



Potassium Sulfate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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SECTION 1: Identification

1.1. Identification

Product form : Substance
Substance name : Potassium Sulfate
CAS-No. : 7778-80-5
Formula : K_2SO_4

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Nutrient; Dietary Supplement; Pharmaceuticals
Laboratory Reagent; Nitrogen Determination

1.3. Supplier

Manufacturer

Jost Chemical Co.
8150 Lackland Rd.
Saint Louis, Missouri 63114
T 314-428-4300 - F 314-428-4366
sds@jostchemical.com - www.jostchemical.com

1.4. Emergency telephone number

Emergency number : For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
United States and Canada: 1-800-424-9300 / +1 703-527-3887
Global: +1 703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

No labeling applicable

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None, to our knowledge.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	GHS-US classification
Potassium Sulfate (Main constituent)	(CAS-No.) 7778-80-5	100	Not classified

Full text of hazard classes and H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact : Wash with water and soap. Take victim to a doctor if irritation persists. Wash skin with plenty of water.

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- First-aid measures after eye contact : Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist if irritation persists. Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Victim is fully conscious: immediately induce vomiting. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Potential Adverse human health effects and symptoms : Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Slightly harmful in contact with skin. Slightly irritant to skin. Slightly irritant to respiratory organs. Slightly irritant to eyes.
- Symptoms/effects after inhalation : AFTER INHALATION OF DUST: Coughing.
- Symptoms/effects after skin contact : Slight irritation.
- Symptoms/effects after eye contact : ON CONTINUOUS EXPOSURE/CONTACT: Redness of the eye tissue. Irritation of the eye tissue.
- Symptoms/effects after ingestion : AFTER INGESTION OF HIGH QUANTITIES: Gastrointestinal complaints. Nausea. Diarrhoea. Irritation of the gastric/intestinal mucosa. Decreased renal function. Disturbances of heart rate.
- Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. Respiratory difficulties.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting extinguisher, reel). Water. Class A foam. Water spray. Dry powder. Foam.
- Unsuitable extinguishing media : Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.

5.2. Specific hazards arising from the chemical

- Fire hazard : DIRECT FIRE HAZARD: No fire hazard. INDIRECT FIRE HAZARD: No fire hazard.
- Explosion hazard : DIRECT EXPLOSION HAZARD: No direct explosion hazard.
- Reactivity : In molten state: reacts violently with (some) metals.

5.3. Special protective equipment and precautions for fire-fighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighborhood close doors and windows.
- Firefighting instructions : Dilute toxic gases with water spray.
- Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.
- Emergency procedures : Ventilate spillage area. Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.
- Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighborhood close doors and windows.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray.
- Methods for cleaning up : Mechanically recover the product. Prevent dust cloud formation. Scoop solid spill into closing containers. Wash down leftovers with plenty of water. Wash clothing and equipment after handling.

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Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid raising dust. Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements.

Hygiene measures : Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Does not require any specific or particular technical measures.

Storage conditions : Store in a clean, dry warehouse in the original unopened containers. Store in a well-ventilated place. Keep cool.

Incompatible products : Strong oxidizing agents. Aluminum.

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.

Storage area : Store in a dry area. Store at room temperature. Keep container in a well-ventilated place. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: closing. dry. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: wood. glass. MATERIAL TO AVOID: aluminum.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Dust production: dust mask with filter type P1. Gloves. Safety glasses.

Materials for protective clothing:

GIVE GOOD RESISTANCE: rubber. nitrile rubber

Hand protection:

Gloves

Eye protection:

Safety glasses. In case of dust production: protective goggles. Safety glasses

Skin and body protection:

Protective clothing

Respiratory protection:

Dust production: dust mask with filter type P1. Dust production: dust mask with filter type P3

Personal protective equipment symbol(s):



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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder. Crystals. Granules.
Color	: Colorless to white
Odor	: Odorless
Odor threshold	: No data available
pH	: 2.5 - 5
Melting point	: 1067 °C
Freezing point	: Not applicable
Boiling point	: 1689 °C
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: Not applicable
Relative density	: 2.7
Specific gravity / density	: 2661 kg/m ³
Molecular mass	: 174.26 g/mol
Solubility	: Soluble in water. Water: 11 g/100ml (20 °C)
Log Pow	: Not applicable (inorganic substance)
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: Non oxidizing material according to EC criteria.

9.2. Other information

Minimum ignition energy	: Not applicable
SADT	: Not applicable
VOC content	: 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

In molten state: reacts violently with (some) metals.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None to our knowledge.

10.4. Conditions to avoid

Heat.

10.5. Incompatible materials

Strong oxidizing agents. Aluminum.

10.6. Hazardous decomposition products

On combustion or on thermal decomposition (pyrolysis) releases: Potassium oxides. Sulphur oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)

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Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Potassium Sulfate (7778-80-5)	
LD50 oral rat	6600 mg/kg (Rat)
LD50 dermal rat	> 2000 mg/kg (OECD 402 method)
ATE US (oral)	6600 mg/kg body weight

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 2.5 - 5
Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 2.5 - 5
Respiratory or skin sensitization : Not classified (Lack of data)
Germ cell mutagenicity : Not classified (Lack of data)
Carcinogenicity : Not classified (Lack of data)
Reproductive toxicity : Not classified (Lack of data)
Specific target organ toxicity – single exposure : Not classified (Lack of data)
Specific target organ toxicity – repeated exposure : Not classified (Lack of data)

Potassium Sulfate (7778-80-5)	
NOAEL (subacute,oral,animal/male,28 days)	>= 1500 mg/kg body weight (OECD 422 method)
NOAEL (subacute,oral,animal/female,28 days)	>= 1500 mg/kg body weight (OECD 422 method)

Aspiration hazard : Not classified
(Not applicable)
Viscosity, kinematic : No data available
Likely routes of exposure : Skin and eye contact. Inhalation. Ingestion.
Potential Adverse human health effects and symptoms : Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Slightly harmful in contact with skin. Slightly irritant to skin. Slightly irritant to respiratory organs. Slightly irritant to eyes.
Symptoms/effects after inhalation : AFTER INHALATION OF DUST: Coughing.
Symptoms/effects after skin contact : Slight irritation.
Symptoms/effects after eye contact : ON CONTINUOUS EXPOSURE/CONTACT: Redness of the eye tissue. Irritation of the eye tissue.
Symptoms/effects after ingestion : AFTER INGESTION OF HIGH QUANTITIES: Gastrointestinal complaints. Nausea. Diarrhoea. Irritation of the gastric/intestinal mucosa. Decreased renal function. Disturbances of heart rate.
Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. Respiratory difficulties.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water : Slightly harmful to crustacea. Slightly harmful to fishes. Mild water pollutant (surface water). Not harmful to algae.

Potassium Sulfate (7778-80-5)	
LC50 fish 1	653 - 796 mg/l (96 h, Lepomis macrochirus, Static system)
EC50 Daphnia 1	890 mg/l (48 h, Daphnia magna)

12.2. Persistence and degradability

Potassium Sulfate (7778-80-5)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

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12.3. Bioaccumulative potential

Potassium Sulfate (7778-80-5)	
Log Pow	Not applicable (inorganic substance)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste)	: LWCA (the Netherlands): KGA category 05.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Remove waste in accordance with local and/or national regulations. Recycle/reuse. Remove to an authorized dump (Class I). Precipitate/make insoluble.
Additional information	: Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Proper Shipping Name (Transportation of Dangerous Goods) : Not regulated for transport

Transport by sea

Proper Shipping Name (IMDG) : Not regulated for transport

Air transport

Proper Shipping Name (IATA) : Not regulated for transport

SECTION 15: Regulatory information

15.1. US Federal regulations

Potassium Sulfate (7778-80-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

Potassium Sulfate (7778-80-5)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Potassium Sulfate (7778-80-5)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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National regulations

Potassium Sulfate (7778-80-5)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

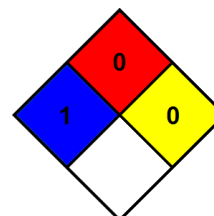
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NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product