

SAFETY DATA SHEET

PRODUCT NAME: POTASSIUM NITRATE

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Recommended use: Fertiliser
Other Names: Potassium Nitrate (Hort Grade), Potassium Nitrate Prill
Supplier: Baileys Fertilisers
Address: 24 Beach St
 Kwinana Beach
 Western Australia 6167
Telephone: (08) 9439 1688 (Monday to Friday: 8.00am – 5.00pm)
Emergency Contact: Poisons Information Centre on 13 11 26
Facsimile: (08) 9439 1068
Email: baileys@baileysfertiliser.com.au
Website: baileysfertiliser.com.au

2. HAZARD IDENTIFICATION

- 1. GHS Classification:** Hazardous according to Australian Criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS).
- 2. Signal Word:** **Warning**
- 3. Hazard Category(s):** Oxidising Solids – Category 3
- 4. Hazard Symbol:**



5. Hazard Statement(s): H272 May intensify fire; oxidiser.

6. Precautionary Statements:

- Prevention: P 210 Keep away from heat.
 P220 Keep / store away from clothing / combustible materials.
 221 Take any precaution to avoid mixing with combustibles.
 P280 Wear protective gloves / eye protection / face protection.
- Response: P370 + P378 In case of fire: Use flooding quantities of water to extinguish.
- Storage: N/A
- Disposal: P501 Dispose of contents/container in accordance with local or national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Contents % w/w
Potassium nitrate	7757-79-1	>= 99

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4. FIRST AID MEASURES

Eye Contact:	If in eyes, immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice / attention.
Skin Contact:	If skin or hair contact occurs, remove contaminated clothing and shoes immediately. Flush skin with running water for at least 15 minutes. In case of gross contamination, drench contaminated clothing and skin with plenty of water before removing clothes. If skin irritation occurs, get medical advice / attention. Wash contaminated clothing and shoes before reuse.
Inhalation:	If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. Apply resuscitation if victim is not breathing. Administer oxygen if breathing is difficult. Keep victim calm and warm. Obtain immediate medical care.
Ingestion:	Rinse mouth. Do NOT induce vomiting unless directed to do so by medical personnel. Call a Poison Centre (13 11 26) or doctor / physician for advice. Never give anything by mouth to an unconscious person.
First aid facilities:	Eye wash facilities must be available.
Medical Attention and Special Treatment:	Treat symptomatically. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves. Rinse contaminated clothes (fire hazard) with plenty of water.

5. FIRE FIGHTING MEASURES

General Measures:	If safe to do so, move undamaged containers from fire area. Do not move cargo if cargo has been exposed to heat.
Flammability:	OXIDISING SUBSTANCE: Non-combustible; however will accelerate burning when involved in a fire.
Extinguishing Media:	Use flooding quantities of water for extinction – do not use dry chemicals, carbon dioxide or foam. Large fire: Flood fire area with water from a protected position.
Fire/Explosion Hazard:	May explode from heating, shock, friction or contamination. May ignite combustibles. Containers may explode when heated. Runoff may create fire or explosion hazard.
Hazardous Products of Combustion:	Fire may produce irritation, toxic and / or corrosive gases, including nitrogen oxides, oxygen.
Special Fire Fighting Instructions:	Contain runoff from fire control or dilution water – runoff may pollute waterways and may create fire or explosion hazard.
Personal Protection:	Wear self-contained breathing apparatus (SCBA) in combination with normal fire fighting clothing (full fire kit). Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources.
Hazchem Code:	1Z

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. Prevent exposure to heat. Remove all sources of ignition. Do not contaminate – keep combustibles (wood, paper, clothing, oil, etc) away from spilled material. Clean up spills immediately. Avoid generating dusty conditions. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures:	Use clean, non-sparking tools to transfer material to a suitable, clean container for disposal (see Section 13). Move container from spill area.
Containment:	Stop leak if safe to do so – prevent entry into waterways, drains or confined areas.
Decontamination:	Wash away remainder with plenty of water.
Environmental precautions:	Spillages and decontamination runoff should be prevented from entering drains and watercourses. Runoff may pollute waterways and may create fire or explosion hazard.

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Evacuation Criteria: Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.

Personal Precautionary Measures: Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see Section 8).

7. HANDLING AND STORAGE

Precautions for safe handling: Safety showers and eye wash 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. Avoid generating dusty conditions. Avoid breathing dust and contact with eyes, skin and clothing. Use personal protective equipment as required (see section 8). **OXIDISING SUBSTANCE:** Keep away from heat and all sources of ignition – no smoking. Do not contaminate – take any precaution to avoid mixing with combustibles / incompatible materials.

Conditions for safe storage: Store in a cool, dry, well ventilated area, out of direct sunlight. Keep container tightly closed. Keep away from heat and all sources of ignition – no smoking. Keep / store away from clothing and combustible materials. Keep away from incompatible materials (see section 10). Avoid storage on wooden floors. Keep in the original container.

Specific end use(s): No information provided.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

General: No value assigned for this specific material by Safe Work Australia. For dusts from solid substances without specific occupational exposure standards:
Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m³, measured as inhalable dust.
New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m³ (total); TWA = 3 mg/m³ (respirable).

Derived no-effect levels (DNELs) for Workers:

- Dermal: Long term, systemic effects: 20.8 mg/kg bw/day.
- Inhalation: Long term, systemic effects: 36.7 mg/m³.

Exposure standards: No exposure standards have been entered for this product.

Biological limits: Predicted no-effect concentrations (PNECs):

- Freshwater: 0.45 mg/L
- Marine water: 0.045 mg/L
- Intermittent release: 4.5 mg/L
- STP: 18 mg/L

Exposure controls

Engineering controls: A system of local and / or general exhaust is recommended to keep employee exposure as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

PPE:

Eye / Face	Wear appropriate eye protection to avoid eye contact. Recommended: protective eyeglasses or chemical safety goggles.
Hands	Wear protective gloves. Recommended (full/splash contact): impervious gloves e.g. nitrile rubber (0.11 mm), break through time > 480 min.

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- Body** Wear appropriate personal protective clothing to avoid skin contact. Recommended: overalls, safety shoes.
- Respiratory** Wear respiratory protection in case of inadequate ventilation or when dusts are generated. Recommended: Dust mask / respirator, filter type P1 (refer to AS/NZS 1715 & 1716).



Work Hygienic Practices: Do not eat, drink or smoke when using this product. Do not ingest. Avoid contact with eyes and prolonged or repeated contact with skin. Wash thoroughly after handling. Remove contaminated clothing and shoes immediately and rinse with plenty of water (fire hazard).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White solid (crystalline powder or prill)
Odour	Odourless
Flash Point	Not available
Boiling Point	Not available
Melting Point	333 – 335 °C
Evaporation Rate	Not available
pH	4.5 – 8.5 (50g/L with water)
Vapour density	Not available
Density	2.1 g/cm ³ (crystalline powder)
Solubility (water)	Soluble
Vapour pressure	Not available
Upper explosion limit	Not relevant
Lower explosion limit	Not relevant
Partition coefficient	Not available
Autoignition temperature	Not available
Decomposition temperature	400 °C
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available
Odour threshold	Not available

10. STABILITY AND REACTIVITY

- General Information:** Reacts violently with organic materials, combustible materials and reducing agents.
- Chemical stability:** Stable under normal temperatures and pressures.
- Possibility of hazardous reactions:** Will not occur.
- Conditions to avoid:** Avoid dust formation. Keep away from heat and all sources of ignition. Do not contaminate.

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Materials to Avoid: Incompatible / reactive with organic materials, combustible materials and reducing agents. Specific incompatibles under various conditions include aluminium, titanium, antimony, germanium, zinc, zirconium, calcium disilicide, chromium nitride, metal sulphides, boron, carbon, sulfur, phosphorus, phosphides, sodium phosphinate, sodium thiosulfate, citric acid, tin chloride, sodium acetate and thorium carbide.

Hazardous decomposition products: Fire may produce irritating, toxic and / or corrosive gases, including nitrogen oxides, oxygen.

11. TOXICOLOGICAL INFORMATION

No adverse health effects are expected if the product is handled in accordance with this SDS and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Acute toxicity: May be harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhoea.
Skin: Causes mild skin irritation. Not irritating (Rabbit) [OECD 404].
Eye: Causes (slight) eye irritation. Not irritating (Rabbit) [OECD 405, 437].
Sensitisation: Not classified as a sensitiser.
Mutagenicity: Not classified as a mutagen.
Carcinogenicity: Not classified as a carcinogen. Nitrate or nitrite (ingested) under conditions that result in endogenous nitrosation is classified in Group 2A of the IARC Monographs – Probably carcinogenic to humans.
Reproductive: Not classified as a reproductive toxin.
Chronic Effects: Ingestion of large quantities causes methaemoglobinemia with headaches, heart beat irregularities, blood pressure loss, cramps and breathing difficulties, cyanosis, nephritis.
Aspiration: No information available.

Toxicological Data

Acute: Ingestion Acute toxicity (Oral): - LD50, Rats: 3,540 – 3,750 mg/kg bw.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Aquatic toxicity: LC50, Poecilia reticulata (Guppy): 191 mg/L (96 h) [ECOTOX Database]
EC50, Daphnia magna (Water flea): 490 mg/L (48 h) [IUCLID].

Persistence and degradability: In aqueous solution, the substance is dissociated into potassium and nitrate ions. Under anoxic conditions, denitrification occurs and nitrate is ultimately converted into molecular nitrogen as part of the Nitrogen cycle.

Bioaccumulative potential: Low bioaccumulation potential.

Mobility in soil: No information available.

Environmental fate: Prevent entry into drains and waterways.

Other adverse effects: Toxic to aquatic life with long lasting effects – avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

Disposal: Generation of waste should be avoided or minimised wherever possible. Dispose of surplus, non-recyclable product and any by-products via a specialist disposal company and in accordance with local / regional / national regulations. Depending on the degree and nature

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of the contamination, dispose of as fertiliser, as a raw material or in an authorised waste facility. Incineration or landfill should only be considered when recycling is not feasible.

Special Precautions for Land Fill: Contaminated packaging: Empty containers or liners may contain product residues. Handle uncleaned containers like the product itself. Packages should be emptied and can be recycled after thoroughly cleansing.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG or IATA

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG)	AIR TRANSPORT (IATA / ICAO)
UN Number	1486		
Proper Shipping Name	POTASSIUM NITRATE		
Transport Hazard Class	5.1 Oxidising Substances		
Packing Group	III		
Hazchem Code	1Z		

15. REGULATORY INFORMATION

Poison schedule	A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
Classifications	Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals. The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substance [NOHSC: 1008(2004)].
AICS	All chemicals listed on the Australian Inventory of Chemical Substances (ACIS).

16. OTHER INFORMATION

Disclaimer	<p>This document has been prepared by Baileys Fertilisers 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.</p> <p>While Baileys Fertilisers has 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, Baileys Fertilisers accepts 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.</p> <p>As the use of the products described in this document is outside the control of Baileys Fertilisers, we make no representation or warranty concerning the suitability or fitness of this product for any purpose. It is your sole responsibility to ensure that the product will have the qualities and attributes that will make them fit for any ordinary or special purpose required of them, even if that purpose is made known to us at any time. This includes responsibility on your part to conduct in a timely manner all appropriate tests and quality checks on the product and any goods made from them. We disclaim any liability if any products are not suitable or fit for any such purpose.</p>
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Revision 3
Date 13/11/2019
End of SDS