

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Lithium Chloride
CHEMICAL FAMILY: Alkali Chlorides
MOLECULAR FORMULA: LiCl
SYNONYM(s): Lithium Chloride Anhydrous
ALTERNATE TRADE NAME(S): Metallurgical Grade Lithium Chloride, Lectro® Lyte 600 Salt
GENERAL USE: Industrial Manufacturing

MANUFACTURER
FMC CORPORATION
Lithium Division
P.O. Box 795
Bessemer City, NC 28016-0795
General Information: (704) 868-5300

Emergency Telephone Numbers:
CHEMTREC (800) 424-9300
Emergency Phone (704) 629-5361 (Plant) Call Collect 24 Hr/Day
Emergency Phone (303) 595-9048 (Medical) Call Collect

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt. %</u>
Lithium chloride	7447-41-8	100

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS:
POTENTIAL HEALTH EFFECTS: White granular solid or powder, odorless. This product is moderately irritating to the skin, eyes, nose and throat. Ingestion may cause drowsiness, weakness, tremors, anorexia, nausea, blurred vision, and muscle spasm.

COMMENTS:
(See Section 11, Toxicological Information)

4. FIRST AID MEASURES

EYES: Flush with water for at least 15 minutes. If irritation occurs and persists, contact a medical doctor.
SKIN: Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.
INGESTION: Drink 1 or 2 glasses of water and induce vomiting by touching the back of the throat with a finger or by giving syrup of ipecac. Never induce vomiting or give anything by mouth to an unconscious person. Contact a medical doctor.
INHALATION: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, contact a medical doctor.

NOTES TO MEDICAL DOCTOR:
This product has low oral, dermal and inhalation toxicity, and is a mild irritant. Treatment is controlled removal of exposure followed by symptomatic and supportive care.

5. FIRE FIGHTING MEASURES

<u>FLAMMABLE LIMITS:</u>	Upper: Not available Lower: Not available.
<u>GENERAL HAZARD:</u>	No known physical hazard, non-combustible.
<u>EXTINGUISHING MEDIA:</u>	Dry chemical, CO ₂ , water spray or regular foam.
<u>HAZARDOUS COMBUSTION PRODUCTS:</u>	None
<u>FIRE FIGHTING PROCEDURES:</u>	Wear full protective clothing and self-contained breathing apparatus (SCBA) approved for fire fighting. This is necessary to protect against the hazards of heat, products of combustion and oxygen deficiency. Do not breathe smoke, gases or vapors generated.
<u>AUTOIGNITION TEMPERATURE:</u>	Not applicable
<u>PROPERTIES CONTRIBUTING TO FLAMMABILITY:</u>	None
<u>FLASH POINT:</u>	Not applicable
<u>SENSITIVITY TO STATIC DISCHARGE:</u>	Not applicable
<u>SENSITIVITY TO IMPACT:</u>	Not applicable

COMMENTS:
(See Section 10, Stability and Reactivity)

6. ACCIDENTAL RELEASE MEASURES

<u>RELEASE NOTES:</u>	Sweep up and place in suitable container. Dispose of waste according to local and Federal laws and regulations. Before cleanup measures begin, review the entire MSDS with particular attention to Section 3, Emergency Overview and Potential Health Effects; and Section 8, Recommended Personal Protective Equipment.
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7. HANDLING AND STORAGE

<u>HANDLING:</u>	Avoid contact with eyes, skin or clothing. Use with adequate ventilation. Wear safety glasses or goggles and rubber gloves. Wash thoroughly after handling.
<u>STORAGE:</u>	Keep away from strong acids. Keep container closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<u>EXPOSURE LIMITS</u>				
<u>Chemical Name</u>	<u>TWA (ACGIH)</u>	<u>STEL/Ceiling (ACGIH)</u>	<u>PEL (OSHA)</u>	<u>STEL/Ceiling (OSHA)</u>
PNOC ¹ , inhalable particulate	10 mg/m ³			
PNOC ¹ , respirable particulate	3 mg/m ³			

¹PNOC = Particulates Not Otherwise Classified.

ENGINEERING CONTROLS:
Use local exhaust ventilation to keep airborne concentrations below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

<u>Eyes And Face:</u>	Safety glasses or goggles
<u>Respiratory:</u>	When engineering controls are not adequate, wear a NIOSH/MSHA respirator approved for protection against inorganic dusts.
<u>Protective Clothing:</u>	Rubber gloves
<u>Work Hygienic Practices:</u>	Quick-drench eyewash and safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

<u>ODOR:</u>	Odorless
<u>APPEARANCE:</u>	White, granular solid or powder
<u>pH:</u>	(1% solution) @ 25°C: 6
<u>PERCENT VOLATILE:</u>	Not applicable
<u>VAPOR PRESSURE:</u>	Not applicable
<u>VAPOR DENSITY:</u>	Not applicable
<u>BOILING POINT:</u>	1355°C (2471°F)
<u>MELTING POINT:</u>	608°C (1126°F)
<u>SOLUBILITY IN WATER:</u>	% by wt. @ 25°C (77°F): 45.4
<u>EVAPORATION RATE(Butyl Acetate = 1):</u>	Not applicable
<u>SPECIFIC GRAVITY:</u>	2.1 g/ml
<u>MOLECULAR WEIGHT:</u>	42.4
<u>COEFF. OIL/WATER:</u>	Not applicable
<u>ODOR THRESHOLD:</u>	Not applicable
<u>FLAMMABLE LIMITS:</u>	Upper: Not available Lower: Not available.
<u>FLASH POINT:</u>	Not applicable
<u>AUTOIGNITION TEMPERATURE:</u>	Not applicable
<u>EXPLOSIVE PROPERTIES:</u>	Not explosive
<u>OXIDIZING PROPERTIES:</u>	Not an oxidizer

10. STABILITY AND REACTIVITY

<u>CONDITIONS TO AVOID:</u>	Contact with acids
<u>STABILITY:</u>	Stable
<u>POLYMERIZATION:</u>	Will not occur
<u>HAZARDOUS DECOMPOSITION PRODUCTS:</u>	None
<u>INCOMPATIBLE MATERIALS:</u>	Strong acids

11. TOXICOLOGICAL INFORMATION

<u>Eye Contact:</u>	Moderate irritant (rabbit)	[FMC Study Number 187-0996]
<u>Skin Contact:</u>	Slight irritant PII=1.5/8.0 (rabbit)	[FMC Study Number 187-0997]
<u>Skin Absorption:</u>	Dermal LD ₅₀ >2000 mg/kg (rabbit)	[FMC Study Number 194-1941]
<u>Ingestion:</u>	Oral LD ₅₀ = 526 mg/kg (rat)	[RTECS 2005]
<u>Inhalation:</u>	Inhalation LC ₅₀ > 5.57 mg/L (rat)	[FMC Study Number 199-2287]

Acute Effects From Overexposure:

This product is moderately irritating to the skin, eyes, nose and throat.

Chronic Effects From Overexposure:

Ingestion of lithium chloride has been reported to produce drowsiness, weakness, tremors, anorexia, nausea, blurred vision and muscle spasms in humans. Exposure to lithium chloride has been shown to impair reproductive function and to produce developmental toxicity in laboratory animals (Reproductive Toxicology 9 (2), 176-210, 1995).

Sensitization: No

Carcinogenicity: Lithium chloride solution: Non-sensitizing (guinea pig) (35 - 40% LiCl aqueous solution) [FMC Study Number I97-2225]
EH40: Not listed.
IARC: Not listed.
NTP: Not listed.
OSHA: Not considered a carcinogen under OSHA.
ACGIH: Not listed

Mutagenicity: No

Reproductive Toxicity: No

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

96-hour LC₅₀ = 158 mg/L (rainbow trout) [FMC I97-2174]
48-hour EC₅₀ = 249 mg/L (daphnia magna) [FMC I97-2175]

Chemical Fate Information:

Lithium chloride exists as the inorganic ions of lithium and chloride in aqueous solutions. LiCl is not biodegraded, bioaccumulated or photodegraded.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of waste according to local and Federal laws and regulations.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: None
CLASSIFICATION: None
LABELS: None
UN NUMBER: None
PACKING GROUP: None
CUSTOM TARIFF NO: 2827.39.9050
MARINE POLLUTANT: No

15. REGULATORY INFORMATION

UNITED STATES

SECTION 311 HAZARD CATEGORY (40 CFR 370): Immediate (acute) health hazard.
SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372): This product does not contain a toxic chemical subject to the reporting requirements of Section 313 of Emergency Planning and Community Right-To-Know Act of 1986.

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355): Not listed

CERCLA HAZARDOUS SUBSTANCE (40 CFR 302.4): Not listed

TSCA SEC 12B EXPORT NOTIFICATION: This product is not subject to TSCA 12 (b) Export Notification Requirements.

TSCA INVENTORY STATUS (40 CFR 710): Listed

CANADA
WHMIS:

Product Identification No.: None
Hazard Classification:
Ingredient Disclosure List: Not listed

16. OTHER INFORMATION

REVISION SUMMARY: Revision # 7: Section 1 modified.

NFPA RATING

HEALTH: 1
FLAMMABILITY: 0
REACTIVITY: 0
SPECIAL: None

This MSDS has been prepared to meet U. S. OSHA Hazard Communication Standard, 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

type 1b

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