**  
Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410

**For information, call:** 201-796-7100  
**Emergency Number:** 201-796-7100  
**For CHEMTREC assistance, call:** 800-424-9300  
**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10034-99-8</td>
<td>Magnesium sulfate heptahydrate</td>
<td>ca.100</td>
<td>unlisted</td>
</tr>
</tbody>
</table>

**Hazard Symbols:** None listed.  
**Risk Phrases:** None listed.

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: transparent solid. **Caution!** May cause eye and skin irritation. May cause respiratory and digestive tract irritation. The toxicological properties of this material have not been fully investigated. May cause central nervous system depression.  
**Target Organs:** Central nervous system, gastrointestinal system.

**Potential Health Effects**  
**Eye:** May cause mild eye irritation.  
**Skin:** May cause skin irritation.  
**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not been fully investigated.  
**Inhalation:** May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.  
**Chronic:** Exposure to high concentrations may cause central nervous system depression.
Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

**Antidote:** The use of calcium gluconate to precipitate the oxalate should be determined by only qualified medical personnel.

Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Material will not burn. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Substance is noncombustible; use agent most appropriate to extinguish surrounding fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection
**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium sulfate heptahydrate</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Magnesium sulfate anhydrous</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

**OSHA Vacated PELs:** Magnesium sulfate heptahydrate: No OSHA Vacated PELs are listed for this chemical. Magnesium sulfate anhydrous: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

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**Section 9 - Physical and Chemical Properties**

**Physical State:** Solid

**Appearance:** transparent

**Odor:** odorless

**pH:** Not available.

**Vapor Pressure:** < 0.1 mm Hg @ 20 deg C

**Vapor Density:** < 0.01

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Decomposes

**Freezing/Melting Point:** 1124 deg C

**Decomposition Temperature:** 1124 deg C

**Solubility:** Soluble in water.

**Specific Gravity/Density:** 2.66

**Molecular Formula:** MgSO4.7H2O

**Molecular Weight:** 246.4564

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**Section 10 - Stability and Reactivity**

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, dust generation, excess heat.

**Incompatibilities with Other Materials:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Irritating and toxic fumes and gases, sulfur oxides (SOx), including sulfur oxide and sulfur dioxide.

**Hazardous Polymerization:** Will not occur.
Section 11 - Toxicological Information

RTECS#:  
CAS# 10034-99-8: OM4508000  
CAS# 7487-88-9: OM4500000  
LD50/LC50:  
Not available.  
Not available.  

Carcinogenicity:  
CAS# 10034-99-8: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 7487-88-9: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
Epidemiology: No information available.  
Teratogenicity: No information available.  
Reproductive Effects: No information available.  
Neurotoxicity: No information available.  
Mutagenicity: No information available.  
Other Studies: No information available.

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.  
RCRA P-Series: None listed.  
RCRA U-Series: None listed.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>Shipping Name:</th>
<th>No information available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard Class:</td>
<td></td>
</tr>
<tr>
<td>UN Number:</td>
<td></td>
</tr>
<tr>
<td>Packing Group:</td>
<td></td>
</tr>
</tbody>
</table>

Canada TDG: No information available.

Section 15 - Regulatory Information

US FEDERAL
TSCA
CAS# 10034-99-8 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).
CAS# 7487-88-9 is listed on the TSCA inventory.

Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.

Section 12b
None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.

SARA

CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.

SARA Codes
CAS # 7487-88-9: acute.

Section 313
No chemicals are reportable under Section 313.

Clean Air Act:
This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

STATE
CAS# 10034-99-8 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
CAS# 7487-88-9 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:
Not available.
Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)
CAS# 10034-99-8: 0
CAS# 7487-88-9: 0

Canada - DSL/NDSL
CAS# 10034-99-8 is listed on Canada's DSL List.
CAS# 7487-88-9 is listed on Canada's DSL List.

Canada - WHMIS
This product does not have a WHMIS classification.

Canadian Ingredient Disclosure List
Exposure Limits
Section 16 - Additional Information

**MSDS Creation Date:** 7/14/1999  
**Revision #4 Date:** 7/14/2003

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.