

## MATERIAL SAFETY DATA SHEET

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Section 1 - Product and Company Information

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Product Name AMMONIUM DIHYDROGENPHOSPHATE, 98+%,  
A.C.S. REAGENT  
Product Number 216003  
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

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Section 2 - Composition/Information on Ingredient

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Substance Name	CAS #	SARA 313 No
AMMONIUM DIHYDROGEN PHOSPHATE	7722-76-1	
Formula (NH <sub>4</sub> )H <sub>2</sub> PO <sub>4</sub>		

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Section 3 - Hazards Identification

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## HMIS RATING

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

## NFPA RATING

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

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

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Section 4 - First Aid Measures

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## 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: Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.

### 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: 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

Color: Colorless  
Form: Fine crystals

Property	Value	At Temperature or Pressure
Molecular Weight	115.03 AMU	
pH	7.8 - 8.2	20 °C Concentration: 5 g/l
BP/BP Range	N/A	
MP/MP Range	203.0 - 205.0 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	1.8 g/cm <sup>3</sup>	
Bulk Density	1,000 kg/l	
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	Solubility in Water:Soluble.	

N/A = not available

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## Section 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents, Strong acids, Sodium hypochlorite.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Nitrogen oxides, Ammonia, Thermal decomposition may produce toxic fumes of phosphorus oxides and/or phosphine.

### 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.

#### 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

5,750 mg/kg

LD50

Skin

Rabbit

> 7,940 mg/kg

LD50

#### IRRITATION DATA

Skin

Human

Remarks: Mild irritation effect

Eyes

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

#### 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 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.