

## 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.

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### Section 5 - Fire Fighting Measures

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#### 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.

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### Section 6 - Accidental Release Measures

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#### 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.

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### Section 7 - Handling and Storage

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#### 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.

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### Section 8 - Exposure Controls / PPE

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#### 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.

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## Section 9 - Physical/Chemical Properties

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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

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## Section 10 - Stability and Reactivity

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### 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

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## Section 11 - Toxicological Information

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### 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.

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## Section 12 - Ecological Information

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## Section 13 - Disposal Considerations

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### 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.

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## Section 14 - Transport Information

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### 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.

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## Section 15 - Regulatory Information

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### 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

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## Section 16 - Other Information

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### 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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