

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.07.2021

Revision: 19.07.2021

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

- **1.1 Product identifier**
- **Trade name:** Lithium fluoride, 99+%
- **Item number:** 93-0322
- **CAS Number:**  
7789-24-4
- **EC number:**  
232-152-0
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Strem Chemicals, Inc.  
7 Mulliken Way  
NEWBURYPORT, MA 01950  
USA  
info@strem.com
- **Further information obtainable from:** Technical Department
- **1.4 Emergency telephone number:**  
EMERGENCY: CHEMTREC: + 1 (800) 424-9300  
During normal opening times: +1 (978) 499-1600

## SECTION 2: Hazards identification

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



GHS06 skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS06

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
lithium fluoride

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· **Hazard statements**

- H301 Toxic if swallowed.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

· **Precautionary statements**

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients**

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description**  
7789-24-4 lithium fluoride
- **Identification number(s)**
- **EC number:** 232-152-0

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

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- **5.3 Advice for firefighters**
- **Protective equipment:** *No special measures required.*

### **SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures** *Not required.*
- **6.2 Environmental precautions:** *No special measures required.*
- **6.3 Methods and material for containment and cleaning up:**  
*Dispose contaminated material as waste according to item 13.*  
*Ensure adequate ventilation.*
- **6.4 Reference to other sections**  
*See Section 7 for information on safe handling.*  
*See Section 8 for information on personal protection equipment.*  
*See Section 13 for disposal information.*

### **SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
*Thorough dedusting.*  
*Ensure good ventilation/exhaustion at the workplace.*
- **Information about fire - and explosion protection:** *No special measures required.*
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
  - **Requirements to be met by storerooms and receptacles:** *No special requirements.*
  - **Information about storage in one common storage facility:** *Not required.*
  - **Further information about storage conditions:** *Keep container tightly sealed.*
- **7.3 Specific end use(s)** *No further relevant information available.*

### **SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical facilities:** *No further data; see item 7.*
- **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

**7789-24-4 lithium fluoride**

WEL	Long-term value: 2.5 mg/m <sup>3</sup> as F
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- **Additional information:** *The lists valid during the making were used as basis.*
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
*Keep away from foodstuffs, beverages and feed.*  
*Immediately remove all soiled and contaminated clothing*  
*Wash hands before breaks and at the end of work.*  
*Avoid contact with the eyes and skin.*
- **Respiratory protection:**  
*In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.*

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· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Powder
Colour:	White
Odour:	Odourless
Odour threshold:	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/freezing point:	842 °C
Initial boiling point and boiling range:	1.620 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Not determined.

· **Ignition temperature:**

Decomposition temperature: Not determined.

· **Auto-ignition temperature:** Not determined.

· **Explosive properties:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapour pressure:** Not applicable.

Density at 20 °C:	2.635 g/cm <sup>3</sup>
Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.

· **Solubility in / Miscibility with water:**

Insoluble.

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- |  |  |
|--|--|
| · <b>Partition coefficient: n-octanol/water:</b> | Not determined.                            |
| · <b>Viscosity:</b>                              |  |
| <b>Dynamic:</b>                                  | Not applicable.                            |
| <b>Kinematic:</b>                                | Not applicable.                            |
| · <b>Solvent content:</b>                        |  |
| <b>Organic solvents:</b>                         | 0.0 %                                      |
| <b>VOC (EC)</b>                                  | 0.00 %                                     |
| · <b>Solids content:</b>                         | 100.0 %                                    |
| · <b>9.2 Other information</b>                   | No further relevant information available. |

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**  
Toxic if swallowed.

· **LD/LC50 values relevant for classification:**

Oral	LD50	143 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**  
May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.

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- **12.4 Mobility in soil** *No further relevant information available.*
- **Additional ecological information:**
- **General notes:** *Not known to be hazardous to water.*
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*
- **12.6 Other adverse effects** *No further relevant information available.*

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
*Must not be disposed together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packaging:**
- **Recommendation:** *Disposal must be made according to official regulations.*

### SECTION 14: Transport information

- |   |  |
|---|--|
| · <b>14.1 UN-Number</b>   | <i>UN3288</i>                              |
| · <b>ADR, IMDG, IATA</b>  |  |
| · <b>14.2 UN proper shipping name</b>   |  |
| · <b>ADR</b>  | <i>3288 TOXIC SOLID, INORGANIC, N.O.S.</i> |
| · <b>IMDG, IATA</b>   | <i>TOXIC SOLID, INORGANIC, N.O.S.</i>      |
| · <b>14.3 Transport hazard class(es)</b>  |  |
| · <b>ADR, IMDG</b>  |  |
|  |  |
| · <b>Class</b>  | <i>6</i>                                   |
| · <b>Label</b>  | <i>6.1</i>                                 |
| <hr style="border-top: 1px dashed #000;"/>  |  |
| · <b>IATA</b>   |  |
|  |  |
| · <b>Class</b>  | <i>6.1 Toxic substances.</i>               |
| · <b>Label</b>  | <i>6.1</i>                                 |
| · <b>14.4 Packing group</b>   |  |
| · <b>ADR, IMDG, IATA</b>  | <i>III</i>                                 |
| · <b>14.5 Environmental hazards:</b>  |  |
| · <b>Marine pollutant:</b>  | <i>No</i>                                  |
| · <b>14.6 Special precautions for user</b>  | <i>Not applicable.</i>                     |
| · <b>EMS Number:</b>  | <i>F-A,S-A</i>                             |
| · <b>Stowage Category</b>   | <i>A</i>                                   |

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|--|--|--|
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> |  | Not applicable.                                  |
| · <b>Transport/Additional information:</b>                                       |  |  |
| · <b>ADR</b>   |  |  |
| · <b>Limited quantities (LQ)</b>   | 5 kg   |  |
| · <b>Excepted quantities (EQ)</b>  | Code: E1   |  |
|  | Maximum net quantity per inner packaging: 30 g   |  |
|  | Maximum net quantity per outer packaging: 1000 g |  |
| · <b>IMDG</b>  |  |  |
| · <b>Limited quantities (LQ)</b>   | 5kg  |  |
| · <b>Excepted quantities (EQ)</b>  | Code: E1   |  |
|  | Maximum net quantity per inner packaging: 30 g   |  |
|  | Maximum net quantity per outer packaging: 1000 g |  |
| · <b>UN "Model Regulation":</b>  |  | UN 3288 TOXIC SOLID, INORGANIC, N.O.S., 6.1, III |

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category H2 ACUTE TOXIC**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Department issuing SDS:** Technical Department.
- **Contact:** Technical Director
- **Abbreviations and acronyms:**  
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 VOC: Volatile Organic Compounds (USA, EU)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 Acute Tox. 3: Acute toxicity – Category 3  
 Skin Irrit. 2: Skin corrosion/irritation – Category 2  
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3