1. Identification

**GHS Product Identifier**

LITHIUM CHLORIDE Anhydrous

**Company Name**

CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)

**Address**

38 - 50 Bedford Street GILLMAN
SA 5013  Australia

**Telephone/Fax Number**

Tel: (08) 8440-2000
Fax: (08) 8440-2001

**Recommended use of the chemical and restrictions on use**

Air conditioning, welding and soldering flux, dry batteries, desiccant, chemical production, heat-exchange media, salt baths, production of lithium metal, analytical reagent, soft drinks and mineral water to reduce escape of carbon dioxide and laboratory reagent.

**Other Names**

Name: LITHIUM CHLORIDE Anhydrous AR
Name: LITHIUM CHLORIDE Anhydrous LR
Name: Lithium monochloride
Name: LITHIUM CHLORIDE Anhydrous TG

**Additional Information**

Not to be used as dietary salt substitute.

**Other Information**

**EMERGENCY CONTACT NUMBER:** +61 08 8440 2000

Business hours: 8:30am to 5:00pm, Monday to Friday.

Chem-Supply 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 Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of 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 Chem-Supply 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**

Eye Damage/Irritation: Category 2A
Acute Toxicity - Oral: Category 4
Skin Corrosion/Irritation: Category 2

**Signal Word(s)**

WARNING

**Hazard Statement (s)**

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

**Pictogram(s)**

Exclamation mark

**Precautionary statement – Prevention**

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**

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330 Rinse mouth.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.

3. Composition/information on ingredients
LITHIUM CHLORIDE Anhydrous

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. Get medical aid if cough or other symptoms appear.

Ingestion: Rinse mouth thoroughly with water immediately. Give plenty of water to drink. Do not induce vomiting. Seek medical advice.

Skin: Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. 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. Seek 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 at once.

5. Fire-fighting measures

Hazards from Combustion Products: May liberate toxic fumes of chlorine, hydrogen chloride gas, lithium oxides.

Specific Methods: Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media.

Specific hazards arising from the chemical: Material does not burn. Runoff may pollute waterways. Fire or heat may produce irritating, poisonous and/or corrosive fumes. Containers may explode when heated.

Precautions in connection with Fire: Wear SCBA and structural firefighter's uniform.

6. Accidental release measures

Spills & Disposal: Evacuate unprotected personnel from danger area. In the event of spillage, use absorbent (soil, sand or inert medium) place into tightly closed containers. Adhere to personal protective measures. Flush the remainder with plenty of water. Label container and dispose of as hazardous waste.

Personal Precautions: Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

Personal Protection: Wear protective clothing specified for normal operations (see Section 8)

Clean-up Methods - Small Spillages: Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

7. Handling and storage

Precautions for Safe Handling: Avoid substance contact and generation and inhalation of dust. Wash hands and face thoroughly after working with material.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry place. Keep containers securely sealed and protected against physical damage.

8. Exposure controls/personal protection

Other Exposure Information: A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by Safe Work Australia for this product. There is a blanket limit of 10 mg/m³ for dusts when limits have not otherwise been established.

Appropriate engineering controls: In industrial situations 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.

Respiratory Protection: 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...
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Eye Protection
The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate.

Hand Protection
Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Personal Protective Equipment
Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken.

Footwear
Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection
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.

Eye Protection

Hand Protection

Footwear

Body Protection

Hygiene Measures
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

Form
Solid

Appearance
White, deliquescent crystals.

Odour
Odourless.

Melting Point
614 °C (anhydrous substance)

Boiling Point
1360 °C

Solubility in Water
Soluble (820 g/L @ 20 °C)

Solubility in Organic Solvents
Very soluble in alcohols, ether, pyridine and nitrobenzene. Readily soluble in acetone and amyl alcohol.

Specific Gravity
2.068 @ 25 °C

pH
~5.5 (50g/L, H2O, 20 °C).

Flammability
Non combustible material.

Molecular Weight
42.40

10. Stability and reactivity

Chemical Stability
Stable. One of the most hygroscopic salts known.

Conditions to Avoid
Moisture.

Incompatible Materials
Bromine trifluoride, strong acids, alkali metals, halogen-halogen compounds, strong oxidizing agents, moisture.

Hazardous Decomposition Products
May liberate toxic fumes of chlorine, hydrogen chloride gas, lithium oxides.

Possibility of hazardous reactions
Reacts violently with bromine trifluoride.

Hazardous Polymerization
Will not occur.

11. Toxicological Information

Acute Toxicity - Oral
LD50 (rat): 526 mg/kg (anhydrous substance)

Ingestion
Harmful if swallowed. May cause dizziness, drowsiness, ringing in the ears, impaired vision, visual disturbances, apathy, lack of appetite, loss of weight, anorexia, nausea, vomiting, diarrhea, polyuria, oliguria, tremors, cardiovascular failure, disturbed electrolyte balance, confusion, coma and death.

Inhalation
May be harmful if inhaled. Causes respiratory tract irritation, coughing and dyspnoea.

Skin
Irritating to skin.

Eye
Irritating to eyes.

Carcinogenicity
No evidence of carcinogenic properties.

Reproductive Toxicity
Effects on newborn: other neonatal measures or effects.
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Chronic Effects
Prolonged absorption may cause disturbed electrolyte balance and impair kidney function.

Mutagenicity
Lithium chloride (CAS: 7447-41-8)
DNA inhibition system-human:hela cell 70 mmol/l

12. Ecological information

Persistence and degradability
Methods for the determination of biodegradability are not applicable to inorganic substances.

Bioaccumulative Potential
Distribution: log P(o/w): -2.7
No bioaccumulation is to be expected (log P(o/w) <1).

Other Precautions
Do not allow to enter waters, waste water, or soil!

Acute Toxicity - Fish
LC50 (Onchorhynchus mykiss): 158mg/l/96h (anhydrous substance)

Acute Toxicity - Daphnia
EC50 (Daphnia magna): 249 mg/l/48h (anhydrous substance)

13. Disposal considerations

Disposal Considerations
Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

14. Transport information

Transport Information
Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

15. Regulatory information

Regulatory Information
Listed in the Australian Inventory of Chemical Substances (AICS).

Poisons Schedule
Not Scheduled

Hazard Category
Harmful, Irritant

16. Other Information

Literature References
'Standard for the Uniform Scheduling of Medicines and Poisons No. 6', Commonwealth of Australia, February 2015.
Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.
Safe Work Australia, 'Hazardous Substances Information System, 2005'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.

Contact Person/Point
Paul McCarthy Ph. 08 8440 2000

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Empirical Formula & Structural Formula
LiCl

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