Material Safety Data Sheet
Magnesium Chloride Hexahydrate, 99%

ACC# 96221

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Magnesium Chloride Hexahydrate, 99%
**Catalog Numbers:** AC197530000, AC197530010, AC197530050
**Synonyms:** Dus-Top; Mangogene.
**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>7791-18-6</td>
<td>Magnesium Chloride Hexahydrate</td>
<td>99</td>
<td>unlisted</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: white to gray white solid.
**Warning!** May cause eye and skin irritation. Causes digestive tract irritation. May cause respiratory tract irritation. Inhalation of fumes may cause metal-fume fever. Hygroscopic (absorbs moisture from the air).
**Target Organs:** No data found.

**Potential Health Effects**

**Eye:** May cause mild eye irritation.
**Skin:** May cause skin irritation.
**Ingestion:** Causes gastrointestinal irritation with nausea, vomiting and diarrhea.
**Inhalation:** May cause respiratory tract irritation. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count.
**Chronic:** May cause kidney damage.

Section 4 - First Aid Measures

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

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

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

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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. Use water with caution and in flooding amounts.

**Extinguishing Media:** Use extinguishing media most appropriate for the surrounding fire.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

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

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; 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:** Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

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### Section 7 - Handling and Storage

**Handling:** Wash hands before eating. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed.

**Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from water. Store protected from moisture.

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### Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Good general ventilation should be sufficient to control airborne levels. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**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 Chloride Hexahydrate</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

**OSHA Vacated PELs:** Magnesium Chloride Hexahydrate: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

**Eyes:** Wear chemical splash goggles.

**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.

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### Section 9 - Physical and Chemical Properties

**Physical State:** Solid  
**Appearance:** white to gray white  
**Odor:** none reported  
**pH:** 7.0 (Solution)  
**Vapor Pressure:** Not available.  
**Vapor Density:** Not available.  
**Evaporation Rate:** Not available.  
**Viscosity:** Not available.  
**Boiling Point:** 1412 deg C  
**Freezing/Melting Point:** 118 deg C  
**Decomposition Temperature:** 100 deg C  
**Solubility:** Soluble in water and alcohol  
**Specific Gravity/Density:** 1.569  
**Molecular Formula:** MgCl$_2$.6H$_2$O  
**Molecular Weight:** 203.2914

### Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.  
**Conditions to Avoid:** Dust generation, heating to decomposition, exposure to moist air or water.  
**Incompatibilities with Other Materials:** Oxidizing agents, 2-furan + percarboxylic acid.  
**Hazardous Decomposition Products:** Hydrogen chloride, chlorine.  
**Hazardous Polymerization:** Will not occur.

### Section 11 - Toxicological Information

**RTECS#:**  
**CAS# 7791-18-6:** OM2975000  
**LD50/LC50:**  
**CAS# 7791-18-6:**  
- Oral, mouse: LD50 = 7600 mg/kg;  
- Oral, rat: LD50 = 8100 mg/kg;  
**Carcinogenicity:**  
**CAS# 7791-18-6:** Not listed by ACGIH, IARC, NTP, or CA Prop 65.  
**Epidemiology:** No information found.  
**Teratogenicity:** No information found.  
**Reproductive Effects:** No information found.  
**Mutagenicity:** No information found.  
**Neurotoxicity:** No information found.  
**Other Studies:**
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>US DOT</th>
<th>Canada TDG</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shipping Name:</strong></td>
<td>Please contact Fisher Scientific for shipping information</td>
</tr>
<tr>
<td><strong>Hazard Class:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>UN Number:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Packing Group:</strong></td>
<td></td>
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</tbody>
</table>

Section 15 - Regulatory Information

**US FEDERAL**

**TSCA**
CAS\# 7791-18-6 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)).

**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.

**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 depleters.
This material does not contain any Class 2 Ozone depleters.

**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# 7791-18-6 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 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)  
CAS# 7791-18-6: 0

Canada - DSL/NDSL  
None of the chemicals in this product are listed on the DSL or NDSL list. Canada - WHMIS  
This product has a WHMIS classification of D2B.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 7/09/1998  
Revision #4 Date: 2/03/2003

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.