



## Material Safety Data Sheet

Creation Date 10-Dec-2009

Revision Date 10-Dec-2009

Revision Number 1

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** Ammonium Peroxydisulfate

**Cat No.** A682-3; A682-10; A682-500; BP179-25; BP179-100

**Synonyms** Ammonium persulfate (Crystalline/Certified ACS/Electrophoresis)

**Recommended Use** Laboratory chemicals

**Company** Fisher Scientific  
Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

**Emergency Telephone Number**  
CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 703-527-3887

### 2. HAZARDS IDENTIFICATION

#### DANGER!

#### Emergency Overview

Oxidizer: Contact with combustible/organic material may cause fire. Harmful if swallowed. Causes eye, skin, and respiratory tract irritation. May cause allergic respiratory and skin reaction.

**Appearance** White

**Physical State** Powder

**Odor** odorless

**Target Organs** Respiratory system, Eyes, Skin

#### Potential Health Effects

#### Acute Effects

#### Principle Routes of Exposure

**Eyes**

Irritating to eyes.

**Skin**

Irritating to skin. May be harmful in contact with skin. May produce an allergic reaction.

**Inhalation**

Irritating to respiratory system. May cause allergic respiratory reaction. May be harmful if inhaled.

**Ingestion**

Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

#### **Chronic Effects**

Repeated contact may cause allergic reactions in very susceptible persons.

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions** No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Component	CAS-No	Weight %
Ammonium persulfate	7727-54-0	98

### 4. FIRST AID MEASURES

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.
<b>Ingestion</b>	Do not induce vomiting. Call a physician or Poison Control Center immediately.
<b>Notes to Physician</b>	Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

<b>Flash Point</b>	No information available.
<b>Method</b>	No information available.
<b>Autoignition Temperature</b>	No information available.
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Suitable Extinguishing Media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable Extinguishing Media</b>	No information available.
<b>Hazardous Combustion Products</b>	No information available.
<b>Sensitivity to mechanical impact</b>	No information available.
<b>Sensitivity to static discharge</b>	No information available.

#### Specific Hazards Arising from the Chemical

Oxidizer: Contact with combustible/organic material may cause fire. Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors.

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**NFPA**                      **Health 2**                      **Flammability 1**                      **Instability 2**                      **Physical hazards OX**

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing.
<b>Environmental Precautions</b>	Should not be released into the environment.
<b>Methods for Containment and Clean Up</b>	Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Keep combustibles (wood, paper, oil, etc) away from spilled material.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Use only under a chemical fume hood. Wear personal protective equipment. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Keep away from clothing and other combustible materials.
<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering Measures</b>	Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.
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### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ammonium persulfate	TWA: 0.1 mg/m <sup>3</sup>		

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Ammonium persulfate			TWA: 0.1 mg/m <sup>3</sup>

*NIOSH IDLH: Immediately Dangerous to Life or Health*

### Personal Protective Equipment

#### Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

#### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

#### Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Powder
<b>Appearance</b>	White
<b>Odor</b>	odorless
<b>Odor Threshold</b>	No information available.
<b>pH</b>	3.2 100 g/L
<b>Vapor Pressure</b>	negligible
<b>Vapor Density</b>	No information available.
<b>Viscosity</b>	No information available.
<b>Boiling Point/Range</b>	No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Melting Point/Range	120°C / 248°F
Decomposition temperature °C	120
Flash Point	No information available.
Evaporation Rate	negligible
Specific Gravity	1.980
Solubility	Soluble in water
log Pow	No data available
Molecular Weight	228.19
Molecular Formula	H8 N2 O8 S2

## 10. STABILITY AND REACTIVITY

Stability	Oxidizer: Contact with combustible/organic material may cause fire. Moisture sensitive.
Conditions to Avoid	Combustible material. Excess heat. Exposure to moisture.
Incompatible Materials	Reducing agents, Metals, Peroxides, Strong oxidizing agents
Hazardous Decomposition Products	Nitrogen oxides (NOx), Sulfur oxides, Ammonia
Hazardous Polymerization	Hazardous polymerization does not occur
Hazardous Reactions .	None under normal processing.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ammonium persulfate	495 mg/kg ( Rat )	Not listed	520 mg/L ( Rat ) 1 h

Irritation	Irritating to eyes, respiratory system and skin
Toxicologically Synergistic Products	No information available.
<u>Chronic Toxicity</u>	
Carcinogenicity	There are no known carcinogenic chemicals in this product
Sensitization	May cause sensitization by inhalation and skin contact
Mutagenic Effects	No information available.
Reproductive Effects	No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**Other Adverse Effects** The toxicological properties have not been fully investigated.. See actual entry in RTECS for complete information.

**Endocrine Disruptor Information** No information available

**12. ECOLOGICAL INFORMATION**

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ammonium persulfate	Not listed	Not listed	Not listed	EC50 48 h 120 mg/L

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available

**Mobility** No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

**14. TRANSPORT INFORMATION**

DOT

**UN-No** UN1444  
**Proper Shipping Name** AMMONIUM PERSULFATE  
**Hazard Class** 5.1  
**Packing Group** III

TDG

**UN-No** UN1444  
**Proper Shipping Name** AMMONIUM PERSULFATE  
**Hazard Class** 5.1  
**Packing Group** III

IATA

**UN-No** UN1444  
**Proper Shipping Name** AMMONIUM PERSULPHATE

**14. TRANSPORT INFORMATION**

Hazard Class 5.1  
Packing Group III

**IMDG/IMO**

UN-No UN1444  
Proper Shipping Name AMMONIUM PERSULPHATE  
Hazard Class 5.1  
Packing Group III

**15. REGULATORY INFORMATION****International Inventories**

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Ammonium persulfate	X	X	-	231-786-5	-		X	X	X	X	KE-09815 X

**Legend:**

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

TSCA 12(b) Not applicable

**SARA 313**

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Ammonium persulfate	7727-54-0	98	1.0

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard No  
Chronic Health Hazard No  
Fire Hazard No  
Sudden Release of Pressure Hazard No  
Reactive Hazard No

**Clean Water Act**  
Not applicable

**Clean Air Act**  
Not applicable

**OSHA**  
Not applicable

**CERCLA**  
Not Applicable

**California Proposition 65**  
This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ammonium persulfate	-	X	-	-	-

**U.S. Department of Transportation**  
Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**  
This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class**  
C Oxidizing materials  
D2A Very toxic materials  
D2B Toxic materials



**16. OTHER INFORMATION**

**Prepared By** Regulatory Affairs  
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**Creation Date** 10-Dec-2009

**Print Date** 10-Dec-2009

**Revision Summary** "\*\*\*\*", and red text indicates revision

**Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS

**REVIEWED**DATE: 30 March 2012*Chutterford*