

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **MAGNESIUM SULFATE HEPTAHYDRATE**

Other name(s): Epsom Salt

Recommended use: General Fertilizer

Supplier: Malaco International, Inc.
Street Address: 2070 No. Broadway
Walnut Creek, Ca.
94596

Telephone Number: 925-280-8710
Facsimile: 925-280-4580
Emergency Telephone: **Chemtrec 800-424-9300**

2. HAZARDS IDENTIFICATION

HMIS Ratings: Health Hazard: 1 Fire Hazard: 0 Physical Hazard: 0

Hazard Scale: 0=minimal 1 = slight 2 = Moderate 3 = Serious 4 = Sever * = Chronic hazard

SIGNAL WORD: None required

Symbols: None required

Hazard Statement(s): None required

Precautionary Statement (s):

Prevention:

Keep out of reach of children.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid release to the environment.

Response:

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (see First Aid Measures on this Safety Data Sheet). If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before re-use. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Disposal:

Dispose of contents/container in accordance with local/regional/national/international regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS Number | Proportion | Chemical Formula |
|--------------------------------|------------|------------|--------------------------------------|
| Magnesium Sulfate Heptahydrate | 10034-99-8 | >=98% | MgSO ₄ .7H ₂ O |

4. FIRST AID MEASURES

First Aid Measures

Inhalation: Remove from exposure area to fresh air immediately. If breathing is difficult, oxygen may be administered by a qualified operator. Keep person warm and at rest. Get medical attention for irritation or any other symptom.

Eye Contact: Flush eyes immediately with large amounts of water or normal saline solution occasionally lifting upper and lower lids until no evidence of product remains (approximately 15-20 minutes). Cover with sterile bandages. Call a physician if irritation persists.

Ingestion: DO NOT Induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin Contact Remove contaminated clothing and shoes. Wash affected area with soap or mild detergent and rinse with water until no evidence of product remains. Get medical assistance for irritation, or any other symptom.

Note to Physicians: The decision as to whether the severity of poisoning requires administration of any antidote and actual dose required should be made by a qualified medical personnel

5. FIRE FIGHTING MEASURES

Flash Point: None

Auto Ignition Temperature: Not Determined

Fire and Explosion Hazard: N/A

Extinguishing Media: Use any standard agent suitable for surrounding structural fire or for other chemicals that may be involved.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Dike area to prevent runoff and contamination of water sources.

Hazardous Combustion Products: N/A

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:

Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:

Wear protective equipment to prevent skin and eye contact and breathing in dust. Work up wind or increase ventilation. Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labelled containers or drums for disposal. Wash area down with excess water.

7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid skin and eye contact and breathing in dust.

Conditions for safe storage, including any incompatibilities:

Hygroscopic keep containers tightly closed in a dry, cool and well-ventilated place. Recommended storage conditions 68-110F and 54-87% relative humidity.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: No value assigned for this specific material by the National Occupational Health and Safety Commission. However, Exposure Standard(s) for constituent(s):

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

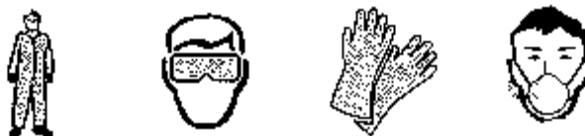
Appropriate engineering controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Avoid generating and breathing in dusts. Use with local exhaust ventilation or while wearing dust mask. Keep containers closed when not in use.

Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependant on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

Personal Protection - OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.



Wear overalls, chemical goggles and impervious gloves. If dust exists, wear dust mask/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Description: White or transparent crystalline odorless powder, free-flowing fine granules.

Molecular formula: $MgSO_4 \cdot 7H_2O$ (Magnesium Sulfate Heptahydrate)

Molecular Weight: 120.366 g/mol

Melting Point: 150C

Boiling Point: Not applicable

Vapor Pressure: Not applicable

Water Solubility: 71g/100ml at 20C, 91g/100ml at 40C

Specific Gravity: 1.76 g/cm Bulk density approximately 1.05g/cm

PH: Approximately 6-7

10. STABILITY AND REACTIVITY

Reactivity: Hygroscopic: absorbs moisture or water from surrounding air.

Chemical stability: Stable.

Possibility of hazardous reactions: Hazardous polymerisation will not occur.

Conditions to avoid: Avoid dust generation. Avoid exposure to moisture.

Incompatible materials: Incompatible with metal hydrides and other water reactive materials.

Hazardous decomposition products: At very high emperatures, magnesium oxide, sulfur dioxide, and sulfur trioxide may be generated

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

- Ingestion:** Swallowing can result in nausea, vomiting, diarrhoea, and gastrointestinal irritation. Symptoms of swallowing large amounts of soluble iron compounds may be delayed several hours and can include epigastric pain, vomiting blood and circulatory failure.
- Eye contact:** An eye irritant.
- Skin contact:** Contact with skin will result in irritation.
- Inhalation:** Breathing in dust may result in respiratory irritation.

Long Term Effects:

Evidence indicates that repeated or prolonged exposure to this chemical could result in effects on the liver. (1)

Toxicological Data:

Acute Toxicity:

LD50: 1520 mg/kg, oral, rat

LD50: 1480 mg/kg, oral, mouse

Local Effects: Corrosive to eyes, ingestion, skin irritant, mucous membranes.

Eyes: dose-420 ug: moderate (rabbit)

Inhalation: Inhalation of dust may cause irritation of the respiratory tract with sore throat.

Ingestion: In patients not in shock or coma, induce emesis with syrup of ipecac if vomiting has not occurred. . Follow with gastric lavage using Deferoxamine, 2 grams in 1 liter of water which contains sodium bicarbonate 20 gm/L. Leave 10 grams of deferoxamine in 50 ml of 5% sodium bicarbonate in the stomach. Maintain airway, blood pressure, and respiration

Delayed/Chronic:

Carcinogen status: Data not available.

Chronic Exposure: Reproductive effects have been reported in animals.

12. ECOLOGICAL INFORMATION

Acute Aquatic Toxicity: No data available.

Degradability: No data available

Log Bio concentration Factor (BCF): No data available

Log Octanol/Water partition coefficient: No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods:

Disposal of Wastes: Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging: Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

US DOT Shipping name: Not Regulated

US DOT Hazard Class: Not Classified

US DOT Identification Number: None

US DOT Packing Group: None

US DOT Label Code: None

Reportable Quantity: None

15. REGULATORY INFORMATION

Classification:

TSCA Status: All ingredients are listed on the TSCA Inventory of Chemical Substances.

Other TSCA Issues: None

SARA 311 Classification: Not Listed

SARA 313 Notification: There are no ingredients on the SARA 313 reporting list.

California Proposition 65: No data available.

Canadian Inventory: All ingredients are listed on the Canadian domestic Substances List.

WHMIS: This Product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the controlled Products Regulations. Classification: D2B

16. OTHER INFORMATION

NFPA Rating: Health: 1 Flammability: 0 Reactivity:

Label Hazard Warning: Warning! Causes irritation to skin, eyes and respiratory tract.

Label Precaution: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Avoid breathing dust. Use with adequate ventilation.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.