



SIGMA-ALDRICH

Material Safety Data Sheet

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Version 1.90

Section 1 - Product and Company Information

Product Name: Ammonium sulfate
Product Number: A5132
Brand: Sigma-Aldrich
Company: Sigma-Aldrich
Street Address: 3050 Spruce Street
City, State, Zip, Country: 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

Table with 5 columns: Substance Name, CAS #, SARA 313, EC no, Annex I Index Number. Row 1: AMMONIUM SULFATE, 7783-20-2, No, 231-984-1.

Formula: (NH4)2SO4
Synonyms: Actamaster, Ammonium sulphate, Diammonium sulfate, Diammonium sulphate, Dolamin, Mascagnite, Sulfatom ammoniya (Russian), Sulfuric acid, diammonium salt

Section 3 - Hazards Identification

HMIS Rating: Health: 1, Flammability: 0, Reactivity: 0
NFPA Rating: Health: 0, Flammability: 0, Reactivity: 0

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

Autoignition Temp: 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.

Section 8 - Exposure Controls / PPE

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.

Section 9 - Physical/Chemical Properties

Appearance Physical State: Solid
Color: Colorless
Form: Crystals

Molecular Weight: 132.14 AMU

pH 5.0 - 6.0
BP/BP Range N/A
MP/MP Range > 280 °C
Freezing Point N/A
Vapor Pressure N/A
Vapor Density N/A
Saturated Vapor Conc. N/A
SG/Density 1.77 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
Partition Coefficient Log Kow: -5.1 25 °C
Decomposition Temp. N/A
Flash Point °F N/A
Flash Point °C N/A

Explosion Limits N/A

Flammability N/A
Autoignition Temp N/A
Refractive Index 1.396
Solubility
Solubility in Water: 1 M in H₂O, 20°C, complete, colorless

N/A = not available

Section 10 - Stability and Reactivity

Stability
Stable
Stable.
Materials to Avoid
Strong oxidizing agents, Strong bases.

Hazardous Decomposition Products
Hazardous Decomposition Products
Sulfur oxides, Ammonia, Nitrogen oxides.

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.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS Number: BS4500000

Toxicity Data

Oral - Rat: 2840 mg/kg (LD50)
Remarks: Behavioral: Somnolence (general depressed activity).
Behavioral: Muscle contraction or spasticity.
Lungs, Thorax, or Respiration: Other changes.

Oral - Mouse: 640 mg/kg (LD50)
Remarks: Behavioral: Somnolence (general depressed activity).
Behavioral: Muscle contraction or spasticity.
Lungs, Thorax, or Respiration: Other changes.

Intraperitoneal - Mouse: 610 MG/KG (LD50)
Remarks: Behavioral: Tremor.
Behavioral: Convulsions or effect on seizure threshold.
Lungs, Thorax, or Respiration: Dyspnea.

Irritation Data

Skin - Rabbit:
Remarks: No irritation effect

Eyes - Rabbit:
Remarks: No irritation effect

Eyes - Human:
Remarks: Mild irritation effect

Skin - Human:
Remarks: Mild irritation effect

Section 12 - Ecological Information

No data available.

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

United States Regulatory Information
SARA Listed: No

TSCA Inventory Item: 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 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 from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

