

MATERIAL SAFETY DATA SHEET

Lithium Fluoride



MSDS Ref. No: QS-MSD-082

Version: US/Canada

Date Approved: 06/22/2001

Revision No: 5

1. 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: Chemical Manufacturing

MANUFACTURER

FMC CORPORATION

Lithium Division

P.O. Box 795

Bessemer City, NC 28016-0795

General Information: (704) 868-5300

Emergency Telephone Numbers:

CHEMTREC (U.S.): (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 fluoride	7789-24-4	100

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: Odorless, white powder.

POTENTIAL HEALTH EFFECTS: This product may be irritating to the eyes, skin and mucous membranes.

COMMENTS:

(See Section 11, Toxicological Information)

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 ophthalmologist immediately.

SKIN: 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: Not applicable

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

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

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Safety glasses or goggles

RESPIRATORY: When engineering controls are not adequate, wear a NIOSH/MSHA respirator approved for protection against inorganic dusts.

PROTECTIVE CLOTHING: Rubber gloves

WORK HYGIENIC PRACTICES: Quick-drench eyewash and safety shower.

COMMENTS: EXPOSURE LIMITS:

Fluorides, as F: ACGIH/TWA 2.5 mg/m³; PEL/OSHA 2.5 mg/m³.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Odorless
APPEARANCE: White powder
pH: (1% Slurry) @ 25°C: 8
PERCENT VOLATILE: Not applicable
VAPOR PRESSURE: Not applicable
VAPOR DENSITY: Not applicable
BOILING POINT: 1681°C (3060°F)
MELTING POINT: 848°C (1560°F)
SOLUBILITY IN WATER: 0.1 % by wt. @ 25°C (77°F)
EVAPORATION RATE: Not applicable
SPECIFIC GRAVITY: 2.6 g/cc
MOLECULAR WEIGHT: 25.94
COEFF. OIL/WATER: Not applicable
ODOR THRESHOLD: Not applicable

10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: No data available for the product.
SKIN EFFECTS: No data available for the product.
DERMAL LD₅₀: No data available for the product.
ORAL LD₅₀: 608 mg/kg (rat) [FMC I88-1055]
INHALATION LC₅₀: 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).

CARCINOGENICITY:

IARC: Not listed
NTP: Not listed
OSHA: Not listed
OTHER: ACGIH: Not listed

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data available for the product.

CHEMICAL FATE INFORMATION: No data available for the product.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Consult the owner of the waste for proper waste disposal procedure. Dispose of waste according to local and Federal laws and regulations.

14. TRANSPORT INFORMATION

COMMENTS:

U.S. DOT, INTERNATIONAL MARITIME, AND INTERNATIONAL AIR

Proper Shipping Name: None

Classification: None

Labels: None

UN Number: None

Packing Group: None

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355): Not listed
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.

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)

CERCLA REGULATORY (40 CFR 302.4): Not listed

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA INVENTORY (40 CFR 710, SUBPART B): This product is not subject to TSCA 12 (b) Export Notification Requirements.

TSCA STATUS (40 CFR 710): Listed

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): Product Identification No.: None

Hazard Classification: None

Disclosure List: Fluoride (inorganic) is listed

16. OTHER INFORMATION

REVISION SUMMARY Revision #: 5

This MSDS replaces the March 19, 2001 MSDS. Any changes in information are as follows:

The Tox Review for this MSDS has been reviewed and updated; however, no changes needed to be made to the MSDS.

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

Copyright 2001. FMC Corporation, Lithium Division. All Rights Reserved. Lectro is a registered trademark of FMC Corporation, Lithium Division.