SAFETY DATA SHEET

1. Identification

Product identifier: POTASSIUM PERSULFATE

Other means of identification
Product No.: 3239, 3238, 7076

Recommended use and restriction on use
Recommended use: Not available.
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer

Avantor Performance Materials, Inc.
3477 Corporate Parkway, Suite 200
Center Valley, PA 18034

Telephone: Customer Service: 855-282-6867
Fax: 610-573-2610
Contact Person: Environmental Health & Safety
E-mail: info@avantormaterials.com

Emergency telephone number: CHEMTREC: 1-800-424-9300 within US and Canada

CHEMTREC: 1-703-527-3887 outside US and Canada

2. Hazard(s) 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

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.

Target Organs:
respiratory tract irritation

Precautionary Statement

Prevention:
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep/Store away from clothing/combustible materials. Take any precaution to avoid mixing with combustibles. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

Response:
IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. 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.

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

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.

Unknown toxicity - Health

Acute toxicity, oral	100 %
Acute toxicity, dermal	100 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	100 %

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

3. Composition/information on ingredients

Substances

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
POTASSIUM PERSULFATE		7727-21-1	99 - 100%

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

4. First-aid measures

General information: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Ingestion: Rinse mouth. Get medical attention if symptoms occur.

Inhalation: Move to fresh air. Get medical attention if symptoms occur.

Skin Contact: Wash skin thoroughly with soap and water. If skin irritation or an allergic skin reaction develops, get medical attention.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

Most important symptoms/effects, acute and delayed

Symptoms: Irritating to eyes, respiratory system and skin. Harmful if swallowed. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

5. Fire-fighting measures

General Fire Hazards: May ignite other combustible materials. In case of fire and/or explosion do not breathe fumes.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Extinguish with foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: May intensify fire; oxidizer. Contact with combustible material may cause fire. During fire, gases hazardous to health may be formed.

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.

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. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and material for containment and cleaning up: Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if possible without any risk. Sweep up and place in a clearly labeled container for chemical waste. Collect in a non-combustible container for prompt disposal. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures: Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. 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 discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling: Keep away from combustible material. Do not get in eyes, on skin, on clothing. Wash hands thoroughly after handling. Do not eat, drink or smoke when using the product. Do not taste or swallow. Avoid breathing dust or vapor. Use caution when adding this material to water. Add material slowly when mixing with water. Do not add water to the material; instead, add the material to the water.

Conditions for safe storage, including any incompatibilities: Do not store in metal containers. Store away from heat and light. Keep away from combustible material. Keep containers closed when not in use. Store in a cool, dry place. Keep container in a well-ventilated place.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	type	Exposure Limit Values	Source
POTASSIUM PERSULFATE	TWA	0,1 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
POTASSIUM PERSULFATE - as persulfate	TWA	0,1 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
POTASSIUM PERSULFATE - as persulfate	TWA	0,1 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
POTASSIUM PERSULFATE - as persulfate	TWAEV	0,1 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
POTASSIUM PERSULFATE - as persulphate	8 HR ACL	0,1 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	0,3 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
POTASSIUM PERSULFATE - as persulfate	TWA	0,1 mg/m3	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:	Use tight fitting goggles if dust is generated.
Skin Protection	
Hand Protection:	Use suitable protective gloves if risk of skin contact.
Skin protection:	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. Air-purifying respirator with a high efficiency particulate filter.
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.

9. Physical and chemical properties

Appearance	
Physical state:	solid
Form:	Powder.
Color:	White
Odor:	Odorless
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	100 °C
Initial boiling point and boiling range:	No data available.
Flash Point:	No data available.
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	9,30 AIR=1
Relative density:	2,48 (20 °C)
Solubility(ies)	
Solubility in water:	47 g/l
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.

Decomposition temperature: No data available.
Viscosity: No data available.

Other information
Molecular weight: 270,32 g/mol (H2O8S2.2K)

10. Stability and reactivity

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical Stability: Unstable

Possibility of hazardous reactions: Hazardous polymerization does not occur.

Conditions to avoid: Heat. Shocks and physical damage. Contact with incompatible materials.

Incompatible Materials: Organic compounds. Powdered metal. Phosphorus. Halogens and halogenated compounds. Alkalies. Acids.

Hazardous Decomposition Products: By heating and fire, toxic vapors/gases may be formed.

11. Toxicological information

Information on likely routes of exposure
Ingestion: Harmful if swallowed.

Inhalation: May cause irritation to the respiratory system.

Skin Contact: Causes skin irritation.

Eye contact: Causes serious eye irritation.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: No data available.

Dermal
Product: No data available.

Inhalation
Product: No data available.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: Causes skin irritation.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization

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

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 Carcinogens:

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: Respiratory tract 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):

POTASSIUM PERSULFATE	LC 50 (Carp (Cyprinus carpio), 48 h): 1.360 mg/l Mortality LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 48 h): 234 mg/l Mortality LC 50 (Guppy (Poecilia reticulata), 48 h): 845 mg/l Mortality

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

POTASSIUM PERSULFATE	LC 50 (Cyclopoid copepod (Cyclops strenuus), 48 h): 1.175 mg/l Mortality LC 50 (Water flea (Daphnia pulicaria), 48 h): 251 mg/l Mortality LC 50 (Oligochaete family (Tubificidae), 48 h): 575 mg/l Mortality LC 50 (Water flea (Daphnia magna), 48 h): 92 mg/l Mortality

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: No data available.

Other Adverse Effects: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws.

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

14. Transport information

TDG

UN Number	UN1492
Proper Shipping Name	POTASSIUM PERSULPHATE
Class	5.1
Packing Group	III
Label(s)	5.1
Subsidiary risk label	–

IMDG

UN Number:	UN 1492
UN Proper Shipping Name:	POTASSIUM 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:	–

IATA

UN Number:	UN 1492
Proper Shipping Name:	Potassium persulphate
Transport Hazard Class(es):	
Class:	5.1
Label(s):	5.1
Marine Pollutant:	No
Packing Group:	III
Special precautions for user:	–

15. Regulatory information

Canada Federal Regulations
List of Toxic Substances (CEPA, Schedule 1)

Export Control List (CEPA 1999, Schedule 3)

National Pollutant Release Inventory (NPRI)

Greenhouse Gases

Controlled Drugs and Substances Act

Precursor Control Regulations

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
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

16.Other information, including date of preparation or last revision

Issue Date: 17.11.2015

Revision Date: No data available.

Version #: 1.0

Further Information: No data available.

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