

SAFETY DATA SHEET

Creation Date 10-Dec-2009

Revision Date 29-Mar-2024

Revision Number 3

1. Identification

Product Name Diammonium peroxodisulphate

Cat No. : A10533

CAS No 7727-54-0

Synonyms Ammonium peroxydisulfate; Peroxydisulfuric acid diammonium salt

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757

Emergency Telephone Number

For information **US** call: 001-800-227-6701 / **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 CO₂, 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	>95

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.
Skin Contact	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 and gloves, including the inside, before re-use.
Inhalation	Remove 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 if necessary.
Ingestion	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.
Most important symptoms and effects	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
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray.
Unsuitable Extinguishing Media	No information available
Flash Point	No information available
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
Upper	No data available
Lower	No data available
Oxidizing Properties	Oxidizer
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	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

Personal Precautions	Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes or clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Environmental Precautions	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 and shovel into suitable containers 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/face protection. 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. Incompatible Materials. Reducing Agent. Metals. Peroxides. Strong oxidizing agents. Strong reducing agents. Combustible material. .

8. Exposure controls / personal protection

Exposure Guidelines

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

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.
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Personal Protective Equipment

Eye/face Protection	Tight sealing safety goggles.
Skin and body protection	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.
Recommended Filter type:	Particulates filter conforming to EN 143.
Hygiene Measures	When using do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

9. Physical and chemical properties

Physical State	Powder Solid
Appearance	White
Odor	Odorless
Odor Threshold	No information available
pH	3.2 100 g/L
Melting Point/Range	120 °C / 248 °F

Boiling Point/Range	No information available
Flash Point	No information available
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	negligible
Vapor Density	Not applicable
Specific Gravity	1.980
Bulk Density	900-1100 kg/m ³
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	> 120°C
Viscosity	Not applicable
Molecular Formula	H8 N2 O8 S2
Molecular Weight	228.19

10. Stability and reactivity

Reactive Hazard	Yes
Stability	Oxidizer: Contact with combustible/organic material may cause fire. Moisture sensitive.
Conditions to Avoid	Avoid dust formation. Combustible material. Excess heat. Exposure to moisture. Incompatible products.
Incompatible Materials	Reducing Agent, Metals, Peroxides, Strong oxidizing agents, Strong reducing agents, Combustible material,
Hazardous Decomposition Products	Nitrogen oxides (NO _x), Sulfur oxides, Ammonia, Oxygen
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	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 > 2.95 mg/L (Rat) 4 h

Toxicologically Synergistic Products No information available

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

Irritation	Irritating to eyes, respiratory system and skin
Sensitization	May cause sensitization by skin contact
Carcinogenicity	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 delayed	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
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: = 76.3 mg/L, 96h static (Oncorhynchus mykiss) LC50: = 323 mg/L, 96h (Poecilia reticulata) 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

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Ammonium persulfate	7727-54-0	X	ACTIVE	-

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT) Not applicable

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Ammonium persulfate	7727-54-0	X	-	231-786-5	X	X	X	X	X	KE-09815

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS No	Weight %	SARA 313 - Threshold Values %	SARA 313 - Reporting thresholds
Ammonium persulfate	7727-54-0	>95	1.0 %	-

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

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

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Ammonium persulfate	7727-54-0	-	Use restricted. See item 75. (see link for restriction details)	-

REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Ammonium persulfate	7727-54-0	Listed	Not applicable	Not applicable	Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Other International Regulations

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Ammonium persulfate	7727-54-0	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

Prepared By Health, Safety and Environmental Department

Email: chem.techinfo@thermofisher.com
www.thermofisher.com

Creation Date 10-Dec-2009
Revision Date 29-Mar-2024
Print Date 29-Mar-2024
Revision Summary New emergency telephone response service provider.

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