SAFETY DATA SHEET

POTASSIUM SULPHATE (SOP) | REVISION 3, DATE JUNE 2026

1. IDENTIFICATION

Product Name	Potassium Sulphate (SOP)
Other Names	Sulphate of Potash; SOP; Potassium Sulfate; Dipotassium Sulfate; Sulfuric Acid, Dipotassium Salt; Arcanite
Uses	Water-soluble potassium fertiliser. Used to supply potassium and sulfur to crops via soil application, fertigation or foliar spray, particularly for chloride-sensitive crops.
Product Type	Water-Soluble Fertiliser
Chemical Family	Inorganic potassium salt (sulfate)
Chemical Formula	K_2SO_4
Chemical Name	Potassium Sulfate
Product Description	Potassium Sulphate (SOP) – high-purity, low-chloride potassium and sulfur fertiliser

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Green Pick Australia	6 Fernhill Lane Bayswater North VIC 3153 Australia	+61-426-571-061
Green Pick Iran	50 Khavaran Hwy, Industrial City Ivanaki, Taavoni 7 Tehran, Iran	+98-912-476-3248

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Australia – Westmead NSW	1800-251525 / 131126
Chemcall	Australia	1800-127406 / +64-4-9179888
Chemcall	New Zealand	0800-243622 / +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 / +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)	Not Scheduled

Globally Harmonised System

Hazard Classification	NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Signal Word	None

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification	NOT hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

Potassium sulfate is a well-characterised, low-hazard inorganic salt. It presents no significant physical, health or environmental hazard when used and stored as directed. As with any fine powder, avoid generating and inhaling dust, and avoid unnecessary eye or skin contact.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Potassium Sulfate	K_2SO_4	7778-80-5	>= 98 %
Chloride (as impurity)	Cl^-	16887-00-6	≤ 1 %
Moisture / insoluble residues	—	—	≤ 0.02 % (moisture) / balance

Note: Potassium sulfate is a single, well-defined inorganic compound (CAS 7778-80-5). Minor impurities (chloride, moisture) are controlled to the levels shown in Section 9 in accordance with the product specification.

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do NOT induce vomiting. Get medical advice/attention if discomfort occurs or if large quantities have been swallowed. Never give anything by mouth to an unconscious person.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention.
Eye	IF IN EYES: Immediately flush eyes with running water for at least 15 minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
Most Important Symptoms and Effects	May cause mechanical irritation to eyes, skin and respiratory tract due to dust. Ingestion of large quantities may cause gastrointestinal disturbance (nausea, vomiting, diarrhoea).
Advice to Doctor	Treat symptomatically.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray. This product is non-combustible; fire fighting should focus on the surrounding materials.
Flammability Conditions	Not flammable. Will not burn.
Extinguishing Media	Use extinguishing media appropriate to the surrounding fire (water spray, dry chemical, carbon dioxide (CO2) or foam).
Fire and Explosion Hazard	Not classified as explosive or oxidising. Not considered a combustible dust hazard.
Hazardous Products of Combustion	At high temperature (> 700 °C) decomposition may release sulfur oxides (SOx) and potassium oxides.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water – runoff may cause pollution.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA) for significant fires involving other materials. Structural firefighters' protective clothing will only provide limited protection.
Flash Point	Not applicable (solid, non-combustible)
Lower Explosion Limit	Not applicable
Upper Explosion Limit	Not applicable
Auto Ignition Temperature	Not applicable
Hazchem Code	None allocated

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6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation, especially in confined areas. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
Personal Precautionary Measures	Do not attempt to take action without suitable protective equipment (see SECTION 8).
Environmental Precautionary Measures	Avoid release to the environment in large quantities. Prevent the product from entering drains or waterways.
Containment	Prevent dust cloud. Prevent entry into waterways, sewers, basements or confined areas.
Clean Up Procedures	Sweep up and shovel into suitable containers for disposal or re-use (see SECTION 13). Avoid dust formation.
Decontamination	Flush remainder with water.
Evacuation Criteria	Not normally required for this product. Isolate large spills and keep unauthorised personnel away.

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Containers which are opened should be properly resealed and kept upright to prevent leakage. Protect from moisture to maintain the low-moisture specification (≤ 0.02%). Keep away from incompatible materials (see SECTION 10).
Container	Keep in the original container.
Incompatible Materials	Aluminium, magnesium (may react under certain conditions). Strong oxidising agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are established for potassium sulfate. General standards for particulates not otherwise classified/nuisance dust may be applied as a guide.
Engineering Measures	A system of local and/or general exhaust ventilation is recommended to keep employee exposure to dust as low as possible.
Respiratory Protection	Respiratory protection is not normally required. Where dust levels are elevated and engineering controls are not feasible, wear a particulate respirator (e.g. P1/P2 or N95, refer to AS/NZS 1715 & 1716).
Eye/Face Protection	Wear safety glasses or chemical goggles to avoid eye contact.
Hand Protection	Handle with gloves. Recommended: general-purpose protective gloves.
Skin/Body Protection	Wear appropriate personal protective clothing to avoid skin contact. Recommended: long-sleeved clothing, overalls, safety shoes.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Take off contaminated clothing and wash it before reuse.
Biological Limits	No information available.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Powder
Colour	White
Odour	Odourless
pH (1% solution in water)	6.0 – 8.0 (neutral)
Water Solubility	Soluble in water: approximately 111 g/L at 20 °C
Potassium (K_2O)	≥ 51% (elemental K 42%)
Sulphate (SO_4)	≥ 56% (elemental S 18%)
Moisture Content	≤ 0.02%
Chloride (Cl^-)	≤ 1%
Melting Point	1,069 °C
Boiling Point	1,689 °C
Flash Point	Not applicable
Decomposition Temperature	> 700 °C
Vapour Pressure	Not applicable
Relative Vapour Density	Not applicable
Density	2.66 g/cm³
Bulk Density	1,100 – 1,300 kg/m³ (typical, powder form)
Molecular Weight	174.26 g/mol
Particle Size	Fine powder
Partition Coefficient (n-octanol/water)	Not applicable (inorganic salt, fully dissociates in water)
Evaporation Rate	Not applicable
Viscosity	Not applicable (solid)
Oxidising Properties	Not classified as oxidising
Explosive Properties	Product is not explosive.

10. STABILITY AND REACTIVITY

General Information	No dangerous reactions known under normal conditions of use.
Chemical Stability	Stable under normal conditions of storage and handling.
Conditions to Avoid	Avoid generating dust. Avoid prolonged exposure to moisture/humidity to maintain product specification. Avoid excessive heat (> 700 °C).
Materials to Avoid	Aluminium and magnesium (potential reactivity under certain conditions); strong oxidising agents.
Hazardous Decomposition Products	Under normal conditions of storage and use, hazardous decomposition products should not be produced. At high temperature (> 700 °C), decomposition may release sulfur oxides and potassium oxides.
Hazardous Polymerisation	Will not occur.

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11. TOXICOLOGICAL INFORMATION

General Information	Acute toxicity: Not classified. Skin corrosion/irritation: Not classified. Eye damage/irritation: Not classified. Respiratory/skin sensitisation: Not classified. Germ cell mutagenicity: Not classified. Carcinogenicity: Not classified (not listed by IARC, NTP or OSHA as a carcinogen). Reproductive toxicity: Not classified. STOT (single exposure): Not classified. STOT (repeated exposure): Not classified. Aspiration toxicity: Not classified.
Likely Routes of Exposure	Ingestion, inhalation of dust, and eye/skin contact.
Ingestion (Oral)	Acute toxicity: LD50, Rat: > 2,000 mg/kg bw (published literature also reports values as high as 6,600 mg/kg bw). Doses well above normal handling exposure (e.g. > 100 g) may cause gastrointestinal irritation.
Dermal	Acute toxicity: LD50, Rat: > 2,000 mg/kg bw
Inhalation	Inhalation of dust in high concentration may cause irritation of the respiratory system.
Chronic Effects	No information available.
Carcinogen Category	None

Note: Potassium sulfate is a well-characterised, widely used industrial and agricultural chemical (CAS 7778-80-5). Toxicological figures shown are based on published literature for this substance.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Not classified as hazardous to the aquatic environment. Potassium sulfate dissociates in water into potassium (K^+) and sulfate (SO_4^{2-}) ions, both of which are essential nutrients for plants and generally occur naturally in soil and water systems.
Persistence/Degradability	Not applicable in the conventional biodegradation sense – product is an inorganic salt that fully dissociates in water.
Bioaccumulation Potential	Not expected to bioaccumulate.
Mobility	Highly soluble and mobile in water; this is intended, as the product is applied as a soil/fertigation nutrient source.
Environmental Fate	Not considered to cause long-term adverse effects on the environment when used as directed as an agricultural fertiliser.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	This material and its container must be disposed of in a safe manner. Collect and reclaim waste from residues/unused product(s) or dispose of in sealed containers at a licensed waste disposal site and in accordance with local/regional/national regulations. Considered non-hazardous waste under normal circumstances.
Contaminated Packaging	Empty containers may be reused after appropriate cleansing, or taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

Dangerous Goods Classification	NOT Dangerous Goods. This product is not restricted for transport by land, sea or air under any recognised transport code (ADG Code, ADR, IMDG Code, IATA DGR).
UN Number	Not Assigned
Class / Subsidiary Risk	Not Applicable
Pack Group	Not Applicable
Hazchem Code	Not Applicable
Marine Pollutant	No
Special Precautions	None required for transport. Ensure product is kept dry during transport and storage.
Comments	NON-DANGEROUS GOODS: Not regulated for LAND, SEA or AIR transport under any mode.

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15. REGULATORY INFORMATION

Poisons Schedule (Aust)	Not Scheduled
General Information	Product is manufactured for use as an agricultural fertiliser/plant nutrient. Users should confirm local fertiliser registration requirements in the country of sale prior to distribution.

National/Regional Inventories

Inventory	Status
Australia (AICS)	Listed
New Zealand (NZIoC)	Listed
Europe (EINECS)	Listed – EC 231-915-5
USA (TSCA)	Listed
Canada (DSL)	Listed
China (IECSC)	Listed
Japan (ENCS)	Listed
Korea (KECI)	Listed
Philippines (PICCS)	Listed
Iran (National Chemical Inventory)	Not Determined

16. OTHER INFORMATION

≥	Greater Than or Equal To	≤	Less Than or Equal To
AICS	Australian Inventory of Chemical Substances	CAS	Chemical Abstracts Service (Registry Number)
Cl^-	Chloride	EC	European Community (Number)
GHS	Globally Harmonised System of Classification and Labelling of Chemicals	K_2O	Potassium Oxide (expressed potassium content)
K_2SO_4	Potassium Sulfate	kg/m^3	Kilograms per Cubic Metre
LD50	Lethal Dose, 50% – the amount of a material, given all at once, which causes the death of 50% of a group of test animals	mg/kg	Milligrams per Kilogram
N/A	Not Applicable	SO_4	Sulphate
SOP	Sulphate of Potash	STOT	Specific Target Organ Toxicity
TWA	Time Weighted Average	UN	United Nations

Revision	3
Revision Date	June 2026
Supersedes	Version 2, April 2026

This Safety Data Sheet has been prepared using published literature and reference data for potassium sulfate (CAS 7778-80-5), a well-characterised, widely used industrial and agricultural chemical, together with the specifications provided by Green Pick Australia for this product. To the best of our knowledge the information contained herein is accurate as of the date of issue; it is provided without warranty, expressed or implied. It is the responsibility of the user to determine the suitability of this information for their particular use and to comply with all applicable local, national and international regulations.

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