

## Material Safety Data Sheet

Date Printed: 15/NOV/2004

Date Updated: 13/MAR/2004

Version 1.3

According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

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1 - Product and Company Information

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Product Name AMMONIUM NITRATE, REAGENTPLUS, 99.99+%  
Product Number 467758

Company Sigma-Aldrich Pty, Ltd  
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Australia

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2 - Composition/Information on Ingredients

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Product Name	CAS #	EC no	Annex I Index Number
AMMONIUM NITRATE	6484-52-2	229-347-8	None

Formula NH<sub>4</sub>NO<sub>3</sub>

Molecular Weight 80.04 AMU

Synonyms Ammonium nitrate \* Ammonium saltpeter \* Herco  
prills \* Nitric acid, ammonium salt \* Varioform I

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3 - Hazards Identification

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## SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Contact with combustible material may cause fire. Irritating to eyes, respiratory system and skin.

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4 - First Aid Measures

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## AFTER INHALATION

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

## AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

## AFTER EYE CONTACT

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.

## AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

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## 5 - Fire Fighting Measures

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### EXTINGUISHING MEDIA

Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

### SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions. Contact with other material may cause fire. May accelerate combustion.

Explosion Hazards: Container explosion may occur under fire conditions.

### SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

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## 6 - Accidental Release Measures

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PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL  
Evacuate area.

### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

### 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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## 7 - Handling and Storage

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### HANDLING

Directions for Safe Handling: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

### STORAGE

Conditions of Storage: Keep tightly closed. Keep away from combustible materials, heat, sparks, and open flame.

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## 8 - Exposure Controls / Personal Protection

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### ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

### GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Remove and wash contaminated clothing promptly. Discard contaminated shoes.

### PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

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## 9 - Physical and Chemical Properties

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Appearance

Physical State: Solid

Property

Value

At Temperature or Pressure

pH	4.5 - 6
BP/BP Range	210 °C
MP/MP Range	169 °C
Flash Point	N/A
Flammability	N/A
Autoignition Temp	N/A
Oxidizing Properties	N/A
Explosive Properties	N/A
Explosion Limits	N/A
Vapor Pressure	N/A
SG/Density	1.72 g/cm3
Partition Coefficient	N/A
Viscosity	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	Solubility in Water: 1 M in H <sub>2</sub> O, 20°C complete, colorless

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## 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Materials to Avoid: Strong reducing agents, Strong acids, Finely powdered metals.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Nitrogen oxides, Ammonia.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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## 11 - Toxicological Information

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RTECS NUMBER: BR9050000

### ACUTE TOXICITY

LD50

Oral

Rat

2217 mg/kg

### SIGNS AND SYMPTOMS OF EXPOSURE

Prolonged exposure can cause: Gastrointestinal disturbances. Blood effects. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes eye irritation.

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

Ingestion: May be harmful if swallowed.

TARGET ORGAN INFORMATION

Blood. Central nervous system.

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12 - Ecological Information

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No data available.

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13 - Disposal Considerations

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SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

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14 - Transport Information

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RID/ADR

UN#: 1942  
Class: 5.1  
PG: III  
Proper Shipping Name: Ammonium nitrate

IMDG

UN#: 1942  
Class: 5.1  
PG: III  
Proper Shipping Name: Ammonium nitrate  
Marine Pollutant: No  
Severe Marine Pollutant: No

IATA

UN#: 1942  
Class: 5.1  
PG: III  
Proper Shipping Name: Ammonium nitrate  
Inhalation Packing Group I: No

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15 - Regulatory Information

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CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: O Xi

Oxidizing. Irritant.

R-PHRASES: 8 36/37/38

Contact with combustible material may cause fire. Irritating to eyes, respiratory system and skin.

S-PHRASES: 17 26 36

Keep away from combustible material. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 1

SWITZERLAND

SWISS POISON CLASS: 4

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16 - Other Information

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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 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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