Material Safety Data Sheet
Magnesium sulfate heptahydrate, Reagent ACS (Crystals)

ACC# 96235

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Magnesium sulfate heptahydrate, Reagent ACS (Crystals)

**Catalog Numbers:** AC423900000, AC423900030, AC423900250, AC423905000

**Synonyms:** Magnesium sulfate heptahydrate; Sulfuric acid, magnesium salt, heptahydrate.

**Company Identification:**
Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

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>100</td>
<td>unlisted</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: transparent solid.

**Caution!** May cause eye, skin, and respiratory tract irritation. The toxicological properties of this material have not been fully investigated.

**Target Organs:** None known.

**Potential Health Effects**

**Eye:** May cause mild eye irritation. The toxicological properties of this material have not been fully investigated.

**Skin:** May cause skin irritation. The toxicological properties of this material have not been fully investigated.

**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:** No information found.

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

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

**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.

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**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 agent most appropriate to extinguish 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

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**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.

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**Section 7 - Handling and Storage**

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. 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.

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**Section 8 - Exposure Controls, Personal Protection**
Engineering Controls: 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</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: 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: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Appearance: transparent
Odor: odorless
pH: Not available.
Vapor Pressure: Not available.
Vapor Density: Not available.
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

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: Oxidizing agents.
Hazardous Decomposition Products: Irritating and toxic fumes and gases, sulfur oxides (SOx), including sulfur oxide and sulfur dioxide.
Hazardous Polymerization: Has not been reported.

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, NTP, or CA Prop 65.  
CAS# 7487-88-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.  

Epidemiology: No information available.  
Teratogenicity: No information available.  
Reproductive Effects: No information available.  
Mutagenicity: No information available.  
Neurotoxicity: No information available.  
Other Studies:  

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></th>
<th>US DOT</th>
<th>Canada TDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Name:</td>
<td>Not regulated as a hazardous material</td>
<td>No information available.</td>
</tr>
<tr>
<td>Hazard Class:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UN Number:</td>
<td></td>
<td></td>
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<tr>
<td>Packing Group:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

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: immediate.

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 Prop 65
   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:
   S 37 Wear suitable gloves.
   S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
   S 28A After contact with skin, wash immediately with plenty of water

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
WHMIS: Not available.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 12/03/1998
Revision #3 Date: 8/27/2004

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.