

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

1.1. Product identifier

Product form : Substance

Product name : Potassium Sulphate

EC no : 231-915-5

CAS No. : 7778-80-5

REACH registration No. : 01-2119489441-34

Synonyms: Krista SOP, Potassium sulfate

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

1.2.1. Relevant identified uses

Use of the substance/preparation:

Substance used as such, in formulation or in formulation of products such as:

- Fertilisers
- Metal Treatment
- Chemical products

1.2.2. Uses advised against

- None identified

Full text of use descriptors: see section 16.

1.3. Details of the supplier of the safety data sheet

Industrial Mineral Services Ltd.

Unit 4

Netherset Hey Lane Industrial Estate

Netherset Lane

Madeley

Nr Crewe

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CW3 9PE

T +44 (0)1630 673611 - F +44 (0)1630 674374

enquiries@industrialmineralservices.com – www.industrialmineralservices.co.uk

1.4. Emergency telephone number

T +44 (0)1630 673611 (Office hours only)

enquiries@industrialmineralservices.com

SECTION 2: Hazards identification.

2.1. Classification of the substance or mixture

Product definition: Mono-constituent substance

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

Physical and chemical hazards: Not classified

Human health: Not classified

Environment: Not classified

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD]

Not classified

Full text of R-phrases: see section 16

2.2. Label elements

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

None

2.3. Other hazards

Product forms slippery surface when combined with water.

SECTION 3: Composition/information on ingredients.

3.1. Substances

Chemical name	CAS No.	EC-No.	%	Classification (67/548/EEC)	Classification (1272/2008/EC)
Potassium sulphate	7778-80-5	231-915-5	100	N/A	N/A

Substance/mixture: Mono-constituent substance

Full text of R-, H- and EUH-phrases: see section 16

REACH registration No. 01-2119489441-34

SECTION 4: First aid measures.

4.1. Description of first aid measures

Inhalation: Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion: Rinse mouth thoroughly. Get medical attention if any discomfort continues.

Skin contact: Wash skin with soap and water. Get medical attention if irritation persists after washing.

Eye contact: Make sure to remove any contact lenses from the eyes before rinsing. Rinse eye with water immediately. Get medical attention if any discomfort continues.

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

Inhalation: No significant effects or critical hazards.

Ingestion: No significant effects or critical hazards.

Skin contact: No significant effects or critical hazards.

Eye contact: No significant effects or critical hazards.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5: Firefighting measures.

5.1. Extinguishing media

Suitable extinguishing media: No limitations. Adjust extinguishing media to the surrounding fire

Unsuitable extinguishing media: None

5.2. Special hazards arising from the substance or mixture

Fire hazard: Not flammable.

Explosion hazard: No explosive properties known.

Reactivity: Stable under normal conditions of handling and storage. Decomposition products may include the following materials: Sulphur oxides, metal oxide/oxides. Avoid breathing dusts, vapours or fumes from burning materials. In case of inhalation of decomposition products in a fire, symptoms may be delayed.

5.3. Advice for firefighters

Protection during firefighting: Fire fighter should wear the usual protective clothing and self-contained breathing apparatus.

SECTION 6: Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Keep public away from danger area. See section 8.2.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and soil. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Sweep or shovel spills into appropriate container for disposal. Avoid dust production.

6.4. Reference to other sections

See section 8 and 13 for more information.

SECTION 7: Handling and storage.

7.1. Precautions for safe handling

Precautions for safe handling: Do not breathe dust. Wash hands plentifully and other exposed areas with water after handling. Remove contaminated clothing and shoes. Wash clothing before re-using.

Packagings: Even those that have been emptied, will retain product residue. Always obey safety warnings and handle empty packages as if they were full. Avoid all contact with this substance.

Hygiene measures: When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Remove contaminated clothing and shoes.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in dry, cool, well-ventilated area. Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

The identified uses for this product are detailed in section 1.2

SECTION 8: Exposure controls/personal protection.

8.1. Control parameters

Occupational exposure limits: No exposure limit value known

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Potassium sulphate	DNEL	Long term - Dermal	21.3mg/kg bw/day	Workers	Systemic
Potassium sulphate	DNEL	Long term - Inhalation	37.6mg/m ³	Workers	Systemic

PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
Potassium sulphate	PNEC	Fresh water	0.68mg/l	Assessment Factors
Potassium sulphate	PNEC	Marine water	0.068mg/l	Assessment Factors
Potassium sulphate	PNEC	Sewage Treatment Plant	10mg/l	Assessment Factors

8.2. Exposure controls

Appropriate engineering controls: Use as far as possible in a closed system. Provide a regular control of the atmosphere. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Local exhaust and general ventilation must be adequate to meet exposure standards. Please refer to the annex (exposure scenarios).

Hand protection: Use gloves resistant to chemical products corresponding to EN 374:3. Take advice to gloves' manufacturer.

Eye protection: Wear safety glasses with side shields according EN 166.

Skin and body protection: Wear closed protective clothing.

Respiratory protection: Use respiratory protection mask according to EN 140 or EN 405 with filter type P3 according to EN 143:2000 or FFP3 according to EN 149:2001.

Environmental exposure controls: Avoid release to the environment.

SECTION 9: Physical and chemical; properties.

Physical state	Granular Solid
Colour	White/tan
Odour	odourless
Odour threshold	Not determined
pH	4.5 – 8.5 (Conc. (% w/w: 50g/l)
Relative evaporation rate (butylacetate=1)	No data available
Melting point	1,067 ^o C
Freezing point	No data available
Initial Boiling point	1,689 ^o C
Flash point	Not flammable
Self ignition temperature	Not applicable
Decomposition temperature	No data available
Flammability (solid, gas)	Not flammable
Vapour pressure	Not applicable (not volatile)
Relative vapour density at 20 °C	Not applicable (not volatile)
Relative density at 20 ^o C	2.66
Density	No data available
Log Pow	Not applicable
Log Kow	Not applicable
Viscosity, kinematic	Not applicable
Viscosity, dynamic	Not applicable
Explosive properties	Not explosive.
Oxidising properties	None
Explosive limits	Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity.

10.1. Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2. Chemical stability

The product is stable.

10.3. Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4. Conditions to avoid

Avoid contamination by any source including metals, dust and organic materials.

10.5. Incompatible materials

No specific data. Metal, Strong reducing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information.

11.1. Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure	References
Potassium sulphate	LD50 Oral	Rat	>2,000mg/kg 425 Acute Oral Toxicity: Up-and-Down Procedure		IUCLID5
Potassium sulphate	LC50 Inhalation	Rat	1.2mg/l	192 h	IUCLID5
Potassium sulphate	LD50 Dermal	Rat	>2,000mg/kg OECD 402		IUCLID5

Conclusion/Summary: No known significant effects or critical hazards.

Skin corrosion/irritation No known significant effects or critical hazards.

Serious eye damage/irritation No known significant effects or critical hazards.

Respiratory or skin sensitisation No known significant effects or critical hazards.

Germ cell mutagenicity No known significant effects or critical hazards.

Carcinogenicity

Product/ingredient name	Result	Species	Dose	References
Potassium sulphate	Negative- Oral NOAEL 453 Combined Chronic Toxicity/ Carcinogenicity Studies	Rat	284mg/kg bw/day	IUCLID5

Conclusion/Summary: No known significant effects or critical hazards.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	References
Potassium sulphate		Negative	Negative	Rat	Oral: >1,500mg/kg bw/day OECD 422	IUCLID5

Conclusion/Summary: No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Potential acute health effects

No known significant effects or critical hazards.

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure	References
Potassium sulphate	Chronic NOAEL Oral	Rat	256mg/kg 453 Combined Chronic Toxicity/ Carcinogenicity Studies		IUCLID5

Conclusion/Summary: No known significant effects or critical hazards.

SECTION 12: Ecological information.

12.1. Acute fish toxicity

Product/ingredient name	Result	Species	Exposure	References
Potassium sulphate	Acute LC50 680mg/l Fresh water	Fish - Fish	96 h	IUCLID5
Potassium sulphate	Acute LC50 3,550mg/l Fresh water	Fish - Bluegill	96 h	Proc. Acad. Nat. Sci. Philadelphia 106: 185-205
Potassium sulphate	Acute LC50 720mg/l Fresh water	Aquatic Invertebrates. Daphnia	48 h	IUCLID5
Potassium sulphate	Acute EC50 2,700mg/l Fresh water	Aquatic plants Algae	432 h	IUCLID5
Potassium sulphate	Acute NOEC50 >100mg/l Fresh water	Aquatic plants Algae		IUCLID5

Conclusion/Summary: No known significant effects or critical hazards.

12.2. Persistence and degradability

No known significant effects or critical hazards.

12.3. Bioaccumulative potential

No known significant effects or critical hazards.

12.4. Mobility in soil

This product may move with surface or groundwater flows because its water solubility is high.

12.5. Results of PBT and vPvB assessment

No known significant effects or critical hazards.

12.6. Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations.

13.1. Waste treatment methods

Waste treatment methods: Dispose of this material and residues in accordance with local authority requirements.

Additional information: Empty packaging can have residues or dusts and are subject to proper waste disposal, as above.

Ecology - waste materials: See the european waste catalogue. Waste code 06 03 14

SECTION 14: Transport information.

14.1. UN number

The product is not covered by international regulation on transport of dangerous goods (IMDG, IATA, ADR/RID).

14.2. UN proper shipping name

Not classified for transportation.

14.3. Transport hazard class(es)

Not classified for transportation.

14.4. Packing group

Not classified for transportation.

14.5. Environmental hazards

Other information: No environmental hazards known with this product.

14.6. Special precautions for user

Not classified for transportation

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information.

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

Not classified as dangerous according to Council Directive 67/548/EEC

Not classified as dangerous according to Council Regulation 1272/2008/EC

15.2. Chemical Safety Assessment.

Complete

SECTION 16: Other information.

Abbreviations and acronyms:

ADN: European Agreement concerning international carriage of Dangerous goods by Inland waterways

ADR: European Agreement concerning international carriage of Dangerous goods by Road

AF: Assessment factor

ATE: Acute Toxicity Estimate

BCF: Bioconcentration factor

Bw: Body weight

CAS: Chemical Abstracts Service

CLP: Classification, labelling, packaging

CSR: Chemical Safety Report

DMEL: Derived maximum effect level

DNEL: Derivative No effect Level

EC: European Community

ELV: Emission limit values

EN: European Norm

EUH: European Hazard Statement

EWC: European Waste catalogue

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

IMDG: International Maritime Dangerous Goods

LC50: Median lethal concentration

LD50: Median lethal dose

NOAEL: No-observed-adverse-effect-level

NOEC: No observed effect concentration
NOEL: No observed effect level
OEL: Operator exposure level
PBT: Persistent, bioaccumulative, Toxic
PEC: Predicted effect level
PNEC: Predicted No effect Concentration
REACH: Registration, evaluation and authorisation of chemicals
RID: Regulations concerning the international carriage of dangerous goods by rail
STEL: Short Term Exposure Limit
TWA: Time weighted average
vPvB: Very persistent, very bioaccumulative.

Key literature reference and sources for data:

EU REACH IUCLID5 CSR.

National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances.

IHS, 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.

Regulation (EC) No 1272/2008 Annex VI.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification: Not classified

Justification: Calculation method

Full text of abbreviated H statements: Not applicable

Full text of classifications (CLP/GHS): Not applicable

Full text of abbreviated R phrases: Not applicable

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