

Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Sodium peroxodisulfate

Reference number(SDS): 67512jis_E1-3

Product type:

Reagent

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan

Division: Quality Assurance Department

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Section 2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

PHYSICAL AND CHEMICAL HAZARDS

Oxidizing solids: Category 3

HEALTH HAZARDS

Acute toxicity (Oral): Category 4

Respiratory sensitization: Category 1

Skin sensitization: Category 1

Specific target organ toxicity – single exposure: Category 2(systemic toxicity)

Specific target organ toxicity – single exposure: Category 3 (Respiratory tract irritation)

(Note) GHS classification without description: Not classified/Classification not possible

Label elements



Signal word: Danger

HAZARD STATEMENT

H272–May intensify fire; oxidizer

H302–Harmful if swallowed

H334–May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317–May cause an allergic skin reaction

H371–May cause damage to organs

H335–May cause respiratory irritation

PRECAUTIONARY STATEMENT

Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep away from clothing and other combustible materials.

Do not breathe dust/fume/gas/mist/vapors/spray.

In case of inadequate ventilation wear respiratory protection.

Use only outdoors or in a well-ventilated area.

Wash contaminated parts thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Sodium peroxodisulfate, JUNSEI CHEMICAL CO., LTD., 67512jis_E1-3, 07/Oct/2022

Wear protective gloves/protective clothing/eye protection/face protection.

Do not eat, drink or smoke when using this product.

Response

In case of fire: Use appropriate media to extinguish.

Call a POISON CENTER/doctor/physician if you feel unwell.

IF exposed or concerned: Call a POISON CENTER/doctor/physician.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

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

Storage

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

Store locked up.

Disposal

Dispose of contents/container in accordance with local/national regulation.

Specific Physical and Chemical hazards

Oxidizing material. Organic or combustible material may catch fire in contact with it.

Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Common name, synonyms: Sodium persulfate

Ingredient name: Sodium peroxodisulfate

Content (%): 98.0 <

Chemical formula: Na₂O₈S₂

CAS No.: 7775-27-1

MW: 238.10

ECNO: 231-892-1

Section 4. First-aid measures

Descriptions of first-aid measures

General measures

Call a POISON CENTER/doctor/physician if you feel unwell.

Keep victim warm and quiet.

Call emergency medical service.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Give artificial respiration if victim is not breathing.

Administer oxygen if breathing is difficult.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician.

Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water or shower.

Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Remove and isolate contaminated clothing and shoes.

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.

IF SWALLOWED

Rinse mouth.

If victim is conscious, give 1 – 2 glasses of water.

Call a POISON CENTER/doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Cough. Laboured breathing. Sore throat. Wheezing. Diarrhoea. Nausea. Vomiting.

(Symptoms when skin and/or eye contact)

Conjunctival redness of the eyes. Redness of the skin. Pain.

Section 5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

Use appropriate extinguishing media suitable for surrounding facilities.

Not combustible but enhances combustion of other substances.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

Advice for firefighters**Specific fire-fighting measures**

Evacuate non-essential personnel to safe area.

Cool container with water spray.

Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

Section 6. Accidental release measures**Personnel precautions, protective equipment and emergency procedures**

Keep unauthorized personnel away.

In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

Ventilate area until material pick up is complete.

Wear proper protective equipment.

PUBLIC SAFETY: Ventilate closed spaces before entering.

Environmental precautions

Avoid release to headsprings, rivers, lakes, ocean and groundwater.

Runoff may create fire or explosion hazard.

Methods and materials for containment and cleaning up

With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

※Do NOT absorb in saw-dust or other combustible absorbents.

Preventive measures for secondary accident

Collect spillage.

Stop leak if you can do it without risk.

Keep combustibles (wood, paper, oil, etc.) away from spilled material.

Do not get water inside containers.

Keep out of low areas.

Section 7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep away from clothing and other combustible materials.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

May ignite combustibles (wood, paper, oil, clothing, etc.).

Contaminated clothing may be a fire risk when dry.

Any incompatibilities

Strong bases, Reducing agents, Powdered metals, Combustible substances should not be mixed with the chemicals.

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Take off contaminated clothing and wash it before reuse.

Storage

Conditions for safe storage

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

Keep cool. Protect from sunlight.

Store in accordance with local/national regulation.

Store locked up.

Container and packaging materials for safe handling data is not available.

Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See

Section 8 for exposure controls and personal protection recommendations.

Section 8. Exposure controls/personal protection

Control parameters

Control value in MHLW is not available.

Adopted value

Adopted value in JSOH is not available.

ACGIH(2006) TWA: 0.1mg/m³ (Skin irr)

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures**Respiratory protection**

Wear respiratory protection.

Hand protection

Wear protective gloves.

Inspect before use and replace worn or damaged gloves.

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.

Eye protection

Wear safety glasses with side-shields.

Wear eye/face protection.

Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.

Section 9. Physical and Chemical Properties**Information on basic physical and chemical properties**

Physical state: Crystals or crystalline powder

Color: White

Odor: None

Odor threshold data is not available.

Melting point/Freezing point data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature: 180°C

Self-Accelerating Decomposition Temperature/SADT data is not available.

pH: 3.5~3.8 (100g/L, 20°C)

Dynamic viscosity data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: 55.6 g/100 ml (20°C)

Solubility in solvent data is not available.

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Vapor density data is not available.

Density and/or relative density: 1.1g/cm³

Relative vapor density (Air=1) data is not available.

Relative density of the Vapor/air – mixture at 20°C (Air = 1) data is not available.

Particle characteristics data is not available.

Other information

Critical temperature data is not available.

Evaporation rate data is not available.

VOC data is not available.

Section 10. Stability and Reactivity**Reactivity**

Runaway polymerization will not occur.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

The substance is a strong oxidant. It reacts with combustible and reducing materials.
Decomposes on heating. This produces toxic and corrosive fumes.
Reacts violently with powdered metals and strong bases.
The solution in water is a weak acid.

Conditions to avoid

Contact with incompatible materials.
Heating.

Incompatible materials

Strong bases, Reducing agents, Powdered metals, Combustible substances

Hazardous decomposition products

Sulfur oxides, Sodium oxides.

Section 11. Toxicological Information**Information on toxicological effects****Acute toxicity****Acute toxicity (Oral)****[Product]**

Category 4, Harmful if swallowed

[Product data]

No data available.

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium peroxodisulfate)

male rat LD50=895mg/kg (SIDS, 2006)

Acute toxicity (Dermal)**[Product]**

Based on available data, the classification criteria are not met.

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium peroxodisulfate)

rabbit LD50 >10000 mg/kg (SIDS, 2006)

Acute toxicity (Inhalation)**[Product]**

Based on available data, the classification criteria are not met.

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium peroxodisulfate)

mist : rat LC50 >5.1 mg/L/4hr (SIDS, 2006)

Irritant properties**Skin corrosion/irritation****[Product]**

Based on available data, the classification criteria are not met.

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium peroxodisulfate)

rabbit : non-irritating or slightly irritating (SIDS, 2006; NICNAS, 2001)

Serious eye damage/irritation**[Product]**

Based on available data, the classification criteria are not met.

[Data for components of the product]

[Company proprietary data]

[GHS Cat. Japan, base data]

rabbit : non-irritating (SIDS, 2006; NICNAS, 2001)

Sensitization

Respiratory sensitization

[Product]

Category 1, May cause allergy or asthma symptoms or breathing difficulties if inhaled

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium peroxodisulfate)

cat. 1; SIDS, 2006; NICNAS, 2001

Skin sensitization

[Product]

Category 1, May cause an allergic skin reaction

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium peroxodisulfate)

cat. 1; SIDS, 2006; NICNAS, 2001

Germ cell mutagenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium peroxodisulfate)

mouse/rat_in vivo data :All negative (SIDS, 2006; NICNAS, 2001)

Reverse-mutation assay in bacteria (Ames test) :Negative(SIDS, 2006; IUCLID, 2000; NICNAS, 2001)

Chromosome aberration test :Negative(SIDS, 2006; IUCLID, 2000; NICNAS, 2001)

Carcinogenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Reproductive toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Category 2, May cause damage to organs

Category 3, May cause respiratory irritation

[Data for components of the product]

[cat.2]

[GHS Cat. Japan, base data]

(Sodium peroxodisulfate)

systemic toxicity (SIDS, 2006; NICNAS, 2001)

[cat.3 (resp. irrit.)]

[GHS Cat. Japan, base data]

(Sodium peroxodisulfate)

respiratory tract irritation (SIDS, 2006; NICNAS, 2001)

STOT-repeated exposure

[Product data]

No data available.

[Data for components of the product]

No data available.

Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Section 12. Ecological Information

Toxicity

Aquatic toxicity

[Product]

Based on available data, the classification criteria are not met.

[Data for components of the product]

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(Sodium peroxodisulfate)

Fish (Atheriniformes) LC50 > 100mg/L/96hr (MOE Japan, 1999)

Hazardous to the aquatic environment (Long-term)

[GHS Cat. Japan, base data]

(Sodium peroxodisulfate)

Algae (*Pseudokirchneriella subcapitata*) NOEC = 3.2mg/L/72hr (MOE Japan, 1999)

Water solubility

[Data for components of the product]

(Sodium peroxodisulfate)

55.6 g/100 ml (20°C) (ICSC, 2002)

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

Bioaccumulative potential data is not available.

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Dispose of contents/container in accordance with local/national regulation.

Section 14. Transport Information

UN No., UN CLASS

UN No. or ID No.: 1505

UN Proper Shipping Name : SODIUM PERSULPHATE

Class or division (Transport hazard class) : 5.1

Packing group : III

ERG GUIDE No.: 140

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 1505

Proper Shipping Name : SODIUM PERSULPHATE

Class or division : 5.1

Packing group : III

IATA Dangerous Goods Regulations

UN No.: 1505

Proper Shipping Name : SODIUM PERSULPHATE

Class or division : 5.1

Hazard labels : Oxidizer

Packing group : III

Environmental hazards**MARPOL Annex III – Prevention of pollution by harmful substances**

Marine pollutants (yes/no) : no

Maritime transport in bulk according to IMO instruments

Not applicable to Maritime transport in bulk according to IMO instruments

Section 15. Regulatory Information

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

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

7775-27-1

All components are listed or exempted.

Other regulatory information

We are not able to check up the regulatory information with regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

Section 16. Other information**GHS classification and labelling**

H272–Oxidising Solids, Category 3: H272 May intensify fire; oxidiser

H302–Acute toxicity, Category 4: H302 Harmful if swallowed

H334–Respiratory sensitization, Category 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317–Skin sensitization, Category 1: H317 May cause an allergic skin reaction

H371–STOT – single exposure, Category 2: H371 May cause damage to organs

H335–STOT – single exposure, Category 3, Respiratory tract irritation: H335 May cause respiratory irritation.

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN

IMDG Code, 2018 Edition (Incorporating Amendment 39–18)

IATA Dangerous Goods Regulations (62nd Edition) 2021

Sodium peroxodisulfate, JUNSEI CHEMICAL CO., LTD., 67512jis_E1-3, 07/Oct/2022

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2022 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

2021 Recommendation on TLVs (JSOH)

Supplier's data/information

Chemicals safety data management system "GHS Assistant" Version 4.19 (<https://www.asahi-ghs.com/>)

NITE Chemical Risk Information Platform "NITE-CHRIP"

(https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop)

GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.0) (Mar. 2020, METI)

Abbreviations and acronyms

SDS (Safety Data Sheet)

LD50 (Lethal Dose, 50%)

LC50 (Lethal Concentration, 50%)

IARC (International Agency for Research on Cancer)

ACGIH (American Conference of Governmental Industrial Hygienists)

EPA (US Environmental Protection Agency)

NTP (US National Toxicology Program)

JSOH (Japan Society for Occupational Health)

EU (European Union)

EC50 (Effective Concentration, 50%)

NOEC (No Observed Effect Concentration)

BOD (Biochemical Oxygen Demand)

COD (Chemical Oxygen Demand)

BCF (Bioconcentration Factor)

anh (anhydride)

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2021).