

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: RICHGRO SULFATE of POTASH

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Sulfate of Potash

Other names:

Sulphate of Potash, Potassium Sulfate, SOP, Dipotassium Sulfate.

Recommended use: Fertiliser in Agriculture and Horticulture, general purpose food additive.

Company name: Richgro Garden Products

Address: 203 Acourt Road, Jandakot

State: WA

Postcode: 6164

Telephone number: 08 6258 7100

Emergency Telephone No: 1800 455 132

SECTION 2: HAZARD IDENTIFICATION

Hazard Classification, including a statement of overall hazardous nature

HAZARDOUS SUBSTANCE.

Sulfate of Potash is not classified as hazardous according to Safe Work Australia criteria.

DANGEROUS GOODS.

Sulfate of Potash is not classified as dangerous good according to the ADG Code.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical identity of ingredients	Proportion of ingredients	CAS Number for ingredients
Dipotassium Sulfate	96 %	7778-80-5
Potassium Chloride	<4 %	7447-40-7

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SECTION 4: FIRST AID MEASURES

First Aid Facilities

Drinking water and eyewash facilities should be available whenever fertilisers are in regular use.

FIRST AID PROCEDURES FOR DEALING WITH THIS PRODUCT AND EXPOSURE TO IT

1. Swallowed

If person is conscious, immediately rinse mouth thoroughly with water and give plenty of water to drink.

Do Not induce vomiting. Seek medical attention immediately if there is pain or difficulty with swallowing.

2. Eyes

Irrigate immediately eyes with plenty of water for at least 15 minutes while holding eyelids open.

Seek immediate medical attention if irritation develops.

3. Skin

Remove all contaminated clothing and shoes. Wash affected skin with water. Seek medical attention if irritation develops.

4. Inhalation

Remove affected person from exposure to fresh air. Keep warm and at rest. In emergency situation, if breathing is difficult give oxygen. If the affected person suffers cardiac arrest commence cardio-pulmonary resuscitation immediately and seek urgent medical attention.

ADVICE TO DOCTOR

Treat symptomatically based on individual reactions of patient.

Poison Information Centre in each state's capital city can provide additional assistance
(Phone: 13 11 26)

SECTION 5: FIRE FIGHTING MEASURES

Product flammability

Non-flammable and does not support combustion.

Suitable extinguishing media

Non-flammable and does not support combustion.

Hazard from combustion products

Non-combustible solid. When heated above 1066°C Sulfate of Potash may yield toxic oxides of sulfur.

Hazchem Code

None allocated.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

Methods and Materials for containment and clean up

Any spillage should be cleaned up promptly and swept up. Prevent run-off into drains and waterways.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Segregate from food or foodstuffs, oxidizing agents (Class 5) and acids (Class 8) when transporting.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry and well-ventilated area. Avoid contact with moisture, as it will cause product-handling problem.

Store away from oxidizers, acids and from food or drink. Violent explosion occurs when Sulfate of Potash is melted with aluminum.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

National exposure standards

No exposure standard has been established for this product by the ACGIH.

However, ACGIH recommended value for inhalable particulates is 10 mg/m³ (TLV/TWA).

Note: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.

TLV = Threshold Limit Value

Engineering controls

Ensure adequate local and/or general exhaust ventilation to avoid high dust concentration.

Personal protective equipment

Wear rubber or PVC gloves to prevent skin contact. Where dust is a problem use a P2 type canister respirator.

Wear chemical safety glasses with side shields to prevent eye contact.

Wear long-sleeved and long trousers protective clothing to prevent contact.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance (colour, physical form, shape):

Colourless to white hard crystals or powdered solid.

Odour: Odourless

pH of 10% solution: 3 - 4

Vapour pressure:

Does not exert significant vapour pressure.

Vapour density:

Not available.

Boiling point/range: 1689 °C at 100 kPa.

Freezing/Melting point: 1067°C

Evaporation rate: Not available.

Solubility

Soluble in water (12g/100g water at 20°C), not soluble in alcohol or acetone.

% Volatiles

Not available.

Specific Gravity / Bulk density

2.66 / 1.03 – 1.20 t/ m³

Flammability

Not flammable.

Flash point and method of detecting flash point:

Not relevant.

Upper and lower flammable (explosive) limits in air

Not relevant.

Ignition temperature:

Not available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Incompatible with aluminium, magnesium or sodium sulfate and may explode in combination with these at temperature exceeding 800°C.

Corrosivity similar to common salt. In the presence of moisture, Sulfate of Potash is mildly corrosive to cement, mild steel, zinc and copper.

Decomposition products

No data available.

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SECTION 11: TOXICOLOGICAL INFORMATION

HEALTH EFFECTS

Low toxicity. Use safe work practices to avoid eye or skin contact and dust inhalation. Sulfate of Potash is relatively non toxic when ingested in small quantities. Acute potassium intoxication is rare since the potassium ion tends to cause vomiting. Ingestion of large quantities may cause gastrointestinal irritation.

Inhalation:

High dust concentration of air-borne material may cause irritation to the nose and upper respiratory tract, and symptoms may include coughing, shortness of breath and sore throat.

Skin:

Prolonged contact may cause some irritation to skin, including redness and itching. No harmful effects from skin absorption have been recorded.

Eye:

May cause irritation to eyes with redness and pain following contact.

Swallowed:

Presents little toxicity, unless large amounts are ingested. Potassium Sulfate is slowly absorbed from the alimentary tract and because of osmotic activity it will draw water into the lumen of the bowel.

Consequently, massive doses exceeding about 100 grams of Potassium Sulfate give rise to severe gastro-intestinal irritation, with symptoms such as nausea, vomiting, diarrhea, irregular heart beats (arrhythmia), dehydration and hypertension. Smaller doses will likely irritate the mouth, esophagus, stomach, etc.

TOXICITY DATA

Dipotassium sulfate (7778-80-5)

LDLo (Subcutaneous): 3000 mg/kg (guinea pig)
TDLo (Ingestion): 750 mg/kg (woman)
LD50 (Ingestion): 6600 mg/kg (rat)
LDLo (Ingestion): 750 mg/kg (woman)

Potassium chloride (7447-40-7)

LDLo (Intravenous): 77 mg/kg (guinea pig)
LDLo (Intraperitoneal): 900 mg/kg (guinea pig)
LD50 (Intraperitoneal): 620 mg/kg (mouse)
LDLo (Subcutaneous): 2120 mg/kg (frog)
TDLo (Ingestion): 60 mg/kg/days (woman)
LD50 (Ingestion): 1500 mg/kg (mouse)
LDLo (Ingestion): 20 mg/kg (man)
LD50 (Intravenous): 117 mg/kg (mouse)

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SECTION 12: ECOLOGICAL INFORMATION

Environment

It is not anticipated to cause any adverse effects to plants or animals.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods and containers

Dispose of on a farm, or authorised waste facility in accordance with statutory requirements.
Clean up personnel should vacuum or wet sweep to avoid dust dispersal.
Contact the manufacturer if additional information is required.

Legislation

Dispose of in accordance with local and state legislation.

SECTION 14: TRANSPORT INFORMATION

Land Transport (Australia)

Regulation Name: ADG

UN Number

None allocated.

UN Proper shipping name

None allocated.

Class and subsidiary risk

None allocated.

Packing group

None allocated.

EPG

None allocated.

Hazchem code

None allocated.

SECTION 15: REGULATORY INFORMATION

Australian regulatory information

A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

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SECTION 16: OTHER INFORMATION

Key / legend to abbreviations and acronyms used in the MSDS

NOHSC	National Occupational Health and Safety Commission
SUSDP	Standard for the Uniform Scheduling of Drugs and Poisons
AICS	Australian Inventory of Chemical Substances
ACGIH	American Conference of Government Industrial Hygienists
CAS	Chemical Abstracts Service (Registry Number)
ES-TWA	Exposure Standard – Time weighted average
ES-STEL	Exposure Standard – Short term exposure level
ES-Peak	Exposure Standard – Peak level
LD Lo	The lowest dose in an animal study in which lethality occurred
LD50	Lethal dose 50. The single dose of a substance that causes the death of 50% of an animal population from exposure to the substance by any route other than inhalation
TC Lo	Toxic concentration low. It is the lowest concentration of a substance in air to which humans (or animals) have been exposed for any given period of time that has produced any toxic effect or produced a tumorigenic or reproductive effect one or more members of the group of subjects
t/m3	Tonnes per cubic metre
mg/m3	Milligrams per cubic metre
mg/kg	Milligrams per kilogram
pH	Relates to hydrogen ion concentration - this value will relate to a scale of 0 - 14, where 0 is highly acidic and 14 is highly alkaline

IMPORTANT NOTES

1. To the best of our knowledge this document complies with the National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC:2011 (2003)].
2. This material safety data sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this material safety data sheet and consider the information in the context of how the product will be handled and used in the workplace, including in conjunction with other products.
3. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact the Safety and Emergency Services Department, Richgro Garden Products on (08) 6258 7100 (Australia), +61 8 6258 7100 (Overseas).
4. Our responsibility for products sold, is subject to our terms and conditions, a copy of which is sent to our customers, and is also available on request.
5. Richgro Garden Products reserves the right to make change to material safety data sheets without notice.