

MATERIAL SAFETY DATA SHEET

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Version 1.8

Section 1 - Product and Company Information

| | |
|---------------------------|-------------------------|
| Product Name | MAGNESIUM SULFATE, 97+% |
| Product Number | 208094 |
| Brand | ALDRICH |
| Company | Sigma-Aldrich |
| Street Address | 3050 Spruce Street |
| City, State, Zip, Country | SAINT LOUIS MO 63103 US |
| Technical Phone: | 314 771 5765 |
| Emergency Phone: | 414 273 3850 Ext. 5996 |
| Fax: | 800 325 5052 |

Section 2 - Composition/Information on Ingredient

| | | |
|-----------------------------|--|----------|
| Substance Name | CAS # | SARA 313 |
| MAGNESIUM SULFATE ANHYDROUS | 7487-88-9 | No |
| Formula | MgSO4 | |
| Synonyms | Epsom salts * Magnesium sulphate * Sulfuric acid magnesium salt (1:1) | |
| RTECS Number: | OM4500000 | |

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution: Avoid contact and inhalation. Target organ(s): Central nervous system. G.I. System.

HMIS RATING

HEALTH: 1*

FLAMMABILITY: 0

REACTIVITY: 1

NFPA RATING

HEALTH: 1

FLAMMABILITY: 0

REACTIVITY: 1

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed.

SPECIAL REQUIREMENTS

Hygroscopic.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Wear dust mask.
Hand: Protective gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

| | | |
|-----------------------|---------------------------------------|----------------------------|
| Appearance | Physical State: Solid Form: Powder | |
| Property | Value | At Temperature or Pressure |
| Molecular Weight | 120.37 AMU | |
| pH | N/A | |
| BP/BP Range | N/A | |
| MP/MP Range | N/A | |
| Freezing Point | N/A | |
| Vapor Pressure | < 0.1 mmHg | 20 °C |
| Vapor Density | < 0.01 g/l | |
| Saturated Vapor Conc. | N/A | |
| SG/Density | 1.07 g/cm3 | |
| Bulk Density | N/A | |
| Odor Threshold | N/A | |
| Volatile% | N/A | |
| VOC Content | N/A | |
| Water Content | N/A | |
| Solvent Content | N/A | |
| Evaporation Rate | N/A | |
| Viscosity | N/A | |
| Surface Tension | N/A | |
| Partition Coefficient | N/A | |
| Decomposition Temp. | N/A | |
| Flash Point | N/A | |
| Explosion Limits | N/A | |
| Flammability | N/A | |
| Autoignition Temp | N/A | |
| Refractive Index | N/A | |
| Optical Rotation | N/A | |
| Miscellaneous Data | N/A | |
| Solubility | N/A | |

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions to Avoid: Hygroscopic.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Sulfur oxides, Magnesium oxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

TARGET ORGAN(S) OR SYSTEM(S)

Central nervous system. G.I. System.

SIGNS AND SYMPTOMS OF EXPOSURE

Exposure can cause: Diarrhea. Vomiting. Can cause CNS depression. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

TOXICITY DATA

Intravenous Intravenous

Woman Woman

80 MG/KG 80 MG/KG

LDLO LDLO

Remarks: Cardiac:Other changes. Lungs, Thorax, or Respiration:Cyanosis. Cardiac:Other changes. Lungs, Thorax, or Respiration:Cyanosis.

Subcutaneous Subcutaneous

Rat Rat

1200 MG/KG 1200 MG/KG

LD50 LD50

Intraperitoneal Intraperitoneal

Mouse Mouse

1029 MG/KG 1029 MG/KG

LD50 LD50

Subcutaneous Subcutaneous

Mouse Mouse

645 MG/KG 645 MG/KG

LD50 LD50

CHRONIC EXPOSURE - TERATOGEN

Species: Rat Rat

Dose: 750 MG/KG 750 MG/KG

Route of Application: Intraperitoneal Intraperitoneal

Exposure Time: (17-21D PREG) (17-21D PREG)

Result: Effects on Embryo or Fetus: Other effects to embryo.

Specific Developmental Abnormalities: Hepatobiliary system.

Effects on Embryo or Fetus: Other effects to embryo. Specific

Developmental Abnormalities: Hepatobiliary system.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Woman Woman

Dose: 320 MG/KG 320 MG/KG

Route of Application: Intravenous Intravenous

Exposure Time: (39W PREG) (39W PREG)

Result: Maternal Effects: Other effects. Effects on Embryo or

Fetus: Other effects to embryo. Maternal Effects: Other effects.

Effects on Embryo or Fetus: Other effects to embryo.

Species: Rat

Dose: 9 GM/KG

Route of Application: Subcutaneous

Exposure Time: (15-20D PREG)

Result: Maternal Effects: Other effects.

Species: Rat
Dose: 18 GM/KG
Route of Application: Subcutaneous
Exposure Time: (15-20D PREG)
Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain). Effects on Newborn: Physical.

Section 12 - Ecological Information

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

S: 22 24/25

Safety Statements: Do not breathe dust. Avoid contact with skin and eyes.

US CLASSIFICATION AND LABEL TEXT

US Statements: Caution: Avoid contact and inhalation. Target organ(s): Central nervous system. G.I. System.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

TSCA INVENTORY ITEM: Yes Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our

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