

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Lithium Fluoride
CHEMICAL FAMILY: Alkali Fluorides
MOLECULAR FORMULA: LiF
SYNONYM(s): Hydrofluoric Acid, Lithium Salt
ALTERNATE TRADE NAME(S): Lectro® Lyte 700 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. HAZARDS IDENTIFICATION

CLASSIFICATION: Skin irritation; Category 3
Acute Toxicity; Category 4

LABELING:

SYMBOLS:	Exclamation mark
SIGNAL WORD:	Warning
HAZARD STATEMENTS:	Causes mild skin irritation. Harmful if swallowed.
PRECAUTIONARY STATEMENTS:	Prevention: Wash thoroughly after handling. Do not eat, drink or smoke when using this product Response First Aid See Section 4 of the MSDS. Storage See Section 7 of the MSDS. Disposal See Section 13 of the MSDS.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS #</u>	<u>EC No.</u>	<u>Wt.%</u>	<u>Classification, Hazard Statement Codes</u>	
Lithium Fluoride	7789-24-4	232-152-0	100	Skin Irrit. Cat 3	H316
				Acute Tox. Cat 4	H302

4. FIRST AID MEASURES

EYES: Immediately flush with water for at least 15 minutes, lifting the upper and lower eyelids intermittently. See a medical doctor or

SKIN: ophthalmologist immediately.
Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

INGESTION: Drink plenty of water. Never give anything by mouth to an unconscious person. If any discomfort persists, obtain medical attention.

INHALATION: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, see a medical doctor. If breathing has stopped, give artificial respiration and see a medical doctor immediately.

NOTES TO MEDICAL DOCTOR:

This product has low oral toxicity and may be a severe irritant. Treatment is symptomatic and supportive.

5. FIRE FIGHTING MEASURES

FLAMMABLE LIMITS: Upper: Not available Lower: Not available.
GENERAL HAZARD: No known physical hazard, non-combustible.
EXTINGUISHING MEDIA: Dry chemical, CO2, water spray or regular foam.
HAZARDOUS COMBUSTION PRODUCTS: None
FIRE FIGHTING PROCEDURES: 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.

AUTOIGNITION TEMPERATURE: Not applicable
PROPERTIES CONTRIBUTING TO FLAMMABILITY: None
FLASH POINT: Not applicable
SENSITIVITY TO STATIC DISCHARGE: Not applicable
SENSITIVITY TO IMPACT: Not applicable

COMMENTS:

(See Section 10, Stability and Reactivity)

6. ACCIDENTAL RELEASE MEASURES

RELEASE NOTES: 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.

7. HANDLING AND STORAGE

HANDLING: Avoid contact with eyes, skin or clothing. Use with adequate ventilation. Wear safety glasses or goggles and rubber gloves. Wash thoroughly after handling.

STORAGE: Keep away from strong acids. Keep container closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

<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			
Fluorides, as F:	2.5 mg/m ³		2.5 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 powder
<u>pH:</u>	(1% Slurry) @ 25°C: 8
<u>PERCENT VOLATILE:</u>	Not applicable
<u>VAPOR PRESSURE:</u>	Not applicable
<u>VAPOR DENSITY:</u>	Not applicable
<u>BOILING POINT:</u>	1681°C (3060°F)
<u>MELTING POINT:</u>	848°C (1560°F)
<u>SOLUBILITY IN WATER:</u>	0.1 % by wt. @ 25°C (77°F)
<u>EVAPORATION RATE(Butyl Acetate = 1):</u>	Not applicable
<u>SPECIFIC GRAVITY:</u>	2.6 g/cc
<u>MOLECULAR WEIGHT:</u>	25.94
<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>VISCOSITY:</u>	Not applicable
<u>FLAMMABILITY:</u>	Not combustible.
<u>DECOMPOSITION TEMPERATURE:</u>	Not available
<u>EXPLOSIVE PROPERTIES:</u>	Not explosive
<u>OXIDIZING PROPERTIES:</u>	Not an oxidizer

10. STABILITY AND REACTIVITY

<u>CONDITIONS TO AVOID:</u>	Contact with strong acids
<u>STABILITY:</u>	Stable
<u>POLYMERIZATION:</u>	Does not polymerize
<u>HAZARDOUS DECOMPOSITION PRODUCTS:</u>	Toxic fluorides
<u>INCOMPATIBLE MATERIALS:</u>	Strong acids

11. TOXICOLOGICAL INFORMATION

<u>Eye Contact:</u>	No data available for the product.
<u>Skin Contact:</u>	No data available for the product.
<u>Skin Absorption:</u>	No data available for the product.
<u>Ingestion:</u>	LD ₅₀ = 608 mg/kg (rat) [FMC 188-1055]
<u>Inhalation:</u>	No data available for the product.

Acute Effects From Overexposure:

This product has low oral toxicity. Ingestion of inorganic soluble fluorides may cause kidney and liver damage, vomiting, stomach bleeding, abdominal pain, diarrhea, shortness of breath, slight paralysis, difficulty in speaking, thirst, weak pulse, disturbed color vision, muscular weakness, convulsions and unconsciousness. Fluoride dust may cause irritation to the eyes, skin and respiratory tract.

Chronic Effects From Overexposure:

Chronic overexposure to fluoride may result in digestive disturbances, mottled tooth enamel, abnormal hardening of the bones and other bone changes, and damage to the liver and kidneys. Skin rashes and worker complaints related to bones, joints and muscles have been reported. High doses of stannous fluoride (in drinking water) have been reported to cause impaired reproductive performance in animals. Persons with impaired pulmonary function, pre-existing eye problems, skin disorders and kidney disease may be at increased risk from overexposure to fluorides (NIOSH/OSHA Guidelines, September, 1978).

<u>Sensitization:</u>	No
<u>Carcinogenicity:</u>	EH40: Not listed. IARC: Not listed. NTP: Not listed. OSHA: Not considered a carcinogen under OSHA. ACGIH: Not listed
<u>Mutagenicity:</u>	No
<u>Reproductive Toxicity:</u>	No

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

No data available for the product.

Chemical Fate Information:

No data available for the product.

13. DISPOSAL CONSIDERATIONS

<u>DISPOSAL METHOD:</u>	Dispose of waste according to local and Federal laws and regulations.
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14. TRANSPORT INFORMATION

UN NUMBER: None
PROPER SHIPPING NAME: None
CLASSIFICATION: None
LABELS: None
PACKING GROUP: None
CUSTOM TARIFF NO: 2826.19.0080
MARINE POLLUTANT: No
PIH: Not designated Poison Inhalation Hazard by US DOT.

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: None
Ingredient Disclosure List: Fluoride (inorganic) is listed

16. OTHER INFORMATION

REVISION SUMMARY: Revision #8: Sections 2, 3, 9, 14 & 16 revised. Regular review conducted.

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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