SECTION-1: Identification of the substance / mixture and the company / undertaking

Catalogue Number	CS-BX-00879
Product Name	Lithium chloride solution
CAS No.	7447-41-8
Category	Solutions
Synonyms	Lithium chloride
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email **sales@clearsynth.com** for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Skin irritation (Category 2)
Serious eye damage/eye irritation (Category 2)
Acute toxicity (Category 4)

2.2 Label Elements

Signal Word: Warning

Hazard Statement(s)

Code	Statement
H302	Harmful if swallowed.
H315	Causes skin irritation.

H319	Causes serious eye irritation.
H335	Not available
H360	Not available
H361	Not available
H371	Not available
H373	Not available
H372	Not available

Precautionary Statement(s)

Code	Statement
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P264+P265	Not available
P270	Not available
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P317	Not available
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if presen
P319	Get medical help if you feel unwell.
P321	Specific treatment (see … on this label).
P330	Not available
P332+P317	If skin irritation occurs: Get medical help.
P337+P317	If eye irritation persists: Get medical help.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulatio
P203	Not available

P318	Not available
P260	Not available
P308+P316	Not available

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Lithium chloride solution
CAS Number : 7447-41-8
Molecular Formula : LiCl
Molecular Weight : 42.39
Parent Chemical : -
Synonyms : Lithium chloride
Concentration : Not available

SECTION 4: First aid measures

Not available

SECTION 5: Firefighting measures

Not available

SECTION 6: Accidental release measures

Not available

SECTION-7: Handling and storage

Not available

SECTION 8: Exposure controls / personal protection

Not available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available

Test	Result
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

Not available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- Acute toxicity: Acute poisoning in man reported after 4 doses of 2 g each of lithium chloride, causing weakness, prostration, vertigo, and tinnitus. Chronic toxicity symptoms following ingestion of nonlethal doses of lithium chloride with low-sodium chloride diets are thirst and polyuria. Acute intoxication signs of toxicity include: anorexia, dry mouth, nausea, vomiting, diarrhea, tremor of the hands, faintness of musculature, thirst, leukocytosis, and concentration and memory disturbances (especially with older people). Serious toxic symptoms occur which include: fasciculations, muscle contractions, hyperreflexia and hypertonia, drowsiness, confusion, sometimes epileptiform insults, hypotension, coma, collapse. Moderately toxic; probable oral lethal dose (human 0.5-5 g/kg; between 1 oz and 1 pint (or 1 lb) for 70 kg person (150 lb).
- Skin corrosion/irritation: No data available.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: PAH-stimulated lymphocyte cultures from healthy adult volunteers were exposed to concentrations of lithium chloride; the mitotic index increased and the incidence of chromosomal breaks, gaps and satellite associations was increased in the presence of lithium chloride in the media. The vast majority of the studies on chromosomal damage in leukocytes, lymphocytes and bone marrow cells in patients do not indicate any increased risk by lithium therapy for chromosome aberrations or sister chromatid exchanges. Lithium chloride was negative in the Bacillus subtilis recombination assay without metabolic activation. Lithium chloride tested negative in the Ames test with Salmonella typhimurium strains TA 98, TA 100, TA 1535 and TA 1537 with or without metabolic activation. Lithium chloride induced chromosomal aberrations, but not sister chromatid exchanges, in mice (bone marrow).
- Carcinogenicity: Monocyte cultures from patients affected by non-metastatic and metastatic breast cancer: lithium chloride treatment induced IL-15 production by monocytes mainly from non-metastatic patients; combined lipopolysaccharide/lithium chloride treatment up-regulated IL-15 release compared to those treated with LPS alone.
- Reproductive toxicity: A teratogenicity study in rats administered lithium chloride in drinking water: no malformations or other defects in lithium exposed litters; no differences in size and weight among these and untreated controls. If the young were maintained at the same lithium concentration in the drinking water, 23 showed slightly lower growth, but developed finally into adult rats indistinguishable from normal rats. Significant inhibition of spermatogenesis was found in immature rats after daily subcutaneous injections of lithium chloride for at least 15 days. Chronic administration of lithium chloride during the embryogenesis of Bufo arenarum toad resulted in teratological development and in some cases an irreversible blockade of morphogenesis; results varied according to embryonic stage, duration of treatment and concentration used.
- STOT-single exposure: No data available.
- STOT-repeated exposure: Chronic toxicity symptoms following ingestion of nonlethal doses of lithium chloride with low-sodium chloride diets are thirst and polyuria. Independent of the plasma level, changes can occur in the ECG and in the EEC, with symptoms such as polyuria and polydipsia, seldom nephrogenic diabetes insipidus, ulcers of the leg, enhancement of acne and psoriasis, transient hyperglycemia, pruritus, and a metal taste. In about 5% of the cases, a (usually reversible) hypothyroidia develops. Factors affecting the glomerular filtration rate have a significant influence on the clearance of lithium; subjects with chronic renal insufficiency are especially vulnerable to lithium exposure. Other conditions predisposing to lithium intoxication include advanced age, sodium depletion of different origin or use of certain drugs affecting the renal function.
- Aspiration hazard: No data available.

Likely routes of exposure
- Human volunteers were exposed to lithium chloride in spa water for 20 minutes/day, five days/week for two consecutive weeks; it is concluded that lithium is not absorbed through the skin during spa use. Acute poisoning in man reported after oral dosing (4 doses of 2 g each). Chronic toxicity symptoms following ingestion of nonlethal doses are reported.

Symptoms related to the physical, chemical and toxicological characteristics
- Weakness, prostration, vertigo, tinnitus; thirst and polyuria. Signs of toxicity include anorexia, dry mouth, nausea, vomiting, diarrhea, tremor of the hands, faintness of musculature, thirst, leukocytosis, and concentration and memory disturbances; in elderly people, reversible delirious conditions can occur with confusion, restlessness, and ataxia. Serious toxic symptoms include fasciculations, muscle contractions, hyperreflexia and hypertonia, drowsiness, confusion, sometimes epileptiform insults, hypotension, coma, collapse. Symptoms reported include polyuria and polydipsia, seldom nephrogenic diabetes insipidus, ulcers of the leg, enhancement of acne and psoriasis, transient hyperglycemia, pruritus, and a metal taste; (usually reversible) hypothyroidia in about 5% of cases.

SECTION 12: Ecological information

Not available

SECTION 13: Disposal considerations

Not available

SECTION 14: Transport information

Not available

SECTION 15: Regulatory information

Not available

SECTION 16: Other information

Not available

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