

# Material Safety Data Sheet

## Magnesium nitrate hexahydrate

ACC# 13441

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Magnesium nitrate hexahydrate

**Catalog Numbers:** AC217560000, AC217560010, AC217565000, AC423880000, AC423880050, AC423885000, S73058, S73059, S80065, S93294, M46-212, M46-500

**Synonyms:** Magnesium dinitrate hexahydrate; Nitric acid, magnesium salt 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
13446-18-9	Magnesium nitrate hexahydrate	>98	unlisted

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: colorless or white solid.

**Danger!** Strong oxidizer. Contact with other material may cause a fire. May cause eye, skin, and respiratory tract irritation. May cause central nervous system depression. May cause methemoglobinemia. May cause cardiac disturbances. May cause kidney damage.

**Target Organs:** Blood, kidneys.

**Potential Health Effects**

**Eye:** May cause eye irritation.

**Skin:** May cause skin irritation.

**Ingestion:** May cause methemoglobinemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), convulsions, and death. May cause nausea, vomiting, and diarrhea, possibly with blood. Excessive amounts of magnesium may cause central nervous system depression, respiratory paralysis, and cardiac

**Inhalation:** May cause respiratory tract irritation. May cause methemoglobinemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), convulsions, tachycardia, dyspnea (labored breathing), and death. May cause effects similar to those described for ingestion.

**Chronic:** May cause methemoglobinemia, which is characterized by chocolate-brown colored blood, headache, weakness, dizziness, breath shortness, cyanosis (bluish skin due to deficient oxygenation of blood), rapid heart rate, unconsciousness and possible death. Repeated exposure may cause kidney damage and digestive tract abnormalities. Effects may be delayed.

### 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:** Get medical aid. Immediately 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 disodium EDTA as a chelating agent should be determined by 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. Strong oxidizer. Contact with other material may cause fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water with caution and in flooding amounts. Some oxidizers may react explosively with hydrocarbons(fuel). May accelerate burning if involved in a fire. Containers may explode when heated.

**Extinguishing Media:** Use water only! Contact professional fire-fighters immediately. For small fires, do NOT use dry chemicals, carbon dioxide, halon or foams. USE WATER ONLY. For large fires flood fire with water from a distance.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

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

**Upper:** Not available.

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

## 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, then place into a suitable container for disposal. Remove all sources of ignition. Provide ventilation. Do not use combustible materials such as paper towels to clean up spill.

## Section 7 - Handling and Storage

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

**Storage:** Keep away from heat, sparks, and flame. Do not store near combustible materials. 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**

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

**OSHA Vacated PELs:** Magnesium nitrate hexahydrate: No OSHA Vacated PELs are listed for this chemical.  
Magnesium nitrate 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 a chemical apron. 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:** colorless or white

**Odor:** none reported

**pH:** 5.0-8.2; 5% solution

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** 89 deg C

**Decomposition Temperature:** 330 deg C

**Solubility:** Soluble.

**Specific Gravity/Density:** 1.46 (water=1)

**Molecular Formula:** MgN2O6.6H2O

**Molecular Weight:** 256.41

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions. Deliquescent (tending to absorb atmospheric water vapor and become liquid).

**Conditions to Avoid:** Dust generation, excess heat.

**Incompatibilities with Other Materials:** Reducing agents, organic materials, combustible materials.

**Hazardous Decomposition Products:** Nitrogen oxides, oxides of magnesium.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 13446-18-9: OM3756000

**CAS#** 10377-60-3 unlisted.

**LD50/LC50:**

CAS# 13446-18-9:

Draize test, rabbit, eye: 500 mg/24H Mild;

Draize test, rabbit, skin: 500 mg/24H Mild;

Oral, rat: LD50 = 5440 mg/kg;

CAS# 10377-60-3:

**Carcinogenicity:**

CAS# 13446-18-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 10377-60-3: 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

	US DOT	Canada TDG
<b>Shipping Name:</b>	MAGNESIUM NITRATE	MAGNESIUM NITRATE
<b>Hazard Class:</b>	5.1	5.1
<b>UN Number:</b>	UN1474	UN1474
<b>Packing Group:</b>	III	III

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 13446-18-9 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# 10377-60-3 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 # 13446-18-9: immediate, delayed, fire.

**Section 313**

This material contains Magnesium nitrate hexahydrate (listed as Water Dissociable Nitrate Compounds), >98%, (CAS# 13446-18-9) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

This material contains Magnesium nitrate anhydrous (listed as Water Dissociable Nitrate Compounds), -%, (CAS# 10377-60-3) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

**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# 13446-18-9 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 10377-60-3 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.

**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:**

O

**Risk Phrases:**

R 8 Contact with combustible material may cause fire.

**Safety Phrases:**

S 17 Keep away from combustible material.

**WGK (Water Danger/Protection)**

CAS# 13446-18-9: 1

CAS# 10377-60-3: 1

**Canada - DSL/NDSL**

CAS# 10377-60-3 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of C.

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**

CAS# 13446-18-9 is not listed on the Canadian Ingredient Disclosure List.

CAS# 10377-60-3 is not listed on the Canadian Ingredient Disclosure List.

**MSDS Creation Date:** 9/02/1997

**Revision #8 Date:** 9/18/2007

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