

SAFETY DATA SHEET

Version: v1

Revision Date: 2025-09-16

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Potassium peroxodisulfate
Product Number : P433868
Brand : aladdin
CAS-No. : 7727-21-1

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances.

1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION
Address : 14078 Meridian Parkway,
Riverside, CA. 92518
Telephone : +1 (833) 552-7181
Fax : no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300
CHEMTREC®, Outside the USA :

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Oxidizing solids (Category 3), H272

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Respiratory sensitization (Category 1), H334

Skin sensitization (Category 1), H317

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

2.2 GHS Label elements, including precautionary statements

Phone: +1 (833) 552-7181 Email: QualityAssurance@aladdinsci.com Website: <https://www.aladdinsci.com/>

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Pictogram



Danger

Signal word

Hazard statement(s)

H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H402	Harmful to aquatic life

Precautionary statement(s)

P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P220	Keep away from clothing and other combustible materials.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands [and ...] thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] Wear respiratory protection.
P321	Specific treatment (see ... on this label).
P330	Rinse mouth.
P302+P352	IF ON SKIN: wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P333+P313	IF SKIN irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use ... to extinguish.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to an approved waste disposal plant.
P264+P265	Wash hands [and ...] thoroughly after handling. Do not touch eyes.
P301+P317	IF SWALLOWED: Get medical help.
P337+P317	If eye irritation persists: Get medical help.
P332+P317	If skin irritation occurs: Get medical help.
P319	Get medical help if you feel unwell.
P342+P316	If experiencing respiratory symptoms: Get emergency medical help immediately.

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2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: Potassium persulfate, Potassium peroxodisulfate
Formula	: K ₂ S ₂ O ₈
Molecular weight	: 270.32
CAS No.	: 7727-21-1
EC-NO.	: 231-781-8

Component	Classification	Concentration
Potassium peroxodisulfate	Ox. Sol. 3; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; Resp. Sens. 1; Skin Sens. 1; STOT SE 3; H272, H302, H315, H319, H334, H317, H335	Ph.Eur., Premium-Grade Reagents, Suitable for Analysis, ACS, < = 0.001% N

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

no data available

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

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5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Sulfur oxides Potassium oxides Container explosion may occur under fire conditions. Not combustible. Has a fire-promoting effect due to release of oxygen. Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Keep away from open flames, hot surfaces and sources of ignition. Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Tightly closed. Keep locked up or in an area accessible only to qualified or authorized persons. Do not store near combustible materials. Moisture sensitive.

7.3 Specific end use(s)

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no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Hazard composition and occupational exposure limit:

Components	CAS No.	value	Control parameters	basis
Potassium persulfate	7727-21-1	TWA	0.1 mg/m ³	U.S.A. ACGIH Threshold Limit Value (TLV)

8.2 Exposure controls

Appropriate engineering controls

Operate according to industrial hygiene and safe use rules. Wash hands before rest and at the end of work.

Personal protective equipment**Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves

Body Protection

protective clothing

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

no data available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|---------------------------------|---------------------------------------|
| a) Appearance | form: Powder or Crystals color: White |
| b) Odour | no data available |
| c) Odour Threshold | no data available |
| d) pH | no data available |
| e) Melting point/freezing point | no data available |

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f) Initial boiling point and boiling range	no data available
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	2.48g/cm ³ at 20°C
n) Water solubility	no data available
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

9.2 Other safety information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapours with: Exothermic reaction with: Reducing agents combustible substances Sodium hydroxide Potassium hydroxide alkali hydroxides Water

10.4 Conditions to avoid

Exposure to moisture. Heat.

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 oral - rat - female - 700 mg/kg

(OECD Test Guideline 401)

Remarks: (compared with similar compounds)

The corresponding values are specified for the following substances: ammonium persulfate

LC50 inhalation - rats - male and female - 4 h ->=2.95 mg/l

(US-EPA)

Remarks: (compared with similar products)

The corresponding values are specified for the following substances: ammonium persulfate

Inhalation: Irritating to respiratory system.

LD50 transcutaneous - rats - male and female ->2000 mg/kg

(US-EPA)

Remarks: (compared with similar products)

The corresponding values are specified for the following substances: ammonium persulfate

Skin corrosion/irritation

Causes skin irritation. (Annex VI to Regulation (EC) No 1272/2008)

Serious eye damage/eye irritation

Eyes - Rabbit Result: It caused serious eye irritation. (OECD Test Guideline 405) Remarks: (compared with similar products) The corresponding values are specified for the following substances: ammonium persulfate (Annex VI to Regulation (EC) No 1272/2008)

Respiratory or skin sensitisation

Freund's complete adjuvant test - guinea pigs Result: Positive (OECD Test Guideline 406) Remarks: (Annex VI to Regulation (EC) No 1272/2008)

Germ cell mutagenicity

Test type: Ames test Test system: Salmonella typhimurium Metabolic activation: with or without metabolic activation Result: Negative Remarks: (compared with similar products) (ECHA) Corresponding values are specified for the following substances: sodium persulfate test type: out-of-phase DNA synthesis test Test system: rat hepatocytes Method: US-EPA Result: Negative Remarks: (compared with similar products) The corresponding values are specified for the following substances: sodium persulfate Test type: micronucleus test Species: mouse Cell type: bone marrow Route of exposure: intraperitoneal Method: OECD Test Guideline 474 Result: Negative Remarks: (compared with similar products) The corresponding values are specified for the following substances: sodium persulfate Test type: out-of-phase DNA synthesis test Species: rat Cell type: hepatocyte Poisoning route: oral Method: OECD Test Guideline 486 Result: Negative Remarks: (compared with similar products) The corresponding values are specified for

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the following substances: sodium persulfate

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

May cause respiratory irritation. - Respiratory system

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

Repeated toxicity - rat - male - oral - 90 days - level of no harmful effect observed - 91 mg/kg - harmful effect observed

Minimum level of - 200 mg/kg

Remarks: (compared with similar products)

Registration of toxic effects of chemical substances: SE0400000

As far as we know, the chemical, physical and toxic properties have not been fully studied.

SECTION 12: Ecological information

12.1 Toxicity

Static toxicity test for fish LC50 - Oncorhynchus mykiss (rainbow trout) - 76.3 mg/l - 96 h

Remarks: (compared with similar products)

(ECHA)

The corresponding values are specified for the following substances: ammonium persulfate

Toxicity to Daphnia and other aquatic invertebrates

Static test EC50 - Daphnia magna (Daphnia magna) - 120 mg/l - 48 h

Remarks: (compared with similar products)

(ECHA)

The corresponding values are specified for the following substances: ammonium persulfate

Static toxicity test on algae ErC50 - Phaeodactylum tricornutum - 320 mg/l - 72 h

(OECD Test Guide 201)

Remarks: (compared with similar products)

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The corresponding values are specified for the following substances: ammonium persulfate

Static toxicity test for bacteria EC50 - Pseudomonas putida - 36 mg/l - 18 h

Remarks: (compared with similar products)

(ECHA)

The corresponding values are specified for the following substances: ammonium persulfate

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no data available

SECTION 13:

13.1 Disposal considerations

Product

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur. Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 1492	Packing group: III	Class: 5.1
Proper shipping name: Potassium persulphate	Reportable Quantity(RQ): no data available	Poison Inhalation Hazard: no data available
Environmental Hazards: no		

IMDG

UN number: 1492	Packing group: III	EMS-No: no data available
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Proper shipping name: Potassium persulphate

IATA

UN number: 1492

Packing group: III

Class: 5.1

Proper shipping name: Potassium persulphate

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: Other information

Prepared By

Regulatory Affairs

ALADDIN SCIENTIFIC CORPORATION

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Revision Summary

SDS sections updated v1

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