

Material Safety Data Sheet

Lithium fluoride

ACC# 00864

Section 1 - Chemical Product and Company Identification

MSDS Name: Lithium fluoride

Catalog Numbers: AC193380050, AC193380250, AC218270100, AC218271000, AC218275000, L124-500

Synonyms: None.

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7789-24-4	Lithium fluoride	>97	232-152-0

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white powder.

Warning! Harmful if swallowed, inhaled, or absorbed through the skin. Causes eye, skin, and respiratory tract irritation. Long-term exposure may cause bone and joint changes.

Target Organs: Kidneys, central nervous system, cardiovascular system, skeletal structures.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation. Harmful if absorbed through the skin.

Ingestion: Harmful if swallowed. Inorganic fluorides can be harmful. Acute exposure to fluorine compounds can lead to digestive tract burns, and abdominal pain. Exposure to fluoride compounds can result in systemic toxic effects on the heart, liver, and kidneys. It may also deplete calcium levels in the body leading to hypocalcemia and death. Fluoride can reduce calcium levels leading to fatal hypocalcemia.

Inhalation: Harmful if inhaled. Causes respiratory tract irritation.

Chronic: Overexposure to fluoride dust over prolonged periods can result in fluoride deposition in bones and cartilage as evidenced by X-ray changes (fluorosis) which may be accompanied by stiffness of joints. (Alcoa)

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Non-combustible, substance itself does not burn but may decompose upon heating to produce irritating, corrosive and/or toxic fumes.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid breathing dust.

Storage: Store in a cool, dry place. Store in a tightly closed container.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Lithium fluoride	2.5 mg/m ³ TWA (as F) (listed under Fluorides).	2.5 mg/m ³ TWA (inorganic solids, as F) (listed under Fluorides, inorganic).	2.5 mg/m ³ TWA (as F) (listed under Fluorides).2.5 mg/m ³ TWA (as F) (listed under Fluorides).

OSHA Vacated PELs: Lithium fluoride: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Powder

Appearance: white

Odor: odorless

pH: Not available.

Vapor Pressure: 1 mm Hg @ 1047 deg C

Vapor Density: Not available.

Evaporation Rate:Not available.

Viscosity: Not applicable.

Boiling Point: 1681 deg C

Freezing/Melting Point:845 deg C

Decomposition Temperature:Not available.

Solubility: Slightly soluble in water.

Specific Gravity/Density:2.635

Molecular Formula:LiF

Molecular Weight:25.94

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Dust generation, excess heat.

Incompatibilities with Other Materials: Strong acids.

Hazardous Decomposition Products: Hydrogen fluoride gas, oxides of lithium.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 7789-24-4: OJ6125000

LD50/LC50:

CAS# 7789-24-4:

Oral, mouse: LD50 = 119 mg/kg;

Oral, rat: LD50 = 143 mg/kg;

Carcinogenicity:

CAS# 7789-24-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: No information found

Reproductive Effects: No information found

Mutagenicity: No information found

Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	TOXIC SOLID, INORGANIC, N.O.S.	TOXIC SOLID INORGANIC NOS (LITHIUM FLUORIDE)
Hazard Class:	6.1	6.1
UN Number:	UN3288	UN3288
Packing Group:	III	III

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 7789-24-4 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 7789-24-4: delayed.

Section 313 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 7789-24-4 can be found on the following state right to know lists: California, (listed as Fluorides), California, (listed as Fluorides, inorganic), Pennsylvania, (listed as Fluorides), Minnesota, (listed as Fluorides), Minnesota, (listed as Fluorides, inorganic).

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T

Risk Phrases:

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 7789-24-4: No information available.

Canada - DSL/NDSL

CAS# 7789-24-4 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D1B, D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 7789-24-4 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997

Revision #5 Date: 9/07/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.