

MATERIAL SAFETY DATA SHEET

Product Name Lithium Chloride Solution
Product id 9915
Revision date 09/03/2005 **Revision: 3**
Supersedes 29/04/2002

1. Identification of the substance & the company

Chemical name Lithium chloride solution
Chemical formula LiCl
Chemical family Lithium and compounds
Molecular weight 42.394
Type of product and use Dehumidifying agent in air conditioning systems
Company Bromine Compounds Ltd.
P.O.B 180, Beer Sheva 84101, Israel
Tel +972-8-6297830

Emergency telephone number:

- For Europe (+31) 115 689000
- For UK and Ireland (01865)407333
- For USA Chemtrec (800) 424-9300

2. Composition / information on ingredients

Components CAS	Weight %	Annex No.	EEC No.	EU Classification	Notes
Lithium chloride 7447-41-8	39-41		2312123	Xn; R22, R36	

3. Hazards identification

Adverse human health effects Harmful if swallowed
Irritant to eyes, skin and mucous membranes.



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4. First-aid measures

Eye contact	Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.
Skin contact	Remove contaminated clothing. Wash skin thoroughly with mild soap and plenty of water for at least 15 minutes. Wash clothing before re-use. Get medical attention if irritation persists.
Inhalation	In case of mist inhalation or breathing fumes released from heated material, remove person to fresh air. Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.
Ingestion	If swallowed, wash mouth thoroughly with plenty of water and give water to drink. Get medical attention immediately. ***** NOTE: Never give an unconscious person anything to drink. *****
Notes to the physician	No specific antidote. Treat symptomatically and supportively.

5. Fire - fighting measures

Flash point	None
Flammable/Explosion limits	Not flammable
Auto-ignition temperature	Not available
Suitable extinguishing media	Material is not combustible. Use extinguishing media appropriate to surrounding fire conditions.
Fire fighting procedure	Cool containers with water spray. In closed stores, provide fire-fighters with self-contained breathing apparatus in positive pressure mode.
Unusual fire and explosion hazards	None known

6. Accidental release measures

Personal precautions	Wear respirator, chemical safety goggles, rubber gloves and boots.
Methods for cleaning up	Absorb on sand or vermiculite and place in closed container for disposal. Ventilate area and wash spill site after material pickup is complete.

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7. Handling and storage

Handling	Avoid bodily contact. Keep containers tightly closed.
Storage	Store in a cool, well-ventilated area away from incompatible materials (see "materials to avoid").

8. Exposure controls / personal protection

Exposure Limits :

Components CAS	ACGIH-TLV Data	OSHA (PEL) Data
Lithium chloride 7447-41-8	Not determined	Not Determined

Ventilation requirements	Provide adequate ventilation. Use local exhaust as necessary, especially under misting conditions.
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Personal protective equipment:

- Respiratory protection	If product is misting or when engineering controls are not adequate, wear an approved respirator
- Hand protection	Rubber gloves
- Eye protection	Safety glasses
- Skin and body protection	Body covering clothes and boots
Hygiene measures	Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

9. Physical and chemical properties

Appearance	Clear, odourless and colourless liquid
Melting point/range	-10°C (39%)
Boiling point/range	143°C (39%)
Vapour pressure	Not available
Vapor density	Not available
Evaporation rate (ether=1)	Not available
Solubility:	
- Solubility in water	Soluble

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Density	1.25 g/cc
Decomposition temperature	Not available

10. Stability and reactivity

Stability	Stable under normal conditions
Materials to avoid	Bromine trifluoride
Conditions to avoid	Strong acids
Hazardous decomposition products	None known
Hazardous polymerization	None known Will not occur

11. Toxicological information

Note: The following data refer to LiCl 100% solid

Acute toxicity:

- Rat oral LD50	526 mg/kg
- Eye irritation (rabbit)	Moderate irritant
- Dermal irritation (rabbit)	Severe irritant

Effects of overexposure :

- Ocular	Irritant
- Dermal	Exposure to wet skin may cause severe irritation.
- Inhalation	May irritate the upper respiratory tract Absorption from the lungs may cause symptoms similar to those of ingestion.
- Ingestion	Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. In severe cases can cause central nervous system damage, kidney and heart effects and thyroid changes.

Chronic toxicity Prolonged or repeated ingestion may cause symptoms as for ingestion.

Mutagenicity Not mutagenic by the Ames Test
LiCl was found clastogenic in sister chromatid exchange (oral, mouse)
LiCl was found to be mutagenic in cytogenetic analysis



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Carcinogenicity Not classified by IARC.
Not included in NTP 11th Report on Carcinogens.

Reproductive toxicity Has shown some evidence of reproductive effects in laboratory animals.

12. Ecological information

Information on ecological effects No information available

13. Disposal considerations

Waste disposal Observe all federal, state and local environmental regulations when disposing of this material.

14. Transportation information

IMO Not regulated

ADR/RID Not regulated

ICAO/IATA Not regulated

DOT Not regulated

15. Regulatory information

EU Reported in EINECS (No. 2312123)

- Indication of danger Harmful, symbol required (Xn)

- R Phrases R 22 :Harmful if swallowed.
R 36 :Irritating to eyes.

- S Phrases S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Australia Listed in AICS

USA Reported in the EPA TSCA Inventory



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Canada	Listed in DSL Listed in WHMIS.
Japanese METI	ENCS No.1-231
South Korea	Listed in ECL (KE-22552)
Switzerland	Listed in Giftliste 1 (Toxic Category 3)
Philippines	Listed in PICCS

16. Other information

This data sheet contains changes from the previous version in section(s)
3, 8

Health, Safety & Environment Policy

We will strive to ensure that our operations and products meet the needs of the present global community without compromising the ability of future generations to meet their needs We accept that the success of our business is dependent on the supply of products and services that will benefit society whilst ensuring human safety and protection of the environment and natural resources Within the framework of our commitment to the Responsible Care program, we will provide a healthy and safe work environment for employees and will responsibly manage our products at all stages of their life cycle in order to protect human health and the environment whilst maintaining high production standards of operation

TO MEET THIS COMMITMENT WE WILL:

- Comply with or exceed applicable national and international regulatory requirements and other requirements to which we subscribe
- Communicate openly and actively encourage dialogue with employees, customers and community concerning our products and operations
- Implement documented management systems consistent with and for promotion of the Responsible Care ethics
- Develop and supply products that can be manufactured, transported, used and disposed of safely whilst best meeting the needs of our customers
- Regularly assess, continually improve and responsibly manage health, safety and environmental risks associated with products and processes throughout their life-cycles
- Share knowledge and expertise with others and seek to learn from and incorporate improved practices into our own operations



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Educate and train employees, contractors and customers to improve their HSE performance
Communicate up-to-date information to enable our workers, customers and other interested parties to handle our products in a safe and environmentally responsible manner
Endeavor to work with customers, suppliers, distributors and contractors to foster the safe use, transport and disposal of our chemicals
Support Product Stewardship programs in cooperation with customers, distributors and transporters

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End of safety data sheet