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Safety Data Sheet

1. Chemical product and company identification

Product name : Sodium peroxodisulfate

Company information

Name of manufacturer : KANTO CHEMICAL CO., INC.
Address : 2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, JP
Name of section : Business Administration Department, Reagent Division
Telephone number : +81-3-6214-1090
Facsimile number : +81-3-3241-1047
Mail address : BC32@kanto.co.jp
Reference No : 38117
Recommended use : For research use only
Restrictions on use : Seek expert judgment when using the product for applications other than those recommended.

2. Hazards identification

GHS classification

Physical 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.)

Hazard pictograms



Signal word : Danger

Hazard statements : May intensify fire; oxidizer
Harmful if swallowed
May cause an allergic skin reaction
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation
May cause damage to organs (systemic toxicity)

Precautionary statements

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.
Wash hands, forearms and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the

		workplace. Wear protective gloves/protective clothing/eye protection/face protection. [In case of inadequate ventilation] wear respiratory protection.
Response	:	IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF exposed or concerned: Call a POISON CENTER or doctor. Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. If skin irritation or rash occurs: Get medical advice/attention. If experiencing respiratory symptoms: Call a POISON CENTER or doctor. Take off contaminated clothing and wash it before reuse.
Storage	:	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	:	Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

3. Composition/information on ingredients

Distinction of substance or mixture	:	Substance
Synonyms	:	Sodium persulfate

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Sodium peroxodisulfate	≥ 98	Na2S2O8	Listed	231-892-1	7775-27-1

4. First aid measures

First aid measures

First-aid measures after inhalation	:	Remove the victim to fresh air, and make him blow his nose and gargle.
First-aid measures after skin contact	:	Wash the affected areas under running water.
First-aid measures after eye contact	:	Wash the affected areas under running water.
First-aid measures after ingestion	:	Give the victim water or salt water and make him vomit. Do not give an unconscious victim anything to drink and do not induce vomiting. Get medical attention.
Personal Protection in First Aid and Measures	:	Rescuers should wear proper protective equipment like rubber gloves, goggles.

Most Important Symptoms/Effects

Symptoms/effects	:	Inhalation causes cough, labored breathing, sore throat, and wheezing.

5. Fire fighting measures

Suitable extinguishing media	:	This product is noncombustible.
Unsuitable extinguishing media	:	None

Fire hazard	:	Contact with combustible material may cause fire. Thermal decomposition increase the susceptibility of substances to burn because of emission of oxygen.
Firefighting instructions	:	Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.
Personal protection (Emergency response)	:	Firefighters should wear protective equipment.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

General measures	:	Wear proper protective equipment and avoid contact with skin and inhalation of dust. Conduct operations from upwind and evacuate people downwind.

Environmental precautions

Environmental precautions	:	Attention should be given to avoid discharge of spilled product into rivers and resulting environmental damage. When diluting spill with large amounts of water, discharge of untreated wastewater into the environment must be avoided.

Methods and Equipment for Containment and Cleaning up

For containment	:	Sweep up in a chemical waste container. Flush contaminated area with copious amounts of water.
Prevention Measures for Secondary Accidents	:	Do not allow contact with organic substances or combustible substances.

7. Handling and storage

Handling

Technical measures	:	If necessary, wear proper protective equipment to avoid contact with skin or inhalation of dust.
Precautions for safe handling	:	Avoid formation of dust and aerosols. The substance is an oxdizer. Avoid contact with organic substances.

Storage

Storage conditions	:	Store in a dark, cool place and tightly closed. Keep away from combustible matrials.
Material used in packaging/containers	:	Glass, polyethylene, polypropylene.

8. Exposure controls / Personal protection equipment

ACGIH TWA	0.1 mg/m³ (as persulfate)

Appropriate engineering controls	:	Install a local ventilation system in case of dusty condition.

Protective equipment

Respiratory protection	:	Dust mask
Hand protection	:	Impervious protective gloves
Eye protection	:	Safety goggles

Skin and body protection	:	Protective clothing, protective boots

9. Physical and chemical properties

Physical state	:	Solid
Color	:	White - pale yellow
Odor	:	Odorless
pH	:	Acidity
Melting point	:	180 ° C (Decomposition)
Freezing point	:	No data available
Boiling point	:	Decomposition
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability	:	Non flammable.
Vapor pressure	:	No data available
Relative density	:	No data available
Density	:	2 g/cm³
Relative gas density	:	No data available
Solubility	:	Water: Soluble.
Partition coefficient n-octanol/water (log Pow)	:	No data available
Explosive limits (vol %)	:	No data available
Viscosity, kinematic	:	No data available
Particle characteristics	:	No data available

10. Stability and reactivity

Reactivity	:	Has strong oxidizing properties.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	React vigorously with aluminium, aluminium oxides, acetic anhydride and may cause fire or explode.
Conditions to avoid	:	Light, heat.
Incompatible materials	:	Combustible materials, reducing substances.
Hazardous decomposition products	:	Sulfur oxides.

11. Toxicological information

Acute toxicity (oral)	:	Harmful if swallowed rat LD50=895 mg/kg
Acute toxicity (dermal)	:	No classification rabbit LD50>10000 mg/kg
Acute toxicity (inhalation)	:	No classification (gas) No classification (vapor) No classification (dust, mist) rat LC50>5.1 mg/L/4h
Skin corrosion/irritation	:	No classification In skin irritation tests in rabbits receiving the substance for 4 hours, mean scores of erythema and edema were 0, indicating no irritation. Thus, it was not classified.

Serious eye damage/irritation	:	No classification In rabbit eye irritation tests, mean scores of iritis, keratitis, and conjunctivitis were all 0, indicating no irritation. Thus, it was not classified.
Respiratory sensitization	:	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Human studies have shown that inhalation exposure induced asthma symptoms. Thus, it was classified into category 1.
Skin sensitization	:	May cause an allergic skin reaction In guinea pig sensitization studies, after induction, challenge by intradermal injection gave positive results, whereas challenge by dermal application gave negative results. Both negative and positive sensitization results were reported in human patch tests. Although both negative and positive results were obtained, the substance was classified into category 1 based on positive data in humans and animals.
Germ cell mutagenicity	:	No classification As for in vivo tests, there are negative data on micronucleus examinations in mice, and unscheduled DNA synthesis test in rats. As for in vitro tests, there are negative data on reverse mutation test in bacteria, chromosome aberration tests in cultured mammalian cells, and unscheduled DNA synthesis test in rat hepatocyte cultures.
Carcinogenicity	:	Classification not possible
Reproductive toxicity	:	Classification not possible
STOT-single exposure	:	May cause damage to organs (systemic toxicity) May cause respiratory irritation The substance has airway stimulativeness. Although there are multiple human cases, no data is available for classification. In rats exposed by inhalation, dyspnea, respiratory depression, and nasal discharge were observed. In rats exposed by ingestion, nasal secretions, irregular respiration, sedation, ataxia, dyspnea, diarrhea, reduction in muscle tone, and mydriasis were observed. The effects by ingestion were seen with the dose of the guidance value range of category 2.Thus, it was classified into category 2 (systemic toxicity) and category 3 (respiratory tract irritation).
STOT-repeated exposure	:	Classification not possible
Aspiration hazard	:	Classification not possible

12. Ecological information

Ecotoxicity

Aquatic acute	:	No classification Oryzias latipes LC50>100 mg/L/96h
Aquatic chronic	:	No classification Pseudokirchneriella subcapitata NOEC=3.2 mg/L/72h

Persistence and degradability

No additional information available

Bioaccumulative potential

No additional information available

Mobility in soil

No additional information available

Hazardous to the ozone layer

Ozone	:	Classification not possible

13. Disposal considerations

Ecological waste information	:	Adjusts the aqueous solution of about 3%, and acidified to pH2 with sulfuri acid carefully. While stirring, add acidic sodium sulfite aqueous solution slowly at room temperature. There is a case in which temperature is rise by the reaction. The supernatant solution is disposed after it was adjusted to neutral. Or entrust approved waste disposal companies with the disposal.
Contaminated container and packaging	:	In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

International Regulations

Transport by sea(IMDG)

UN-No. (IMDG)	:	1505
Proper Shipping Name (IMDG)	:	SODIUM PERSULPHATE
Packing group (IMDG)	:	III
Transport hazard class(es) (IMDG)	:	5.1

Air transport(IATA)

UN-No. (IATA)	:	1505
Proper Shipping Name (IATA)	:	Sodium persulphate
Packing group (IATA)	:	III
Transport hazard class(es) (IATA)	:	5.1
Marine pollutant	:	Not applicable
MFAG-No	:	140

15. Regulatory information

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

16. Other information

Data sources	:	Encyclopaedia Chimica, Kyoritsu Shuppan Co, Ltd. (1963) . Handbook of 17322 Chemical Products, The Chemical Daily Co. (2022) . NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully.The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements.The information herein is only provision of information, and it does not represent a guarantee the properties of the product.The Safety Data Sheet(SDS) is prepared based on JIS Z7253.