

SAN YUAN CHEMICAL CO., LTD.

SAFETY DATA SHEET

SDS RER: SY001

Ammonium Persulfate

1. Identification

Chemicals name:

Ammonium persulfate

Manufacturer name:

SAN YUAN CHEMICAL CO., LTD.
34 GUANG FUH ROAD CHIATAI INDUSTRIAL
AREAS TAI PAO CHIA-YI TAIWAN, R.O.C.

EMERGENCY TELEPHONE NUMBER

TEL:886-5-2379361
FAX:886-5-2379695

2. Hazard(s) identification

Chemicals hazard class:

Oxidizing solid category 3 、acute toxicity category 4 、skin corrosion/irritation category 2

Serious eye damage/eye irritation category 2A 、respiratory or skin sensitization category 1

Specific target organ systemic toxicity—single exposure category 3

Hazard symbol:



Signal word: danger

Hazard statement: H272- May intensify fire, oxidizer,

H334- May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H302- Harmful if swallowed.

H319- Causes serious eye irritation

H335 - May cause respiratory irritation.

H317- May cause an allergic skin reaction

H315- Causes skin irritation

Safety advice:

P210- Keep away from heat

P280- Wear protective gloves/eye protection/face protection

P403+233- Store in a well-ventilated place. Keep container tightly closed.

P304+340+312- If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

3. Composition/information on ingredients

Chemical Name: Ammonium Persulfate

Trade Name: Ammonium Persulfate

Product CAS No: 7727-54-0

%Purity: 99 – 100%

Synonyms

Ammoniumpersulfate ;Ammoniumpersulphate. Peroxydisulfuric acid diammonium salt ;

Ammonium peroxydisulfate ;Diammonium persulfate;APS

Chemical Formula: (NH₄)₂S₂O₈

Chemical Family: Persulfate Salt

4. First-aid measures

General advice

Remove from exposure, lie down. Victim to lie down in the recovery position, cover and keep him warm.

Remove immediately adhering matter. Symptoms of poisoning may not appear for several hours. Keep under medical supervision for at least 48 hours.

Inhalation

Remove from exposure, lie down. Call a physician immediately. Symptoms of poisoning may only appear several hours later. Keep under medical supervision for at least 48 hours.

Skin contact

Wash immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Protect unharmed eye
Consult a physician.

Ingestion

Clean mouth with water and drink plenty of water afterwards. Do not give milk, alcoholic beverages or castor oil. Never give anything by mouth to an unconscious person. If a person vomits when lying on his back, place him in the recovery position. Do not induce vomiting without medical advice. Call a physician immediately.

Notes to physician

Later control for pneumonia and lung oedema. In case of lung irritation, first treatment with dexametason aerosol (spray). Treat symptomatically.

5 Fire-fighting measures

Suitable extinguishing media

The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment, dry powder, sand, limestone powder, water spray

Extinguishing media which must not be used for safety reasons

foam, carbon dioxide (CO₂)

Special dangers caused by the substance or preparation itself, results of fire/burning, or ensuing gases

Prevent entering drainage system of water of fire fighting. Danger of explosion by prolonged heating. In the event of fire, the following can be released: Oxides of nitrogen, Oxides of sulfur, Toxic gases, Corrosive gases

Special protective equipment for firefighters

In the event of fire, wear self-contained breathing apparatus. Water mist may be used to cool closed containers. Full protection, if necessary.

6 Accidental release measures

Personal precautions

Ensure adequate ventilation. Avoid dust formation. Keep people away from and upwind of spill/leak. Use personal protective equipment. If air supply is not sufficient, wear protective breathing apparatus. Avoid inhalation, and contact with eyes or skin. Remove possible causes of ignition do not smoke.

Environmental precautions

Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. Protect from water. If accidental entry into drainage system occurs, inform responsible authorities.

Methods for cleaning up

Dam up. Take up mechanically and collect in suitable container for disposal. Avoid dust formation.

Additional advice

Never return spills in original containers for re-use.

7 Handling and storage

Handling

Safe handling advice

Use only in area provided with appropriate exhaust ventilation. During processing, dust may form explosive mixture in air. Use only clean and dry utensils. Protect from contamination. Keep away from heat and sources of ignition. Avoid dust formation. Avoid contact with skin and eyes. Observe directions on label. Only use working methods according to operating instructions. Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Advice on protection against fire and explosion

The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. During processing, dust may form explosive mixture in air. Keep product and empty container away from heat and sources of ignition. Keep away from combustible material. When using do not smoke, avoid shock and friction. Contact with water or heating causes the release of oxygen.

Storage

Requirements for storage rooms and containers

Store in a place accessible by authorized persons only. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Unsuitable materials: Metals.

Advice on common storage

Do not store with alkalis. Do not store with highly flammable, flammable or self-igniting materials. Never allow product to get in contact with water during storage.

Special storage conditions

Keep containers dry and tightly closed to avoid moisture absorption and contamination.

Do not empty into drains.

Keep temperatures below 30 °C.

Protect against moisture and store closed.

Protect from direct sunlight and warming.

8 Exposure controls/personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico(TWA)
AmmoniumPersulfate		-	-	-

Engineering measures

Ensure adequate ventilation, especially in confined areas. This should be achieved by the use of local exhaust ventilation and good general extraction.

Personal protective equipment

Respiratory protection

Half mask with a particle filter P2 (BS EN 143)

Eye protection

goggles

Hand protection

PVC or other plastic material gloves.

Skin and body protection

lightweight protective clothing, Rubber or plastic apron, safety shoes

Industrial hygiene

Avoid contact with skin, eyes and clothing. Keep away from food, drink and animal feeding stuffs.
When Using, do not eat, drink or smoke.

9 Physical and chemical properties

Appearance:	White crystal powder	Vapor pressure:	None
Odor:	Odorless	Solubility in water:	79.4 gm/100ml
Molecular weight:	228.2	(% by wt. @ 20 °C):	Not applicable
Boiling point:	Not applicable	Evaporation Rate:	Not applicable
Specific gravity (H ₂ O=1):	1.98 g/cc	Melting point:	Decomposes
Volatiles (%):	Not applicable	Self accelerating:	Not applicable
Vapor density air=1 :	Not applicable	Decomposition temperature :	> 60 °C
Flammability :	Not applicable	Flash point	Not applicable

10 Stability and reactivity

Conditions to avoid

Decomposes on heating. Do not expose to temperatures above 30 °C. Fire or intense heat may cause violent rupture of packages. Dust may form explosive mixture in air. Decomposes when moist.

Materials to avoid

strong bases, acids, light and/or alkaline metals, humid air, flammable materials, iron, organic materials, heavy metal salts

Hazardous decomposition products

Contact with strong bases liberates ammonia. Nitrogen oxides (NO_x), ammonia, Ozone, sulfur oxides, oxygen

Further information

Keep containers dry and tightly closed to avoid moisture absorption and contamination. Decomposition start from ~50 °C. Product is sensitive to moisture.

11 Toxicological information

Acute toxicity

Ingestion

LD50 oral rate: 689-820 mg/kg (RTECS/ECDIN)

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

Skin contact

LD50 dermal no data available

-

Inhalation

LC50 inhale. rate: 2.95 mg/1/4h (FMC Corp.)

-

Further information

Health injuries are not known or expected under normal use.

Primary irritation

Inhalation

Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Irritating to respiratory system. Irritation of mucous membranes. Effects of breathing high concentration of respirable particles may include: lung irritation.

Skin contact

Irritating to skin.

Eye contact

Irritating to eyes.

Ingestion

Ingestion causes irritation of upper respiratory system and gastrointestinal disturbance.

Further information

Product dust may be irritating to eyes, skin and respiratory system.

Chronic toxicity

Sensitization

May cause sensitization by inhalation and skin contact

Carcinogenicity

APS is not given in any official list as a carcinogen.

Mutagenicity

Tests on mammalian cell cultures did not show mutagenic effects.

Reproductive toxicity

no data available

Narcosis

no data available

Further information

In the case of skin irritation or allergic reactions, see a physician.

12 Ecological information

BOD5

-

COD

-

Aquatic toxicity

LC50/24h/daphnia = 120mg/1

EC50/24h/daphnia: 185mg/1

Toxicity to algae

EC50: 540mg/1

Toxicity to fish

LC50/96h/bluegill sunfish = 100mg/1

LC50/96h/rainbow trout: 71-79mg/1

Toxicity to bacteria

-

Bioaccumulation

not applicable

Mobility

no data available

Persistence and degradability

Biodegradable.

Further information

The aqueous medium should be given appropriate treatment as waste water in line with local regulations.

13 Disposal considerations**Waste from residues / unused products**

Offer surplus and non-recyclable solutions to a licensed disposal company. Can be landfilled or incinerated, when in compliance with the Environmental Protection (Duty of Care) Regulations 1991.

Contaminated packaging

Dispose of unused product. Offer rinsed packaging material to local recycling facilities.

14 Transport information

UN/ID No.: 1444

Packaging group: III

Labels: oxidizer

Road/Rail-transport (ADR/RID)

ADR/RID Class: 5.1 Number and letter: 18c Danger code: 50

Description of the goods: Ammonium persulfate

Other information: Limited quantities according to marginal 2501a ADR/RID: solids not more than 1 kg per inner packaging and not more than 30 kg per package.

Sea transport IMO/IMDG

IMDG class: 5.1 Subrisks: EmS: F – A, S – Q
IMDG page: 5126 MFAG: 725 Marine pollutant: no

Proper shipping name: AMMONIUM PERSULPHATE

Other information: -

Air transport ICAO-TI/IATA-DGR

IATA Class: 5.1

Packing instruction (passenger aircraft): 559

Packing instruction (cargo aircraft): 563

Proper shipping name: Ammonium persulfate

Other information: According to IATA respectively ICAO exempt from regulations up to 30g per inner packaging and 1kg per each outer packaging (excepted quantities).

15 Regulatory information

Chemical Name: Ammonium persulfate

CAS NO.: 7727-54-0

UN NO.: 1444

Labeling: oxidizer

Exceptional labeling: None

Additional advice: None

16 Other information

Issued by: SAN YUAN CHEMICAL CO., LTD.

34 GUANG FUH ROAD CHIA TAI INDUSTRIAL
AREA TAI PAO CHI-YI TAIWAN, R.O.C.

Contact person: HENRY WANG – General Manager

Issued date: Aug. 12, 2024

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.
