

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: Horticulture 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.

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| 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 |

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| Section 6. Accidental Release Measures |
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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.

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| Section 7. Handling and Storage |
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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.

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| Section 8 Exposure Controls / Personal Protection |
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WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

| Substance | TWA | | STEL | |
|-----------|-----|-------------------|------|-------------------|
| | 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



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|-----------------------|------------------------------------------------------------|
| 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 ^o C |
| Melting Point | 1067 ^o C |
| 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

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|-----------------------------------------|----------------------------------------------------------------------------|
| 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.

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|--------------------------------------|--------------------|
| 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

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|------------------|-----------------------------------------------------------------------------------------|
| 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:

Product Name: Solupotasse
Date of SDS: 21 November 2019

Prepared by: Technical Compliance Consultants (NZ) Ltd
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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

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