



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	MAGNESIUM SULFATE HEPTAHYDRATE
Version #	02
Revision date	08-29-2011
CAS #	10034-99-8
Product Codes	J.T.Baker: 2500, 2504, 2505 Macron: 26806, 4200, 5099, 5691, 6046, 6066, 7778
Synonym(s)	Magnesium sulfate (1:1) heptahydrate; Epsom salts; sulfuric acid, magnesium salt (1:1), heptahydrate; Magnesium sulfate, 7- hydrate
Manufacturer	Avantor Performance Materials, Inc.
Address	3477 Corporate Parkway Suite #200 Center Valley, PA 18034 US
Customer Service	855-282-6867
24 Hour Emergency	908-859-2151
Chemtrec	800-424-9300

2. Hazards Identification

Emergency overview	CAUTION Product dust may be irritating to eyes, skin and respiratory system.
OSHA regulatory status	This material is not considered hazardous by the OSHA Hazard Communication Standard, OSHA 29 CFR 1910.1200.
Potential health effects	
Routes of exposure	Inhalation. Skin contact. Eye contact. Ingestion.
Eyes	Dust or powder may irritate eye tissue. If irritation should occur, it is expected to be transient.
Skin	Dust or powder may irritate the skin.
Inhalation	Inhalation of dusts may cause respiratory irritation.
Ingestion	Expected to be a low ingestion hazard. May cause temporary irritation of the throat, stomach, and gastrointestinal tract.
Chronic effects	None known.
Potential environmental effects	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

3. Composition / Information on Ingredients

Non-hazardous components	CAS #	Percent
MAGNESIUM SULFATE HEPTAHYDRATE	10034-99-8	98 - 100

Composition comments CAS # 10034-99-8 can be described by the CAS # 7487-88-9.

4. First Aid Measures

First aid procedures	
Eye contact	Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if irritation develops and persists.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Inhalation	Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

Ingestion	Seek medical advice.
Notes to physician	Treat symptomatically.
General advice	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties	This product is not flammable.
Extinguishing media	
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	None known.
Protection of firefighters	
Protective equipment and precautions for firefighters	Firefighters should wear full protective gear. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Special protective equipment for fire-fighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Keep upwind. Ventilate the area. Avoid inhalation of dust from the spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Environmental precautions	Prevent further leakage or spillage if safe to do so.
Methods for containment	If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	Avoid dust formation. Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Large Spills: Collect dust or particulates using a vacuum cleaner with a HEPA filter. Reduce airborne dust and prevent scattering by moistening with water. Never return spills in original containers for re-use. Clean contaminated surface thoroughly. Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling	Keep formation of airborne dusts to a minimum. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. See Section 8 of the MSDS for Personal Protective Equipment.
Storage	Keep container tightly closed. Store in a well-ventilated place.

8. Exposure Controls / Personal Protection

Engineering controls	Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL, suitable respiratory protection must be worn.
Personal protective equipment	
Eye / face protection	Use tight fitting goggles if dust is generated.
Skin protection	Wear appropriate clothing to prevent repeated or prolonged skin contact.
Respiratory protection	Wear respirator if there is dust formation.
General hygiene considerations	Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical & Chemical Properties

Appearance	Powder. Crystalline.
Color	Colorless to white.
Odor	Odorless.
Odor threshold	Not available.
Physical state	Solid.
Form	Crystalline powder.
Flash point	Not available.
Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor density	Not available.
Specific gravity	1.67
Relative density	Not available.
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available.
Molecular weight	246.47 g/mol
Molecular formula	Mg-O4-S.7H2O

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under normal temperature conditions.
Conditions to avoid	Incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Sulfur oxides. May include oxides of Magnesium.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Sensitization	Not a skin sensitizer.
Acute effects	Low hazard for usual industrial or commercial handling.
Local effects	May cause eye irritation. May cause skin irritation. May cause irritation to the respiratory system.
Chronic effects	None known.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Skin corrosion/irritation	May irritate and cause redness and pain.
Epidemiology	No epidemiological data is available for this product.
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Neurological effects	None known.
Reproductive effects	Contains no ingredient listed as toxic to reproduction
Teratogenicity	No data available to indicate product or any components present at greater than 0.1% may cause birth defects.
Symptoms and target organs	Mild eye irritation.

12. Ecological Information

Ecotoxicological data

Product

Test Results

MAGNESIUM SULFATE HEPTAHYDRATE (10034-99-8)

LC50 Fathead minnow (*Pimephales promelas*): 2610 mg/l
96.00 hours

Ecotoxicity

This product has no known eco-toxicological effects.

Environmental effects

Ecological injuries are not known or expected under normal use. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Aquatic toxicity

This material is not expected to be harmful to aquatic life.

Persistence and degradability

The product is not expected to be biodegradable.

Partition coefficient (n-octanol/water)

Not available

13. Disposal Considerations

Disposal instructions

Dispose of contents/container in accordance with local/regional/national/international regulations. Incinerate the material under controlled conditions in an approved incinerator.

Contaminated packaging

Offer rinsed packaging material to local recycling facilities. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

This product is not listed on the U.S. EPA TSCA Inventory. Under TSCA, hydrates are considered mixtures of their anhydrous salt and water. Accordingly, the anhydrous form is subject to TSCA reporting requirements.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 311 hazardous chemical

No

Food and Drug Administration (FDA)

Total food additive
Direct food additive
GRAS food additive

Inventory status

Country(s) or region

Australia

Canada

Inventory name

Australian Inventory of Chemical Substances (AICS)

Domestic Substances List (DSL)

On inventory (yes/no)*

Yes

Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Saf-T-Data
 Health: 1 - Slight
 Flammability: 0 - None
 Reactivity: 1 - Slight
 Contact: 1 - Slight
 Lab Protective Equip: C - GOGGLES; LAB COAT; PROPER GLOVES
 Storage Color Code: G - Green (General Storage)

16. Labeling Info

Label Hazard Warning CAUTION

Product dust may be irritating to eyes, skin and respiratory system.

Label Precautions Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Keep container closed.

Label First Aid Immediately flush eyes with plenty of water for at least 15 minutes. Flush skin thoroughly with water. If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. Get medical attention if symptoms persist. If ingestion of a large amount does occur, call a poison control center immediately.

17. Other Information

NFPA ratings
 Health: 1
 Flammability: 0
 Instability: 0

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