

MATERIAL SAFETY DATA SHEET

Date Printed: 01/31/2004

Date Updated: 01/23/2004

Version 1.5

Section 1 - Product and Company Information

Product Name	AMMONIUM PERSULFATE, 98%
Product Number	215589
Brand	ALDRICH
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	CAS #	SARA 313
AMMONIUM PEROXODISULFATE	7727-54-0	No
Formula	(NH ₄) ₂ S ₂ O ₈	
Synonyms	Ammonium peroxydisulfate * Diammonium peroxydisulfate * Diammonium peroxydisulphate * Diammonium persulfate * Persulfate d'ammonium (French)	
RTECS Number:	SE0350000	

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Oxidizing. Harmful.

Contact with combustible material may cause fire. Harmful if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.

HMIS RATING

HEALTH: 3

FLAMMABILITY: 0

REACTIVITY: 3

NFPA RATING

HEALTH: 3

FLAMMABILITY: 0

REACTIVITY: 3

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

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

EXPLOSION HAZARDS

Container explosion may occur under fire conditions.

CONDITIONS OF FLAMMABILITY

Vigorously supports combustion.

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: 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.
Contact with other material may cause fire. May accelerate combustion.

Section 6 - Accidental Release Measures

PROCEDURE 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

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed. Keep away from combustible

materials, heat, sparks, and open flame.
Store at 2-8°C

SPECIAL REQUIREMENTS
Moisture sensitive.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

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

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

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

EXPOSURE LIMITS, RTECS

Country	Source	Type	Value
USA USA	ACGIH ACGIH	TWA TWA	0.1 MG/M3 0.1 MG/M3

Section 9 - Physical/Chemical Properties

Appearance Color: White
 Form: Powder

Property	Value	At Temperature or Pressure
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Molecular Weight	228.2 AMU	
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pH	1 - 2	
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BP/BP Range	N/A	
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MP/MP Range	N/A	
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Freezing Point	N/A	
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Vapor Pressure	N/A	
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Vapor Density	7.9 g/l	
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Saturated Vapor Conc.	N/A	
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SG/Density	1.98 g/cm ³	
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Bulk Density	900 kg/l	
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Odor Threshold	N/A	
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Volatile%	N/A	
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VOC Content	N/A	
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Water Content	N/A	
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Solvent Content	N/A	
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Evaporation Rate	N/A	
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Viscosity	N/A	
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Surface Tension	N/A	
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Partition Coefficient	N/A	
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Decomposition Temp.	N/A	
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Flash Point	N/A	
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Explosion Limits	N/A	
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Flammability	N/A	
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Autoignition Temp	N/A	
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Refractive Index	N/A	
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Optical Rotation	N/A	
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Miscellaneous Data	N/A	
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Solubility	Solubility in Water: 1 M in H ₂ O, 20°C complete, colorless	
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N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions of Instability: May decompose on exposure to moist air or water.

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

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Nitrogen oxides, Sulfur oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

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.

SENSITIZATION

Sensitization: May cause allergic respiratory and skin reactions

SIGNS AND SYMPTOMS OF EXPOSURE

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

TOXICITY DATA

Skin

Rat

2,000 mg/kg

LD50

Oral

Rat

689 mg/kg

LD50

IRRITATION DATA

Eyes

Rabbit

Remarks: No irritation effect

Skin

Rabbit

Remarks: No irritation effect

CHRONIC EXPOSURE - MUTAGEN

Mutation test: Histidine reversion (Ames)

Section 12 - Ecological Information

ACUTE ECOTOXICITY TESTS

Test Type: LC50 Fish

Species: Poecilia reticulata

Time: 96 h

Value: 323 mg/l

Test Type: LC50 Fish
Species: Onchorhynchus mykiss (Rainbow trout)
Time: 96 h
Value: 76 mg/l

Test Type: EC50 Daphnia
Species: Daphnia magna
Time: 48 h
Value: 120 mg/l

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

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

Section 14 - Transport Information

DOT

Proper Shipping Name: Ammonium persulfate
UN#: 1444
Class: 5.1
Packing Group: Packing Group III
Hazard Label: Oxidizer
PIH: Not PIH

IATA

Proper Shipping Name: Ammonium persulphate
IATA UN Number: 1444
Hazard Class: 5.1
Packing Group: III

Section 15 - Regulatory Information

EU DIRECTIVES CLASSIFICATION

Symbol of Danger: O Xn
Indication of Danger: Oxidizing. Harmful.
R: 8 22 36/37/38 42/43
Risk Statements: Contact with combustible material may cause fire. Harmful if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.
S: 22 24 26 37
Safety Statements: Do not breathe dust. Avoid contact with skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Oxidizing. Harmful.
Risk Statements: Contact with combustible material may cause fire. Harmful if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.
Safety Statements: Do not breathe dust. Avoid contact with skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves.

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

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. 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.