SAFETY DATA SHEET

Preparation Date: 6/27/2014  Revision Date: 6/11/2018  Revision Number: G2

1. IDENTIFICATION

Product identifier

Product code: MA135
Product Name: MAGNESIUM SULFATE, HEPTAHYDRATE, USP, EP, BP

Other means of identification

Synonyms: Sulfuric acid, magnesium salt (1:1) heptahydrate
Magnesium (II) sulfate, heptahydrate

CAS #: 10034-99-8
RTECS #: OM4508000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: In fertilizers, matches, mineral water, catalyst carriers, cosmetics, dietary supplements, plastics, detergents, ceramics, fireproofing fabrics, paper sizing, tanning leather, dyeing textiles.

Uses advised against: No information available

Supplier: Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: https://www.spectrumchemical.com

Emergency telephone number: Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Not classified

Hazard not otherwise classified (HNOC)

Not Applicable

Other hazards

Product code: MA135  Product name: MAGNESIUM SULFATE, HEPTAHYDRATE, USP, EP, BP
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
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</thead>
<tbody>
<tr>
<td>Magnesium Sulfate, Heptahydrate</td>
<td>10034-99-8</td>
<td>100</td>
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</table>

4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops.

Eye Contact: Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. In case of shortness of breath, give oxygen. Obtain medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms: May cause eye/skin irritation

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: If it is involved in a fire the following can be released: Sulfur Oxides. Magnesium oxides.

Specific hazards: No information available.

Product code: MA135

Product name: MAGNESIUM SULFATE, HEPTAHYDRATE, USP, EP, BP
**Special Protective Actions for Firefighters**

**Specific Methods:** No information available.

**Special Protective Equipment for Firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions:** Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective equipment.

**Environmental precautions** No information available.

**Methods and material for containment and cleaning up**

**Methods for containment** Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

**Methods for cleaning up** Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

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**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Technical Measures/Precautions:** Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

**Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors/dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

**Incompatible Materials:**

Oxidizing agents

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**National occupational exposure limits**

**United States**

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<th>Components</th>
<th>CAS-No.</th>
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<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WEEL</th>
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**Canada**

**Product code:** MA135  
**Product name:** MAGNESIUM SULFATE, HEPTAHYDRATE, USP, EP, BP
Australia and Mexico

<table>
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<th>Components</th>
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<td>Magnesium Sulfate, Heptahydrate</td>
<td>10034-99-8</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering measures to reduce exposure:
Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Safety glasses Safety glasses with side-shields
Skin and body protection: Long sleeved clothing Chemical resistant apron Gloves
Respiratory protection: Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds), inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

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<tr>
<td>Solid</td>
<td>Crystalline powder. Crystals.</td>
<td>White.</td>
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<td>No information available</td>
<td>No information available</td>
<td>1124 °C/2055.2 °F</td>
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</table>

Odor: Odorless.


Flammability: No information available

Flash Point Tested according to: Not applicable

Autoignition Temperature (°C/°F): No information available

Upper Explosion Limit (%): No information available

Melting point/range(°C/°F): No information available

Boiling point/range(°C/°F):
10. STABILITY AND REACTIVITY

Reactivity
It reacts with Calcium Hydroxide to form Magnesium Hydroxide. It reacts with arsenates, phosphates, tartrates, precipitating corresponding magnesium salts. Lead, barium, strontium and calcium react with Magnesium Sulfate heptahydrate resulting in precipitation of respective sulfates. On exposure to dry air at ordinary temperatures, it loses 1 H2O. It loses about 4 H2O at 70-80 deg. C; and 5 H2O at 100 deg. C; at 120 deg. C, it loses 6 H2O, rapidly reabsorbing water when exposed to moist air; Loses last molecule of water at about 250 deg. C.

Chemical stability
Stability: Stable under recommended storage conditions.
Possibility of Hazardous Reactions: Hazardous polymerization does not occur
Conditions to avoid: Heat. Incompatible materials.
Incompatible Materials: Oxidizing agents
Hazardous decomposition products: Sulfur oxides.

Other Information
Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Toxicity

Component Information
Magnesium Sulfate, Heptahydrate
CAS-No. 10034-99-8

LD50/oral/rat = No information available
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE - Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation.

Eye Contact: May cause eye irritation.

Inhalation May cause irritation of respiratory tract.

Ingestion It can be ingested in large amounts and is not absorbed from the gastrointestinal tract unless there is blockage or injury. It has a purging or laxative effect. It may cause gastrointestinal tract irritation with nausea, vomiting, hypermotility, diarrhea. When absorbed from the gastrointestinal tract in the case of blockage or injury, it may cause flushing, sweating, and affect behavior/central nervous system (muscle weakness, central nervous system depression, somnolence, convulsions), peripheral nervous system (flaccid paralysis), cardiovascular system (cardiac arrhythmias, hypotension), blood (changes in serum composition), respiration (respiratory depression, apnea), liver, brain(degenerative changes). It may also cause hypoglycemia, hypermagnesemia.

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity No information available.

Product code: MA135
Product name: MAGNESIUM SULFATE, HEPTAHYDRATE, USP, EP, BP
Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>IARC</th>
<th>ACGIH - Carcinogens</th>
<th>NTP</th>
<th>OSHA HCS - Carcinogens</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
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<tr>
<td>Magnesium Sulfate, Heptahydrate</td>
<td>10034-99-8</td>
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<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
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</tr>
</tbody>
</table>

ACGIH (American Conference of Governmental Industrial Hygienists)
IARC (International Agency for Research on Cancer)
NTP (National Toxicology Program)
OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity: No data is available

Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure: No information available.
STOT - repeated exposure: No information available.
Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available
Bioaccumulative potential: No information available
Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products: Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging: Empty containers should be taken for local recycling, recovery or waste disposal.

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>RCRA - F Series</th>
<th>RCRA - K Series</th>
<th>RCRA - P Series</th>
<th>RCRA - U Series</th>
</tr>
</thead>
</table>

Product code: MA135
Product name: MAGNESIUM SULFATE, HEPTAHYDRATE, USP, EP, BP
**14. TRANSPORT INFORMATION**

**DOT**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Subsidiary Class:** No information available
- **Packing Group:** No information available
- **Emergency Response Guide Number:** No information available
- **Marine Pollutant:** No data available
- **DOT RQ (lbs):** No information available
- **Special Provisions:** No Information available
- **Symbol(s):** No information available
- **Description:** No information available

**TDG (Canada)**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Subsidiary Risk:** No information available
- **Packing Group:** No information available
- **Marine Pollutant:** No Information available
- **Description:** No information available

**ADR**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Packing Group:** No information available
- **Subsidiary Risk:** No information available

**IMO / IMDG**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Packing Group:** No information available
- **Subsidiary Risk:** No information available

**RID**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Packing Group:** No information available
- **Subsidiary Risk:** No information available

**ICAO**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Packing Group:** No information available
- **Subsidiary Risk:** No information available

**Product code:** MA135
**Product name:** MAGNESIUM SULFATE, HEPTAHYDRATE, USP, EP, BP
IATA

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
ERG Code: No information available
Special Provisions: No information available

15. REGULATORY INFORMATION

International Inventories

<table>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>U.S. TSCA</th>
<th>KOREA KECL</th>
<th>Philippines (PICCS)</th>
<th>Japan ENCS</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
<th>EINECS-No.</th>
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<tbody>
<tr>
<td>Magnesium Sulfate, Heptahydrate</td>
<td>10034-99-8</td>
<td>Not listed; Magnesium Sulfate, heptahydrate (CAS no. 10034-99-8) is exempt from TSCA 8(b) Inventory listing since it is a hydrate. However, the anhydrous form (CAS no. 7487-88-9) is listed as ACTIVE on the TSCA 8(b) Inventory</td>
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<td>Present</td>
<td>Present (1)-467</td>
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</table>

U.S. Regulations

Magnesium Sulfate, Heptahydrate

FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1443
FDA - 21 CFR - Total Food Additives 184.1443


Chemicals Known to the State of California to Cause Cancer:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity</th>
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<td>Not Listed</td>
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CERCLA/SARA

<table>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPOs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
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<td>Magnesium Sulfate, Heptahydrate</td>
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Product code: MA135

Product name: MAGNESIUM SULFATE, HEPTAHYDRATE, USP, EP, BP
U.S. TSCA

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
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<td>Magnesium Sulfate, Heptahydrate</td>
<td>10034-99-8</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Canada

**WHIMIS 2015 - GHS Classifications**

WHIMIS 2015 Hazard Classification Information: Not a dangerous product according to HPR classification criteria.

**Canada Hazardous Products Regulation**

This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR.

**WHMIS 1988 Hazard Class**

Non-controlled

**Canada Controlled Products Regulation:**

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

**Inventory**

<table>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
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<th>Canada (NDSL)</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>CEPA Schedule I - Toxic Substances</th>
<th>CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting</th>
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<table>
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<tr>
<th>Components</th>
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<th>EU GHS - SV - CLP (1272/2008)</th>
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**EU Classification**

**EU GHS - SV - CLP 1272/2008**

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**EU - CLP (1272/2008)**

**R-phrase(s)**

none

**S -phrase(s)**

none

<table>
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<tr>
<th>Components</th>
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<th>Classification</th>
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<th>Safety Phrases</th>
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The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Product code:** MA135

**Product name:** MAGNESIUM SULFATE, HEPTAHYDRATE, USP, EP, BP
Indication of danger:
Not dangerous

### 16. OTHER INFORMATION

**Preparation Date:** 6/27/2014  
**Revision Date:** 6/11/2018  
**Prepared by:** Sonia Owen

**Disclaimer:** All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet

**Product code:** MA135  
**Product name:** MAGNESIUM SULFATE, HEPTAHYDRATE, USP, EP, BP