

## MATERIAL SAFETY DATA SHEET

Date Printed: 11/08/2005

Date Updated: 04/12/2004

Version 1.8

## Section 1 - Product and Company Information

Product Name AMMONIUM SULFATE MOLECULAR BIOLOGY REAGENT  
Product Number A4418  
Brand SIGMA

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 AMMONIUM SULFATE CAS # 7783-20-2 SARA 313 No

Formula  $(\text{NH}_4)_2\text{SO}_4$   
Synonyms Actamaster \* Ammonium sulphate \* Diammonium sulfate \* Diammonium sulphate \* Dolamin \* Mascagnite \* Sulfatom ammoniya (Russian) \* Sulfuric acid, diammonium salt

RTECS Number: BS4500000

## 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.

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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.

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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  
Color: Colorless  
Form: Crystals

Property	Value	At Temperature or Pressure
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	
Surface Tension	N/A	
Partition Coefficient	Log Kow: - 5.1	25 °C
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	1.396	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	Solubility in Water: 1 M in H2O, 20°C complete, colorless	

N/A = not available

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## Section 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Materials to Avoid: Strong bases, Strong oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

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

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

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.

#### TOXICITY DATA

Oral

Rat

2840 mg/kg

LD50

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

Behavioral:Muscle contraction or spasticity.

Behavioral:Somnolence (general depressed activity).

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:Convulsions or effect on seizure threshold.

Behavioral:Tremor. 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

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#### Section 12 - Ecological Information

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No data available.

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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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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

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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 from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.