

# Material Safety Data Sheet

## Magnesium chloride hexahydrate

ACC# 13365

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Magnesium chloride hexahydrate**Catalog Numbers:** AC197530000, AC197530010, AC197530050, AC197530250, AC413410000, AC413410030, AC413411000, 41341-5000, BP214-500, BP2638, M33-3, M33-500, M33J500, M35-12, M35-212, M35-500, M3512LC, M35SAM1, M35SAM2, M35SAM3, M36-12, M36-212, M36SAM1, M36SAM2, M36SAM3**Synonyms:** Magnesium dichloride hexahydrate.**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

CAS#	Chemical Name	Percent	EINECS/ELINCS
7791-18-6	Magnesium chloride hexahydrate	99	unlisted

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white to gray white solid.

**Warning!** Causes eye and respiratory tract irritation. Hygroscopic (absorbs moisture from the air).**Target Organs:** Respiratory system, eyes.**Potential Health Effects****Eye:** Causes eye irritation.**Skin:** May cause skin irritation. May be harmful if absorbed through the skin.**Ingestion:** Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.**Inhalation:** Causes respiratory tract irritation. 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. May be harmful if inhaled.**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.

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

## 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.

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

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not available.

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

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 0; Instability: 1

## Section 6 - Accidental Release Measures

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

**Spills/Leaks:** Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing.

**Storage:** Store in a cool, dry place. Store protected from moisture.

## 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**

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Magnesium chloride hexahydrate	none listed	none listed	none listed
Magnesium chloride	none listed	none listed	none listed

**OSHA Vacated PELs:** Magnesium chloride hexahydrate: No OSHA Vacated PELs are listed for this chemical. Magnesium chloride: 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 minimize contact with skin.

**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:** white to gray white

**Odor:** none reported

**pH:** 7.0 (aq solution)

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** 117 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Freely Soluble.

**Specific Gravity/Density:** 1.56

**Molecular Formula:** MgCl<sub>2</sub>·6H<sub>2</sub>O

**Molecular Weight:** 203.31

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures. Deliquescent (tending to absorb atmospheric water vapor and become liquid).

**Conditions to Avoid:** Dust generation, moisture.

**Incompatibilities with Other Materials:** Attacks metals in the presence of moisture.

**Hazardous Decomposition Products:** Hydrogen chloride, chlorine.

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:****CAS#** 7791-18-6: OM2975000**CAS#** 7786-30-3: OM2800000**LD50/LC50:**

CAS# 7791-18-6:

Oral, mouse: LD50 = 7600 mg/kg;

Oral, rat: LD50 = 8100 mg/kg;

CAS# 7786-30-3:

Oral, mouse: LD50 = 4700 mg/kg;

Oral, rat: LD50 = 2800 mg/kg;

**Carcinogenicity:**

CAS# 7791-18-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7786-30-3: 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 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

	US DOT	Canada TDG
<b>Shipping Name:</b>	Not Regulated	Not Regulated
<b>Hazard Class:</b>		
<b>UN Number:</b>		
<b>Packing Group:</b>		

## 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)).

CAS# 7786-30-3 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 # 7786-30-3: 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 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.

CAS# 7786-30-3 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:

XI

#### Risk Phrases:

R 36/37 Irritating to eyes and respiratory system.

#### Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 39 Wear eye/face protection.

**WGK (Water Danger/Protection)**

CAS# 7791-18-6: 0

CAS# 7786-30-3: 0

**Canada - DSL/NDSL**

CAS# 7786-30-3 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of D2B.

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**

<b>Section 16 - Additional Information</b>
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**MSDS Creation Date:** 9/02/1997**Revision #11 Date:** 7/30/2008

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