SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product:	**Solupotasse**
Product Use:	Fertiliser
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	Horticentre Ltd
Address:	10 Firth Street Drury, 2113
Telephone:	+64 9 294 8453
Fax Number:	+64 9 294 7272
Emergency Telephone:	**0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	21 November 2019

Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

EPA Approval No: Fertiliser (subsidiary) – HSR002571

Pictograms

Corrosive

Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
8.3A	H318	Causes serious eye damage.	Eye Corr. 1

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P310	Immediately call a POISON CENTER or doctor/physician.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage Code	Storage Statement
None allocated	

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
potassium sulfate	≥85	7778-80-5
Potassium hydrogensulphate	≤15	7646-93-7

Section 4. First Aid Measures

Routes of Exposure:

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

If in Eyes — Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist.

If on Skin — Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention.

If Swallowed — Clean mouth with water and drink afterwards plenty of water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Immediately call a POISON CENTER or doctor/physician.

If Inhaled — Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion: Not applicable.
Inhalation: Not applicable.
Skin: Not applicable.
Eyes: Corrosion of the eye tissue. Inflammation/damage of the eye tissue.

Section 5. Fire Fighting Measures

Hazard Type	Non-Flammable
Hazards from products	On burning: release of toxic and corrosive gases/vapours (sulphur oxides).
Suitable Extinguishing media	Adapt extinguishing media to the environment.
Precautions for firefighters and special protective	Gloves. Safety glasses. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Heat/fire exposure: compressed air/oxygen apparatus. Dilute toxic gases with water spray.

clothing	
HAZCHEM CODE	**None allocated**

Section 6. Accidental Release Measures

Wear protective equipment as detailed in Section 8. Prevent dust cloud formation, e.g. by wetting. No naked flames.

Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray.

Stop dust cloud by humidifying. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
Dispose of according to Local Regulations.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Avoid raising dust.
- Keep away from naked flames/heat.
- Observe normal hygiene standards.
- Wear protective clothing as detailed in Section 8.

Precautions for Storage:

- Store away from incompatible materials described in Section 10 and heat sources.
- Keep container tightly closed.
- Store in a dry area.
- Store at room temperature.
- Keep container in a well-ventilated place.
- Suitable Packaging Material: Polyethylene.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

	TWA		STEL	
Substance	**ppm**	**mg/m^3**	**ppm**	**mg/m^3**

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

DNEL values:

Workers:

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects dermal	21.3 mg/kg bw/day	
	Long-term systemic effects inhalation	37.6 mg/m^3	

General Population:

potassium sulfate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects oral	12.8 mg/kg bw/day	
	Long-term systemic effects dermal	12.8 mg/kg bw/day	
	Long-term systemic effects inhalation	11.1 mg/m^3	

PNEC

Potassium Sulfate:

Compartments	Value	Remark
Fresh water	0.68 mg/l	
Marine water	0.068 mg/l	
Aqua (intermittent releases)	6.8 mg/l	
STP	10 mg/l	

Engineering Controls

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.

Personal Protection Equipment

Eyes	In case of dust formation: Tightly fitting safety goggles.
Hands and Skin	Rubber Gloves. Protective clothing.
Respiratory	Dust production: dust mask with filter type P1.

Section 9 Physical and Chemical Properties

Appearance	Crystalline Powder
Colour	Colourless to white
Odour	Odourless
Odour Threshold	Not available
pH	Not available
Boiling Point	1689^0C
Melting Point	1067^0C
Freezing Point	Not available
Flash Point	Not available
Flammability	Non flammable
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Bulk Density	Not available
Solubilities	Water soluble
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Size	135 µm

Section 10. Stability and Reactivity

Stability of Substance	This material is thermally stable when stored and used as directed.
Hazardous Reactions	Substance has acid reaction.
Conditions to Avoid	Avoid raising dust. Keep away from naked flames/heat.
Incompatible Materials	In molten state: reacts violently with (some) metals.
Hazardous Decomposition Products	On burning: release of toxic and corrosive gases/vapours (sulphur oxides).

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Causes severe eye damage.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Components:

Potassium Sulfate:

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 425	> 2000 mg/kg bw		Rat (male/female)	Read-across	
Dermal	LD50	OECD 402	> 2000 mg/kg bw		Rat (male/female)	Experimental value	
Inhalation	LC50		> 1.2 mg/l	4 h	Rat	Read-across	

Potassium Hydrogensulphate:

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		2340 mg/kg		Rat		

Corrosive:
Solupotasse:

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage	OECD 437				Experimental value	
Skin	Not irritating	EU Method B.46				Experimental value	

Section 12. Ecotoxicological Information

This product is not hazardous to the environment.

Persistence and degradability	No data available.
Bioaccumulation	No data available.
Mobility in Soil	No data available.
Other adverse effects	No data available.

Components:

Potassium Sulfate:

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	EPA 600/4-90/027	680 mg/l	96 h	Pimephales promelas	Static system	Fresh water	Experimental value

Acute toxicity crustacea	LC50	EPA 600/4-90/027	720 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50	Other	2700 mg/l	18 day(s)	Chlorella vulgaris	Static system	Fresh water	Read-across
Toxicity aquatic micro-organisms	EC50		> 100 mg/l		Activated sludge			Weight of evidence
	NOEC		100 mg/l		Activated sludge			Weight of evidence

Potassium Hydrogensulphate:

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		3500 mg/l		Leuciscus idus			

Section 13. Disposal Considerations

Disposal Method:
Triple rinse and dispose according to Local Regulations.

Precautions or methods to avoid: Avoid release to the environment.

Section 14 Transport Information

This product is NOT classified as a Dangerous Good for transport in NZ ; NZS 5433:2012

Section 15 Regulatory Information

EPA Approval Code: Fertiliser (subsidiary) – HSR002571

HSNO Classification: 8.3A

HSWA & EPA Controls	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	1000kg (8.3A)
Emergency Response Plan	10 000kg (8.3A)
Secondary Containment	10 000kg (8.3A)
Restriction of Use	None

Section 16 Other Information

Glossary

EC_{50}	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC_{50}	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD_{50}	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

This document has been prepared by TCC (NZ) Ltd and serves as the suppliers Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

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Please contact the New Zealand distributor, if further information is required.

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