

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
Substance name	: Potassium Sulfate
EC-No.	: 231-915-5
CAS-No.	: 7778-80-5
Formula	: K ₂ SO ₄

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

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

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

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

Distributor

JOST CHEMICAL EUROPE SPRL
rue du Bois Portal n° 30/1-3
B - 5300 Andenne - BELGIQUE
T +32 85-552655 - F +32 85-552654
info@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: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP] Mixtures/Substances: SDS EU 2015: According to Regulation (EU) 2015/830 (REACH Annex II)

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%
Potassium Sulfate	(CAS-No.) 7778-80-5 (EC-No.) 231-915-5	100

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.
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.

Potassium Sulfate

Safety Data Sheet

according to Regulation (EC) No. 453/2010

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 or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

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. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. 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. Special hazards arising from the substance or mixture

Fire hazard : DIRECT FIRE HAZARD: No fire hazard. INDIRECT FIRE HAZARD: No fire hazard.

Explosion hazard : DIRECT EXPLOSION HAZARD: No direct explosion hazard.

Hazardous decomposition products in case of fire : On heating/burning on exposure to temperature rise: release of toxic and corrosive gases/vapours (sulphur oxides).

5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood 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 neighbourhood 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.

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.

Potassium Sulfate

Safety Data Sheet

according to Regulation (EC) No. 453/2010

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. Aluminium.

Heat and ignition sources : 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: aluminium.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Potassium Sulfate (7778-80-5)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	21.3 mg/kg bw/day
Long-term - systemic effects, inhalation	37.6 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	12.8 mg/kg bw/day
Long-term - systemic effects, inhalation	11.1 mg/m ³
Long-term - systemic effects, dermal	12.8 mg/kg bw/day
PNEC (Water)	
PNEC aqua (freshwater)	0.68 mg/l
PNEC aqua (marine water)	0.068 mg/l
PNEC aqua (intermittent, freshwater)	6.8 mg/l
PNEC (STP)	
PNEC sewage treatment plant	10 mg/l

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

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

Potassium Sulfate

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Personal protective equipment symbol(s):



Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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

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. Aluminium.

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)
-----------------------	---

Potassium Sulfate

Safety Data Sheet

according to Regulation (EC) No. 453/2010

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

Potassium Sulfate (7778-80-5)

LD50 oral rat	6600 mg/kg (Rat)
LD50 dermal rat	> 2000 mg/kg (OECD 402 method)

Causes serious eye damage. : Not classified (Conclusive but not sufficient for classification)
pH: 2.5 - 5

Additional information : (Method EU B.46)

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 2.5 - 5

Additional information : (OECD 405 method)

Respiratory or skin sensitisation : Not classified (Lack of data)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Additional information : (OECD 471 method)
(OECD 473 method)

Carcinogenicity : Not classified (Lack of data)

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

Additional information : (OECD 422 method)
NOAEL (oral, rat) : \geq 1500 mg/kg/d

STOT-single exposure : Not classified (Lack of data)

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Potassium Sulfate (7778-80-5)

NOAEL (subacute, oral, animal/male, 28 days)	\geq 1500 mg/kg bodyweight (OECD 422 method)
NOAEL (subacute, oral, animal/female, 28 days)	\geq 1500 mg/kg bodyweight (OECD 422 method)

Aspiration hazard : Not classified (Not applicable)

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.

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.

Dangerous for the environment : Not classified

Chronic aquatic toxicity : Not classified

Potassium Sulfate (7778-80-5)

LC50 fish 1	653 - 796 mg/l (96 h, <i>Lepomis macrochirus</i> , Static system)
EC50 Daphnia 1	890 mg/l (48 h, <i>Daphnia magna</i>)
EC50 72h algae (1)	2900 mg/l (<i>Scenedesmus subspicatus</i>)

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

12.3. Bioaccumulative potential

Potassium Sulfate (7778-80-5)

Log Pow	Not applicable (inorganic substance)
Bioaccumulative potential	Not bioaccumulative.

Potassium Sulfate

Safety Data Sheet

according to Regulation (EC) No. 453/2010

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Potassium Sulfate (7778-80-5)

Results of PBT assessment	Not applicable (inorganic substance)
---------------------------	--------------------------------------

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment 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

In accordance with ADR / IMDG / IATA

14.1. UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not regulated for transport
Proper Shipping Name (IMDG)	: Not regulated for transport
Proper Shipping Name (IATA)	: Not regulated for transport

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: Not applicable
----------------------------------	------------------

IMDG

Transport hazard class(es) (IMDG)	: Not applicable
-----------------------------------	------------------

IATA

Transport hazard class(es) (IATA)	: Not applicable
-----------------------------------	------------------

14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: Not applicable.

14.6. Special precautions for user

Overland transport

Transport regulations (ADR)	: Not subject
-----------------------------	---------------

Transport by sea

Transport regulations (IMDG)	: Not subject
------------------------------	---------------

Air transport

Transport regulations (IATA)	: Not subject
------------------------------	---------------

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Potassium Sulfate is not on the REACH Candidate List

Potassium Sulfate is not on the REACH Annex XIV List

Potassium Sulfate

Safety Data Sheet

according to Regulation (EC) No. 453/2010

VOC content : 0 %

Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Canadian DSL (Domestic Substances List)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

This sheet was updated (refer to the date at the top of this page).

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