

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** Sodium Persulfate

**Other means of identification**

**Synonyms:** Peroxydisulfuric acid, disodium salt  
**Product No.:** V035

**Recommended use and restriction on use**

**Recommended use:** For Laboratory, Research or Manufacturing Use.  
**Restrictions on use:** Not determined.

**Details of the supplier of the safety data sheet**

	Avantor Performance Materials, LLC 100 Matsonford Rd, Suite 200 Radnor, PA 19087
Telephone:	
	Customer Service: 855-282-6867
Fax:	
Contact Person:	Product Information Compliance
E-mail:	info@avantormaterials.com

**Emergency telephone number:**

CHEMTREC: 1-800-424-9300 within US and Canada (24 hrs/day, 7 days/week)

## 2. Hazard identification

**Hazard Classification**

**Physical Hazards**

Oxidizing solids	Category 3
------------------	------------

**Health Hazards**

Acute toxicity (Oral)	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Respiratory sensitizer	Category 1
Skin sensitizer	Category 1
Specific Target Organ Toxicity - Single Exposure	Category 3 <sup>1</sup>

**Target Organs**

1. Respiratory tract irritation.

**Unknown toxicity - Health**

Acute toxicity, inhalation, dust or mist	100 %
---	-------

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** 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:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. [In case of inadequate ventilation] wear respiratory protection.

**Response:** IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. If skin irritation or rash occurs: Get medical advice/attention.

**Storage:** Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification:** None.

**3. Composition/information on ingredients**

## Substances

Chemical name	Common name and synonyms	CAS number	Content in percent (%)*
Disodium peroxodisulfate	Peroxydisulfuric acid, disodium salt	7775-27-1	100,00%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First-aid measures

<b>General information:</b>	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance. Ensure that emergency personnel are aware of the material involved, and take precautions to protect themselves.
<b>Ingestion:</b>	Rinse mouth. Get medical attention if symptoms occur. Do not induce vomiting without advice from poison control center. Never give liquid to an unconscious person.
<b>Inhalation:</b>	Move to fresh air. Get medical attention if symptoms persist. If breathing stops, provide artificial respiration. For breathing difficulties, oxygen may be necessary.
<b>Skin Contact:</b>	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes. IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
<b>Eye contact:</b>	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation persists after washing.

### Most important symptoms/effects, acute and delayed

<b>Symptoms:</b>	Irritating to eyes, respiratory system and skin.
<b>Hazards:</b>	None known.

### Indication of immediate medical attention and special treatment needed

<b>Treatment:</b>	Symptoms may be delayed. Treat symptomatically.
-------------------	---

## 5. Fire-fighting measures

<b>General Fire Hazards:</b>	In case of fire and/or explosion do not breathe fumes.
------------------------------	--

### Suitable (and unsuitable) extinguishing media

<b>Suitable extinguishing media:</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing media:</b>	DO NOT USE WATER.

<b>Specific hazards arising from the chemical:</b>	May intensify fire; oxidizer.
--	-------------------------------

**Special protective equipment and precautions for firefighters**

- Special fire fighting procedures:** Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
- Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

- Personal precautions, protective equipment and emergency procedures:** Keep unauthorized personnel away. Ventilate closed spaces before entering them. Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment.
- Methods and material for containment and cleaning up:** Remove sources of ignition. Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination. Use non-sparking tools.
- Notification Procedures:** Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.
- Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

**7. Handling and storage**

- Precautions for safe handling:** Do not taste or swallow. Wash hands thoroughly after handling. Avoid contact with eyes. Keep away from food, drink and animal feeding stuffs. Keep away from combustible material. Do not eat, drink or smoke when using the product. Do not smoke, use open fire or other sources of ignition. Use personal protective equipment as required. See Section 8 of the SDS for Personal Protective Equipment. Observe good industrial hygiene practices. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Take any precaution to avoid mixing with combustibles. Wear fire resistant or flame retardant clothing. Avoid contact with skin. Do not breathe dust/fume/gas/mist/vapors/spray. Wash contaminated clothing before reuse.
- Conditions for safe storage, including any incompatibilities:** Keep container tightly closed in a cool, well-ventilated place. Keep container dry. Store away from incompatible materials. Eliminate sources of ignition. Store locked up.

**8. Exposure controls/personal protection**

**Control Parameters**

**Occupational Exposure Limits**

Chemical Identity	Type	Exposure Limit Values	Source
-------------------	------	-----------------------	--------

Disodium peroxodisulfate	TWA	0,1 mg/m <sup>3</sup>	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
Disodium peroxodisulfate - as persulfate	TWA	0,1 mg/m <sup>3</sup>	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Disodium peroxodisulfate - as persulfate	TWA	0,1 mg/m <sup>3</sup>	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
Disodium peroxodisulfate - as persulfate	TWA	0,1 mg/m <sup>3</sup>	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Disodium peroxodisulfate - as persulphate	8 HR ACL	0,1 mg/m <sup>3</sup>	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	0,3 mg/m <sup>3</sup>	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Disodium peroxodisulfate - as persulfate	TWA	0,1 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (2011)

**Appropriate Engineering Controls** No data available.

### Individual protection measures, such as personal protective equipment

**General information:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

**Eye/face protection:** Wear safety glasses with side shields (or goggles) and a face shield.

#### Skin Protection

**Hand Protection:** Chemical resistant gloves

**Other:** Wear suitable protective clothing.

**Respiratory Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

**Hygiene measures:** Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Avoid contact with eyes, skin, and clothing.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	Solid
<b>Form:</b>	Powder.
<b>Color:</b>	White
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	6
<b>Melting point/freezing point:</b>	180 °C
<b>Initial boiling point and boiling range:</b>	No data available.
<b>Flash Point:</b>	Not applicable

<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	No data available.
<b>Density:</b>	1,39 g/cm <sup>3</sup> (20 °C) 2,4 g/cm <sup>3</sup>
<b>Relative density:</b>	1,39 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	556 g/l (20 °C)
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Other information</b>	
<b>Molecular weight:</b>	238,09 g/mol (Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> )

## 10. Stability and reactivity

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Heat, sparks, flames. Moisture. Shocks and physical damage. Contact with incompatible materials.
<b>Incompatible Materials:</b>	Reducing agents. Flammable/combustible material. Organic compounds. Aluminum. Sodium hydroxide. Powdered metal.
<b>Hazardous Decomposition Products:</b>	Oxides of sulfur.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation:</b>	May be harmful if inhaled.
<b>Skin Contact:</b>	Causes skin irritation.
<b>Eye contact:</b>	Causes serious eye irritation.
<b>Ingestion:</b>	Harmful if swallowed.

**Information on toxicological effects**

**Acute toxicity (list all possible routes of exposure)**

**Oral**

**Product:** LD 50 (Rat): 700 - 1.130 mg/kg

**Dermal**

**Product:** LD 50 (Rabbit): > 10.000 mg/kg

**Inhalation**

**Product:** LC 50 (Rat): > 5,1 mg/l

**Repeated dose toxicity**

**Product:** No data available.

**Skin Corrosion/Irritation**

**Product:** Causes skin irritation.

**Serious Eye Damage/Eye Irritation**

**Product:** Causes serious eye irritation.

**Respiratory or Skin Sensitization**

**Product:** May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Carcinogenicity**

**Product:** This substance has no evidence of carcinogenic properties.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogenic components identified

**ACGIH Carcinogen List:**

No carcinogenic components identified

**Germ Cell Mutagenicity**

**In vitro**

**Product:** No mutagenic components identified

**In vivo**

**Product:** No mutagenic components identified

**Reproductive toxicity**

**Product:** No components toxic to reproduction

**Specific Target Organ Toxicity - Single Exposure**

**Product:** May cause respiratory irritation.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

**Aspiration Hazard**

**Product:** Not classified

**Other effects:**

None known.

## 12. Ecological information

### Ecotoxicity:

#### Acute hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Specified substance(s):

Disodium peroxodisulfate LC 50 (Oncorhynchus mykiss, 96 h): 76,3 - 163 mg/l  
NOAEL (Oncorhynchus mykiss, 96 h): 91,7 mg/l  
LC 50 (Scophthalmus maximus, 96 h): 107,6 mg/l

##### Aquatic Invertebrates

**Product:** No data available.

##### Specified substance(s):

Disodium peroxodisulfate LC 50 (Daphnia magna, 48 h): 64,6 mg/l  
EC 50 (Daphnia magna, 48 h): 120 - 133 mg/l  
EC 50 (Acartia tonsa, 48 h): 21,22 mg/l  
NOAEL (Daphnia magna, 48 h): 41 mg/l

#### Chronic hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Aquatic Invertebrates

**Product:** No data available.

##### Toxicity to Aquatic Plants

**Product:** No data available.

### Persistence and Degradability

#### Biodegradation

**Product:** There are no data on the degradability of this product.

#### BOD/COD Ratio

**Product:** No data available.

### Bioaccumulative potential

#### Bioconcentration Factor (BCF)

**Product:** No data available on bioaccumulation.

### Partition Coefficient n-octanol / water (log Kow)

**Product:** No data available.

### Mobility in soil:

The product is water soluble and may spread in water systems.



**Other adverse effects:** Contains a substance which causes risk of hazardous effects to the environment.

### 13. Disposal considerations

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Contaminated Packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### TDG

UN Number:	UN 1505
UN Proper Shipping Name:	SODIUM PERSULPHATE
Transport Hazard Class(es)	
Class:	5.1
Label(s):	5.1
Packing Group:	III
Marine Pollutant:	No
Special precautions for user:	Not determined.

#### IMDG

UN Number:	UN 1505
UN Proper Shipping Name:	SODIUM PERSULPHATE
Transport Hazard Class(es)	
Class:	5.1
Label(s):	5.1
EmS No.:	F-A, S-Q
Packing Group:	III
Marine Pollutant:	No
Special precautions for user:	Not determined.

#### IATA

UN Number:	UN 1505
UN Proper Shipping Name:	Sodium persulphate
Transport Hazard Class(es):	
Class:	5.1
Label(s):	5.1
Packing Group:	III
Marine Pollutant:	No
Special precautions for user:	Not determined.
Cargo aircraft only:	Allowed.

**Transport in bulk according to Annex II of MARPOL and the IBC Code:** Not applicable

### 15. Regulatory information

#### Canada Federal Regulations

##### List of Toxic Substances (CEPA, Schedule 1)

Not Regulated

##### Export Control List (CEPA 1999, Schedule 3)

Not Regulated

**National Pollutant Release Inventory (NPRI)**

**Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements**

NPRI PT5 Not Regulated

**Canada. National Pollutant Release Inventory (NPRI) (Schedule 1, Parts 1-4)**

NPRI Not Regulated

**Greenhouse Gases**

Not Regulated

**Controlled Drugs and Substances Act**

CA CDSI Not Regulated

CA CDSII Not Regulated

CA CDSIII Not Regulated

CA CDSIV Not Regulated

CA CDSV Not Regulated

CA CDSVII Not Regulated

CA CDSVIII Not Regulated

**Precursor Control Regulations**

Not Regulated

**International regulations**

**Montreal protocol**

Not applicable

**Stockholm convention**

Not applicable

**Rotterdam convention**

Not applicable

**Kyoto protocol**

Not applicable

**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Mexico INSQ:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory

**16. Other information**

**Revision Date:** 26.02.2020

**Version #:** 1.2

**Source of information:** Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, information from the Toxicology Data Network (TOXNET), European Chemical Agency (ECHA) substance dossiers, IARC Monographs, US National Toxicology Program data, the Agency for Toxic Substances and Disease Registry, other manufacturer's SDSs and other sources, as appropriate.

**Further Information:** No data available.

**Disclaimer:** The information provided in this Safety Data Sheet (SDS) was prepared based on data believed to be accurate as of the date of this SDS. TO THE GREATEST EXTENT PERMITTED BY LAW, AVANTOR PERFORMANCE MATERIALS ("AVANTOR") EXPRESSLY DISCLAIMS ANY AND ALL REPRESENTATIONS AND WARRANTIES REGARDING THE INFORMATION CONTAINED HEREIN INCLUDING, WITHOUT LIMITATION, AS TO ACCURACY, COMPLETENESS, FITNESS FOR PURPOSE OR USE, MERCHANTABILITY, NON-INFRINGEMENT, PERFORMANCE, SAFETY, SUITABILITY AND STABILITY. This SDS is intended as a guide to the appropriate use, handling, storage and disposal of the product to which it relates by properly trained personnel, and is not intended to be comprehensive. Users of Avantor's products are advised to perform their own tests and to exercise their own judgment to determine the safety, suitability and appropriate use, handling, storage and disposal of each product and product combination for their own purposes and uses. TO THE GREATEST EXTENT PERMITTED BY LAW, AVANTOR DISCLAIMS LIABILITY FOR, AND BY USING AVANTOR'S PRODUCTS PURCHASER AGREES THAT UNDER NO CIRCUMSTANCES SHALL AVANTOR BE LIABLE FOR, SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY TYPE OR KIND, INCLUDING WITHOUT LIMITATION, FOR LOSS OF PROFITS, REPUTATIONAL DAMAGE, PRODUCT RECALL OR BUSINESS INTERRUPTION.