

Infosafe No™ 1CHIQ Issue Date : June 2021 RE-ISSUED by CHEMSUPP

Product Name **LITHIUM NITRATE Anhydrous**

Classified as hazardous

## 1. Identification

**GHS Product Identifier** LITHIUM NITRATE Anhydrous

**Company Name** CHEMSUPPLY AUSTRALIA PTY LTD (ABN 19 008 264 211)

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SA 5013 Australia

**Telephone/Fax Number** Tel: (08) 8440-2000

**Emergency phone number** CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

**E-mail Address** www.chemsupply.com.au

**Recommended use of the chemical and restrictions on use** Ceramics, pyrotechnics, heat-exchange media, refrigeration systems, rocket propellant, salt baths and laboratory reagent.

<b>Other Names</b>	<u><b>Name</b></u>	<u><b>Product Code</b></u>
	LITHIUM NITRATE Anhydrous AR	LA061

### Other Information

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

## 2. Hazard Identification

**GHS classification of the substance/mixture** Oxidizing Solids: Category 3  
Eye Damage/Irritation: Category 2A  
Acute Toxicity - Oral: Category 4

**Signal Word (s)** WARNING

**Hazard Statement (s)** H272 May intensify fire; oxidiser.  
H302 Harmful if swallowed.  
H319 Causes serious eye irritation.

**Pictogram (s)** Flame over circle, Exclamation mark



**Precautionary statement – Prevention**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P220 Keep/Store away from clothing/.../combustible materials.  
P221 Take any precaution to avoid mixing with combustibles.  
P264 Wash thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statement – Response**

Swallowed  
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P330 Rinse mouth.  
Eyes

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<b>Precautionary statement – Disposal</b>	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Other Information</b>	P337+P313 If eye irritation persists: Get medical advice/attention. Fire P370+P378 In case of fire: Use flooding quantities of water for extinction. P501 Dispose of contents/container to an approved waste disposal plant.
	In large doses, lithium compounds can cause dizziness and prostration, and if sodium intake is restricted, may result in kidney damage. Lithium ion has CNS toxicity. Material is irritating to mucous membranes and upper respiratory tract. Exposure can cause stomach pains, vomiting, diarrhoea, nausea, dizziness, headache and convulsions.

### 3. Composition/information on ingredients

Ingredients	Name	CAS	Proportion
	Lithium nitrate	7790-69-4	100 %
Other Information	Derived by reaction of nitric acid with lithium carbonate.		

### 4. First-aid measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.
Skin	First rinse with plenty of water, then remove contaminated clothes, rinse again. If irritation occurs seek medical advice.
Eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. If rapid recovery does not occur, obtain medical attention
First Aid Facilities	Maintain eyewash fountain and safety shower in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

### 5. Fire-fighting measures

Specific Methods	Small fire: USE FLOODING QUANTITIES OF WATER. Do not use dry chemicals, CO2 or foam. If safe to do so, move undamaged containers from fire area. Do not move cargo if cargo has been exposed to heat. Large fire: Flood fire area with water from a protected position. Cool containers with flooding quantities of water until well after fire is out - If impossible, withdraw from area and let fire burn. Avoid getting water inside containers: a violent reaction may occur. Dam fire control water for later disposal.
Specific hazards arising from the chemical	Will accelerate burning when involved in a fire. May explode from heating, shock, friction or contamination. May react explosively with hydrocarbons (fuels). May ignite combustibles (wood, paper, clothing, etc). Fire may produce irritating, poisonous, and/or corrosive gases. Containers may explode when heated. Runoff may create fire or explosion hazard.
Hazchem Code	1Y
Decomposition Temp.	600 °C
Precautions in connection with Fire	Wear SCBA and chemical splash suit. Structural firefighter's uniform will provide limited protection.

### 6. Accidental release measures

Spills & Disposal	Do not contaminate. Keep combustibles (wood, paper, clothing, oil, etc.) away from spilled material. Do not touch damaged containers or spilled material
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	<p>unless wearing appropriate protective clothing. Prevent entry into waterways, drains or confined areas. Prevent exposure to heat.</p> <p><b>Dry Spill</b> Use clean non-sparking tools to transfer material to a clean, dry plastic container and cover loosely. Move container from spill area.</p> <p><b>Small Liquid Spill</b> Use a non-combustible material like vermiculite, sand or earth to soak up the product and place in a loosely-covered container for later disposal.</p> <p><b>Large Liquid Spill</b> SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.</p>
<b>Personal Precautions</b>	<p>Evacuate the area of all non-essential personnel. Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.</p>
<b>Personal Protection</b>	<p>Wear protective clothing specified for normal operations (see Section 8)</p>
<b>Clean-up Methods - Small Spillages</b>	<p>Sweep up (avoid generating dust) and using clean non-sparking tools transfer to a clean, suitable, clearly labelled container for disposal in accordance with local regulations.</p>
<b>Clean-up Methods - Large Spillages</b>	<p>Seek expert advice on handling and disposal.</p>

## 7. Handling and storage

<b>Precautions for Safe Handling</b>	<p>Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible.</p>
<b>Conditions for safe storage, including any incompatibilities</b>	<p>Store in a cool, dry place. Store away from sources of heat or ignition. Store away from combustible materials. Store away from organic materials. Keep containers closed at all times. Store away from oxidizing agents. Store away from reducing agents. Store away from flammable materials. Prevent all contact with water and with moist atmosphere. Oxidizing materials should be stored in a separate safety storage cabinet or room. This product should not be stored on wooden floors.</p>
<b>Storage Regulations</b>	<p>Refer Australian Standard AS 4326-1995 'The storage and handling of oxidizing agents'.</p>

## 8. Exposure controls/personal protection

<b>Other Exposure Information</b>	<p>No exposure standards have been established for this product by Safe Work Australia, however, the TWA exposure standard for dusts/mists not otherwise specified is 10 mg/m<sup>3</sup>. All atmospheric contamination should be kept to as low a level as is workable.</p>
<b>Appropriate engineering controls</b>	<p>Maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.</p>
<b>Respiratory Protection</b>	<p>Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.</p>
<b>Eye Protection</b>	<p>The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.</p>
<b>Hand Protection</b>	<p>Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.</p>

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<b>Personal Protective Equipment</b>	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
<b>Footwear</b>	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
<b>Body Protection</b>	Flame retardant antistatic protective clothing. Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
<b>Hygiene Measures</b>	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

## 9. Physical and chemical properties

<b>Form</b>	Solid
<b>Appearance</b>	Colourless or white powder or granules.
<b>Odour</b>	Odourless.
<b>Decomposition Temperature</b>	600 °C
<b>Melting Point</b>	255 °C
<b>Boiling Point</b>	600 °C (decomposes).
<b>Solubility in Water</b>	Soluble (522 g/L @ 20 °C).
<b>Solubility in Organic Solvents</b>	Soluble in methanol.
<b>Specific Gravity</b>	2.38
<b>pH</b>	The aqueous solution is neutral (~ 7-9 at 50 g/l H <sub>2</sub> O (20 °C)).
<b>Volatile Component</b>	0%
<b>Flammability</b>	Not combustible but assists combustion of other substances.
<b>Explosion Properties</b>	Contact with oxidizable substances may cause extremely violent combustion. Strong oxidants may explode when shocked, or if exposed to heat, flame, or friction. Also may act as initiation source for dust or vapour explosions.
<b>Molecular Weight</b>	68.95
<b>Oxidising Properties</b>	Strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

## 10. Stability and reactivity

<b>Chemical Stability</b>	May explode as a result of heat, shock, or friction. Hygroscopic.
<b>Conditions to Avoid</b>	Heat, shock, friction, moisture, incompatibles.
<b>Incompatible Materials</b>	May react or be incompatible with organic materials, combustible materials, strong oxidizing agents, strong reducing agents, strong acids, finely powdered metals, cyanides, thiocyanates, isothiocyanates and hypophosphites.
<b>Hazardous Decomposition Products</b>	Oxides of nitrogen and lithium.
<b>Possibility of hazardous reactions</b>	Highly reactive with reducing agents, combustible materials, organic materials. May react with strong oxidizing agents.
<b>Hazardous Polymerization</b>	Will not occur.

## 11. Toxicological Information

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<b>Ingestion</b>	Harmful if swallowed. Causes irritation to the mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting and diarrhoea. In severe cases, lithium can cause apathy, sluggishness, drowsiness, slurred speech, blurred vision, irregular eye movements, weakness, sensory loss, incoordination (ataxia), lethargy, dehydration, weight loss, dermatological effects, heart effects, brain effects, impaired vision, hearing defect, ringing in the ears, tremors and muscle twitching, central nervous system damage, kidney effects, thyroid changes, coma, pulmonary edema, and renal failure. May cause muscle tremor and impaired motor function. May cause circulatory system failure. May cause cardiac disturbances. May cause methemoglobinemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), convulsions, and death. Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown coloured blood. May cause tremors and convulsions.
<b>Inhalation</b>	May cause slight irritation to the respiratory tract. Symptoms may include a burning sensation, coughing, wheezing, laryngitis, shortness of breath and headache.
<b>Skin</b>	Skin contact may cause redness, itchiness and irritation.
<b>Eye</b>	Causes serious eye irritation, redness, and pain.
<b>Respiratory sensitisation</b>	Not classified based on available information.
<b>Skin Sensitisation</b>	Not classified based on available information.
<b>Germ cell mutagenicity</b>	Not classified based on available information.
<b>Carcinogenicity</b>	Not listed in the IARC Monographs. Not classified based on available information.
<b>Reproductive Toxicity</b>	Not classified based on available information.
<b>STOT-single exposure</b>	Not classified based on available information.
<b>STOT-repeated exposure</b>	Not classified based on available information.
<b>Chronic Effects</b>	Chronic exposure to lithium ion may cause nausea, vomiting, diarrhoea, neuromuscular effects such as tremor, clonus, and hyperactive reflexes, apathy, sluggishness, drowsiness, slurred speech, blurred vision, visual disturbances, irregular eye movements, weakness, dizziness, incoordination, mental confusion, lethargy, heart effects, brain effects, ringing in the ears, tremors and muscle twitching, central nervous system damage, kidney effects, thyroid changes, coma, pulmonary edema, and renal failure. Prolonged absorption may affect electrolyte balance and impair kidney function. Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation.
<b>Mutagenicity</b>	Not classified based on available information.

## 12. Ecological information

<b>Ecotoxicity</b>	Hazard for drinking water supplies. May contribute to the eutrophication of water supplies.
<b>Environmental Protection</b>	Do not allow to enter waters, waste water, or soil!

## 13. Disposal considerations

<b>Disposal Considerations</b>	Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.
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## 14. Transport information

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<b>Transport Information</b>	Dangerous Goods of Class 5.1 Oxidising Agents are incompatible in a placard load with any of the following: - Class 1, Class 2.1, Class 2.3, Class 3, Class 4, Class 5.2, Class 7, Class 8, Fire risk substances and combustible liquids.
<b>U.N. Number</b>	2722
<b>UN proper shipping name</b>	LITHIUM NITRATE
<b>Transport hazard class(es)</b>	5.1
<b>Hazchem Code</b>	1Y
<b>Packing Group</b>	III
<b>EPG Number</b>	5A1
<b>IERG Number</b>	31
<b>Environmental Hazards</b>	Hazard for drinking water. May contribute to the eutrophication of water supplies.

## 15. Regulatory information

<b>Regulatory Information</b>	All the constituents of this product are listed on the Australian Inventory of Chemical Substances ( AICS ), or exempted. Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
<b>Poisons Schedule</b>	Not Scheduled

## 16. Other Information

<b>Literature References</b>	'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'. Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals'. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand. Safe Work Australia, 'Hazardous Chemical Information System'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'. Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'.
<b>Contact Person/Point</b>	Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT: All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. ChemSupply Australia Pty Ltd accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.
<b>Empirical Formula &amp; Structural Formula</b>	LiNO3  ...End Of MSDS...

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