

Material Safety Data Sheet

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Version 1.7
According to 91/155/EEC

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

1 - Product and Company Information

Product Name	AMMONIUM PERSULFATE, 98+%, A.C.S.
Product Number	REAGEN T 248614
Company	Sigma-Aldrich Pty, Ltd Unit 2, 14 Anella Avenue Castle Hill NSW 1765 Australia
Technical Phone #	+61 2 9841 0555
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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
PEROXYDISULFURIC ACID, DIAMMONIUM SALT	7727-54-0	231-786-5	016-060-00-6
Formula	$(\text{NH}_4)_2\text{S}_2\text{O}_8$		
Molecular Weight	228.2 AMU		
Synonyms	Ammonium peroxydisulfate * Diammonium peroxydisulfate * Diammonium peroxydisulphate * Diammonium persulfate * Persulfate d'ammonium (French) * ammonium peroxodisulfate		

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

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.

4 - First Aid Measures

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.

5 - Fire Fighting Measures

CONDITIONS OF FLAMMABILITY

Vigorously supports combustion.

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.

6 - Accidental Release Measures

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

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

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe vapor. 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.

Store at 2-8°C

SPECIAL REQUIREMENTS: Moisture sensitive.

8 - Exposure Controls / Personal Protection

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.

EXPOSURE LIMITS - UNITED KINGDOM

Source	Type	Value
OEL	TWA	1 mg/m ³

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.
Hand Protection: Compatible chemical-resistant gloves.
Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State: Solid Color: White Form: Powder
Property	Value
pH	1 - 2
BP/BP Range	N/A
MP/MP Range	N/A
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	1.98 g/cm ³
Partition Coefficient	N/A
Viscosity	N/A
Vapor Density	7.9 g/l
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	900 kg/l
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 ₂ O, 20°C complete, colorless

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

11 - Toxicological Information

RTECS NUMBER: SE0350000

ACUTE TOXICITY

LD50
Skin
Rat
2,000 mg/kg

LD50
Oral
Rat
689 mg/kg

IRRITATION DATA

Eyes
Rabbit
Remarks: No irritation effect
Skin
Rabbit
Remarks: No irritation effect

SENSITIZATION

Sensitization: May cause allergic reaction.

SIGNS AND SYMPTOMS OF EXPOSURE

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: Harmful if swallowed.

CHRONIC EXPOSURE - MUTAGEN

Mutation test: Histidine reversion (Ames)

12 - Ecological Information

ECOTOXICOLOGICAL EFFECTS

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

13 - Disposal Considerations

SUBSTANCE DISPOSAL

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

environmental regulations.

14 - Transport Information

RID/ADR

UN#: 1444
Class: 5.1
PG: III
Proper Shipping Name: Ammonium persulphate

IMDG

UN#: 1444
Class: 5.1
PG: III
Proper Shipping Name: Ammonium persulphate
Marine Pollutant: No
Severe Marine Pollutant: No

IATA

UN#: 1444
Class: 5.1
PG: III
Proper Shipping Name: Ammonium persulphate
Inhalation Packing Group I: No

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 016-060-00-6

INDICATION OF DANGER: O Xn
Oxidizing. Harmful.

R-PHRASES: 8 22 36/37/38 42/43

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-PHRASES: 22 24 26 37

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.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 1

SWITZERLAND

SWISS POISON CLASS: 4

16 - Other Information

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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