

## MATERIAL SAFETY DATA SHEET

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Version 1.10

## Section 1 - Product and Company Information

Product Name                   MAGNESIUM SULFATE, ANHYDROUS,  
REAGENTPLUS, 99%

Product Number                246972

Brand                           SIAL

Company                        Sigma-Aldrich

Address                         3050 Spruce Street  
SAINT LOUIS MO 63103 US

Technical Phone:               800-325-5832

Fax:                            800-325-5052

Emergency Phone:               314-776-6555

## 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: 0\*

FLAMMABILITY: 0

REACTIVITY: 0

## NFPA RATING

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

\*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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#### 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: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.  
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/cm <sup>3</sup>	
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	
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)

G.I. System. Central nervous system.

SIGNS AND SYMPTOMS OF EXPOSURE

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

TOXICITY DATA

Intravenous

Woman

80 MG/KG

LDLO

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

Subcutaneous

Rat

1200 MG/KG

LD50

Intraperitoneal

Mouse

1029 MG/KG

LD50

Subcutaneous

Mouse

645 MG/KG

LD50

CHRONIC EXPOSURE - TERATOGEN

Species: Rat

Dose: 750 MG/KG

Route of Application: Intraperitoneal

Exposure Time: (17-21D PREG)

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

Specific Developmental Abnormalities: Hepatobiliary system.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Woman

Dose: 320 MG/KG

Route of Application: Intravenous

Exposure Time: (39W PREG)

Result: 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: Physical. Effects on Newborn: Growth statistics (e.g., reduced weight gain).

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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 knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or

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