



Preparing for the New Era of Laboratories

SAFETY DATA SHEET (SDS)

According to regulation (EU) no.1907/2006

LITHIUM FLUORIDE LR

PRODUCT CODE : O-5286

CAS No : 7789-24-4

FORMULA : LiF

UN No : 3288

SAFETY DATA SHEET (SDS)

LITHIUM FLUORIDE LR



SDS Number : 0592

Date : April 2, 2026

Version : 1.0

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

- 1.1 Product Name** : LITHIUM FLUORIDE LR
Synonyms : Fluorolithium
CAS No. : 7789-24-4
HS Code : 2826.1990
Chemical Formula : LiF
Molecular Weight : 25.96 g/mol
Product Code : 0-5286
Brand : Labotiq
1.2 Manufacturer : Labotiq
Address : Jl.Terapi Raya AD2-Bumi Menteng Asri Bogor, Jawa Barat Indonesia – 16111
Website : www.labotiq.net
Email : labotiq.id@gmail.com.
For information : Phone : (+62-251) 839110, 8311662, Fax : (+62-251) 83135710
Emergency number : +6281316894650
1.3 Application : Laboratory chemicals, Manufacture of substances, General Chemical reagent

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 3), H301

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H301

Toxic if swallowed.

H315

Causes skin irritation. H319 Causes serious eye irritation.

H335

May cause respiratory irritation.

Precautionary statement(s)

P301 + P330 + P331 + P310

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. 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.

Supplemental Hazard Statements

EUH032

Contact with acids liberates very toxic gas.

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2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Contact with acids liberates very toxic gas. Weak hydrogen fluoride-releaser

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Lithium fluoride
 Formula : LiF
 Molecular weight : 25.96 g/mol
 CAS-No. : 7789-24-4
 EC-No. : 232-152-0

3.2 Mixture

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Lithium fluoride CAS-No. 7789-24-4 EC-No. 232-152-0	Acute Tox. 3; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H301, H315, H319, H335	<=100 %

For the full text of the H-Statements mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Hydrofluoric (HF) acid burns require immediate and specialized first aid a hours depending on the concentration of HF. After decontamination with wa penetration/absorption of the fluoride ion. Treatment should be directed exposure. Skin exposures can be treated with a 2.5% calcium gluconate gel exposures may require subcutaneous calcium gluconate except for digital a technique, due to the potential for tissue injury from increased pressure and should be considered when undergoing decontamination. Prevention of a obtained by giving milk, chewable calcium carbonate tablets or Milk of Ma hypocalcemia, hypomagnesemia and cardiac arrhythmias should be monitored.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician. First treatment with calcium gluconate paste.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Water Foam Carbon dioxide (CO₂) Dry powder Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Hydrogen fluoride

Lithium oxides

Not combustible.

Mixture with combustible ingredients.

Development of hazardous combustion gases or vapours possible in the event of fire.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

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7.1 Precautions for safe handling

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons. Do not store near acids.

Storage class

Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested: Dermatrill® L

Splash contact

Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatrill® L

Body Protection

protective clothing

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Respiratory protection

required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Recommended Filter type: Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Form: Powder with lumps
Odour	No data available
Odour Threshold	No data available
pH	7,0 - 8,5 at 0,26 g/l at 25 °C
Melting point/freezingpoint	Melting point/ range: 845 °C
Initial boiling point and boiling range	No data available
Flash point	Not applicable
Evaporation rate	No data available
Flammability (solid, gas)	The product is not flammable.
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Density	2,64 g/mL at 25 °C
Water solubility	ca.0,3 g/l at 20 °C
Partition coefficient: octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed. Contact with acids liberates very toxic gas.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

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10.3 Possibility of hazardous reactions

Violent reactions possible with:
halogen-halogen compounds
Generates dangerous gases or fumes in contact with:
acids
Generates dangerous gases or fumes in contact with:
Acids

10.4 Conditions to avoid

Avoid moisture.

10.5 Incompatible materials

glass

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

LD50 Oral - Rat - male - 608 mg/kg
(OECD Test Guideline 401)
Acute toxicity estimate Oral - 608 mg/kg
(ATE value derived from LD50/LC50 value)
LD50 Inhalation - Rat - 4 h - > 15,57 mg/l - dust/mist
(OECD Test Guideline 403)
LD50 Dermal - Rat - > 2.000 mg/kg
(OECD Test Guideline 402)
Remarks: The value is given in analogy to the following substances: Lithium bromide

Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE)
Result: No skin irritation
(OECD Test Guideline 439)
Skin - in vitro membrane barrier
Result: Not corrosive
(OECD Test Guideline 435)

Serious eye damage/eye irritation

Remarks: May irritate eyes. (in analogy to similar products)

Respiratory or skin sensitisation

in vivo assay - Guinea pig
Result: Not sensitising (US-EPA)

Germ cell mutagenicity

No data available
Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

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Test Type: Ames test
 Test system: Escherichia coli
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 471
 Result: negative
 Test Type: Chromosome aberration test in vitro
 Test system: Human lymphocytes
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 473
 Result: negative
 Remarks: (in analogy to similar products)
 Test Type: In vitro mammalian cell gene mutation test
 Test system: mouse lymphoma cells
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 476
 Result: negative
 Remarks: (in analogy to similar products)

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

Endocrine disrupting properties

RTECS: PC1400000

Product:

Assessment :

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia. Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia., Cyanosis and t-wave inversion have occurred in the breast-fed infants of women receiving lithium carbonate therapy., Lithium and its compounds are possible teratogens by analogy to lithium carbonate which has equivocal human teratogenic data and positive animal teratogenic data., burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Large doses of lithium ion have caused dizziness and prostration, and can cause kidney damage if sodium intake is limited. Dehydration, weight loss, dermatological effects, and thyroid disturbances have been reported. Central nervous system effects that include slurred speech, blurred vision, sensory loss, ataxia, and convulsions may occur. Diarrhea, vomiting, and neuromuscular effects such as tremor, clonus, and hyperactive reflexes may occur as a result of repeated exposure to lithium ion. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia - 152,37 mg/l - 48 h

Remarks: (calculated)

Toxicity to algae

static test NOEC - Desmodesmus subspicatus (green algae) - 25 mg/l - 72 h

(OECD Test Guideline 201)

Remarks: The value is given in analogy to the following substances: Lithium chloride

static test ErC50 - Desmodesmus subspicatus (green algae) - > 400 mg/l - 72 h

(OECD Test Guideline 201)

Remarks: The value is given in analogy to the following substances: Lithium chloride

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

NOEC - Daphnia - 14,1 mg/l - 21 d

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

Endocrine disrupting properties

Product:

Assessment :

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

No data available

SECTION 14: Transport information**14.1 UN number**

ADR/RID: 3288

IMDG: 3288

IATA: 3288

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14.2 UN proper shipping name

ADR/RID: TOXIC SOLID, INORGANIC, N.O.S. (Lithium fluoride)

IMDG: TOXIC SOLID, INORGANIC, N.O.S. (Lithium fluoride)

IATA: Toxic solid, inorganic, n.o.s. (Lithium fluoride)

14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

EUH032 Contact with acids liberates very toxic gas.

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Reactivity: 0

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Labotiq shall not be held liable for any damage resulting from handling or from contact with the above product.

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