

## SAFETY DATA SHEET

Creation Date 10-Dec-2009

Revision Date 30-May-2017

Revision Number 3

### 1. Identification

**Product Name** Ammonium persulfate

**Cat No. :** AC401160000; AC401160020; AC401160050; AC401160100;  
AC401160250; AC401161000; AC401165000

**Synonyms** Ammonium peroxydisulfate; Peroxydisulfuric acid diammonium salt

**Recommended Use** Laboratory chemicals.

**Uses advised against** Not for food, drug, pesticide or biocidal product use

#### Details of the supplier of the safety data sheet

##### Company

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

##### **Emergency Telephone Number**

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

### 2. Hazard(s) identification

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Oxidizing solids	Category 3
Acute oral toxicity	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

#### Label Elements

##### **Signal Word**

Danger

##### **Hazard Statements**

May intensify fire; oxidizer  
Harmful if swallowed  
Causes skin irritation  
Causes serious eye irritation  
May cause an allergic skin reaction  
May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause respiratory irritation



### Precautionary Statements

#### Prevention

Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Avoid breathing dust/fume/gas/mist/vapors/spray  
 In case of inadequate ventilation wear respiratory protection  
 Contaminated work clothing should not be allowed out of the workplace  
 Use only outdoors or in a well-ventilated area  
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
 Keep/Store away from clothing/ other combustible materials  
 Take any precaution to avoid mixing with combustibles

#### Inhalation

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

#### Skin

IF ON SKIN: Wash with plenty of soap and water  
 Take off contaminated clothing and wash before reuse  
 If skin irritation or rash occurs: Get medical advice/attention

#### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 If eye irritation persists: Get medical advice/attention

#### Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
 Rinse mouth

#### Fire

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

#### Storage

Store in a well-ventilated place. Keep container tightly closed  
 Store locked up

#### Disposal

Dispose of contents/container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

None identified

### 3. Composition / information on ingredients

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

### 4. First-aid measures

#### General Advice

If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.

#### Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

	Immediate medical attention is required.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. SPEEDY ACTION IS CRITICAL, GET MEDICAL AID IMMEDIATELY. Remove and wash contaminated clothing before re-use.
<b>Inhalation</b>	Move to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Consult a physician.
<b>Ingestion</b>	Do not induce vomiting. Call a physician or Poison Control Center immediately. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person.
<b>Most important symptoms/effects</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. . Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
<b>Notes to Physician</b>	Treat symptomatically

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Water spray.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	No information available
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Oxidizing Properties</b>	Oxidizer
<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. May ignite combustibles (wood paper, oil, clothing, etc.).

### Hazardous Combustion Products

Nitrogen oxides (NOx) Sulfur oxides Ammonia Oxygen

### 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. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
<b>Environmental Precautions</b>	Should not be released into the environment. See Section 12 for additional ecological information. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

**Methods for Containment and Clean Up** 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. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

## 7. Handling and storage

**Handling** 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. Pay attention to flashback. No information available.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

## 8. Exposure controls / personal protection

### Exposure Guidelines

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

### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

**Engineering Measures** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal Protective Equipment

**Eye/face Protection** Tightly fitting safety goggles.

**Skin and body protection** Long sleeved clothing. Impervious gloves.

**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.

**Hygiene Measures** When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

## 9. Physical and chemical properties

<b>Physical State</b>	Powder Solid
<b>Appearance</b>	White
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH</b>	3.2 - 100 g/L
<b>Melting Point/Range</b>	120 °C / 248 °F
<b>Boiling Point/Range</b>	No information available
<b>Flash Point</b>	No information available
<b>Evaporation Rate</b>	Not applicable
<b>Flammability (solid,gas)</b>	No information available
<b>Flammability or explosive limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Vapor Pressure</b>	negligible
<b>Vapor Density</b>	Not applicable
<b>Specific Gravity</b>	1.980
<b>Bulk Density</b>	900-1100 kg/m <sup>3</sup>

<b>Solubility</b>	Soluble in water
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	
<b>Decomposition Temperature</b>	> 120°C
<b>Viscosity</b>	Not applicable
<b>Molecular Formula</b>	H8 N2 O8 S2
<b>Molecular Weight</b>	228.19

## 10. Stability and reactivity

<b>Reactive Hazard</b>	Yes
<b>Stability</b>	Oxidizer: Contact with combustible/organic material may cause fire. Moisture sensitive.
<b>Conditions to Avoid</b>	Avoid dust formation. Combustible material. Excess heat. Exposure to moisture. Incompatible products.
<b>Incompatible Materials</b>	Reducing agents, Metals, Peroxides, Strong oxidizing agents, Strong reducing agents, Combustible material,
<b>Hazardous Decomposition Products</b>	Nitrogen oxides (NO <sub>x</sub> ), Sulfur oxides, Ammonia, Oxygen
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ammonium persulfate	LD50 = 495 mg/kg ( Rat )	> 2000 mg/kg	LC50 = 520 mg/L ( Rat ) 1 h

**Toxicologically Synergistic Products** No information available

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Irritation</b>	Irritating to eyes, respiratory system and skin
<b>Sensitization</b>	No information available
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Ammonium persulfate	7727-54-0	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and** Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling

**delayed** of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains. Contains a substance which is: Harmful to aquatic organisms. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ammonium persulfate	Not listed	LC50: = 323 mg/L, 96h (Poecilia reticulata) LC50: = 76.3 mg/L, 96h static (Oncorhynchus mykiss) LC50: = 103 mg/L, 96h static (Lepomis macrochirus)	Not listed	EC50: = 120 mg/L, 48h (Daphnia magna)

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 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  
 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

All of the components in the product are on the following Inventory lists: X = listed

### International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
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Ammonium persulfate	X	X	-	231-786-5	-		X	X	X	X	X
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**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 Hazard Categories**

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

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration  
Not applicable**CERCLA**

Not applicable

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

**U.S. State Right-to-Know Regulations**

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

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## 16. Other information

<b>Prepared By</b>	Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
<b>Creation Date</b>	10-Dec-2009
<b>Revision Date</b>	30-May-2017
<b>Print Date</b>	30-May-2017
<b>Revision Summary</b>	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

### Disclaimer

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

**End of SDS**