

Safety Data Sheet

1 Identification of the substance and the company

Description:

Product name: Lithium Fluoride.

Trade names/synonyms: LiF

REACH Reg.-No: exempted from registration in accordance with REACH.

Application:

Crystal material for optical components.

Company identifier:

Hilger Crystals

Unit R1 Westwood Estate Margate Kent CT9 4JL UK

Tel.: +44 (0) 1843 231166 email Sales@hilger-crystals.co.uk

Web: www.hilger-crystals.co.uk

Emergency information:

Contact as above (Mon-Thurs 8.00 – 17.00, Fri 8.00- 12:00)

In the event of a medical enquiry please contact your local doctor or hospital A&E department.

2 Composition/information on ingredients

Component Name	CAS number	%	EC number	EU index	UN number
Lithium Fluoride	7789-24-4	100%	232-152-0	Not Listed	2811
Listed					

3 Hazards Identification

If swallowed causes nausea, stomach pains and diarrhoea. Also harmful in contact with skin. Particular care must be exercised when machining and creating dust or particles.

Storage/Disposal

P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. Composition/Information on ingredients

4 First-aid measures

Description of first-aid measures:

General: Consult a doctor for specific advice.

Eyes: Irrigate thoroughly with water for at least 15 minutes. Obtain medical attention.

Skin: Wash thoroughly with soap and water. Dry area with clean towel. Remove contaminated clothing and wash clothing before re-use.

Inhalation: Remove to fresh air. Perform artificial respiration if breathing has stopped.

When breathing is difficult, properly trained personnel may administer oxygen. Keep affected person warm and at rest. Obtain medical attention.

Safety Data Sheet

Ingestion: Induce vomiting if conscious and as directed by properly qualified personnel. Wash out mouth thoroughly with water. Never make an unconscious person vomit or drink fluids. Obtain Medical Attention Immediately!

5 Firefighting measures

Flash point:

Non-ignitable.

Extinguishing media:

Water, Co₂, foam or dry chemical.

Special hazards arising from the substance:

May evolve toxic fumes in a fire.

Advice for firefighters:

Use breathing apparatus if necessary.

6 Accidental release measures

Emergency procedures, personal precautions, and protective equipment:

Ventilate the area before entering. Wear suitable protective clothing & equipment as listed under Exposure controls. Avoid making dust.

Environmental precautions:

Prevent further leakage or spillage. Do not let product enter drains. Do not discharge to the environment.

Methods and materials for the containment and cleaning up:

Take up and containerise for proper disposal. Containerise any cleaning materials used for proper disposal.

7 Handling & storage

Precautions for safe handling:

Use with adequate ventilation. Keep away from heat. Avoid contact with skin and eyes. Protect against physical damage. Avoid generating dust.

Conditions for safe storage including any incompatibilities:

Keep away from foodstuffs. Keep away from strong acids.

Specific application:

Optical crystal material for UV optics.

8 Exposure controls/personal protection

Control parameters:

Exposure limits, 2.5mg/m³ F long-term 8-hour TWA.

Exposure controls:

Protective PVA gloves and an N95 mask are required, and the use of a laboratory coat is suggested. Safety goggles or safety glasses with side shields are required if there is any possibility of chipping or dust creation. Respirators must be worn when the

Safety Data Sheet

threshold limit is exceeded. Provide adequate general mechanical ventilation, and local exhaust ventilation. Wash hands immediately after handling the product.

9 Physical & chemical properties

Information on basic physical and chemical properties

Appearance: Clear glassy, no odour.

Flash point: Not Applicable

Boiling point: 1676 °C

Flammability: Not Applicable

Melting point: 842°C

Explosive properties: Not Applicable

Specific gravity: 2.64g/mL

Vapour pressure: No data

Solubility in water: Slightly soluble: 270mg/100ml H₂O at 20 °C

pH in aqueous solution: Not determined

Other safety information: None

10 Stability & reactivity

Reactivity: No known dangerous reactions in normal use.

Chemical stability: Stable under normal conditions of storage and use.

Possibility of hazardous reactions: Can evolve toxic and corrosive hydrogen fluoride in contact with mineral acids.

Conditions to avoid: Avoid dispersion of dust in air.

Incompatible materials: Only slightly soluble, even in strong acids.

Hazardous decomposition products: None known.

11 Toxicological information

Toxic dose – LD50

Care must be exercised when machining and creating dust or particles. Inhalation of dust may irritate respiratory system. If swallowed causes nausea, stomach pains and diarrhoea. Also harmful in contact with skin. Particular care must be exercised when machining and creating dust or particles.

Carcinogenicity:

No evidence of carcinogenic properties.

Mutagenicity/teratogenicity:

No evidence of reproductive effects.

Safety Data Sheet

12 Ecological information

Toxicity:

The following applies to inorganic fluorides in general: biological effects: fish: *L. idus* LC50 660mg/l; bacteria: *Ps. putida* toxic from 231mg/l up; algae: *Sc. quadricauda* toxic from 249mg/l up; protozoa: *E. sulcatum* toxic from 101mg/l up; *U. parduczi* toxic from 71mg/l up (all values as NaF). Hazard to drinking water.

13 Disposal considerations

Waste treatment methods:

Chemical residues are generally classified as special waste and are covered by regulations which vary according to location. Contact your local waste disposal authority for advice or pass to a chemical disposal company.

14 Transport information

UN Number: 2811

UN Proper shipping name: Lithium fluoride, not a Hazardous Material for transportation.

Transport hazard class: None

Packing group: III

Environmental hazards: None

Special user precautions: None

Transport in bulk Marpol / IBC: No Data

15 Regulatory information

Safety, health, and environmental regulations/legislation for the substance: TSCA:

Classification:

Xn;R22 R36/37/38; S26



16 Other information

Revision date: May 2025

The above information is believed to be true and correct and is supplied as a guide for information only, it does not purport to be all inclusive.