

# SAFETY DATA SHEET

Date Printed: 04/19/2024

Date Revised: 01/15/2022

## SECTION 1. IDENTIFICATION

**Product Identifier:** (3N) 99.9% Lithium bis(fluorosulfonyl)imide

**Product Code:** LI-FSI-03-P

**CAS Number:** 171611-11-3

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute tox., oral (Category 3) H301

Serious eye dam. (Category 1) H318

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statements

H301

Toxic if swallowed

H318

Causes serious eye damage

H333

May be harmful if inhaled

Precautionary statement(s)

P261

Avoid breathing dust/fume/gas/mist/vapors/spray.

P264

Wash hands thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

P271

Use only outdoors or in a well-ventilated area.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P301 + P310

IF SWALLOWED: Call a poison center or doctor/physician if you feel unwell.

P301 + P330 + P331

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.

Rinse skin with water/shower.

P304 + P312

IF INHALED: Call a poison center or doctor/physician if you feel unwell.

P304 + P340

IF INHALED: Remove victim to fresh air and rest in a position comfortable for breathing.

P305 + P351 + P338

IF IN EYES:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

P312

Call a poison center or doctor/physician if you feel unwell.

P321

Specific treatment (see specific treatment on this label)

P330

Rinse mouth.

P337 + P313P

If eye irritation persists: Get medical advice/attention

P405

Store locked up.

P501

Dispose of contents/container in accordance with local/regional/national/international regulation.

---

## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Lithium bis(fluorosulfonyl)imide

CAS# 171611-11-3

---

## **SECTION 4. FIRST AID MEASURES**

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

Move out of dangerous area.

If inhaled

If inhaled, move person into fresh air. If not breathing, give artificial respiration.

If breathing becomes difficult, consult a physician and provide oxygen.

In case of skin contact

Wash skin with soap and copious amounts of water for at least 15 minutes.

Remove contaminated clothing and shoes.

In case of eye contact

Flush eyes with copious amounts of water for at least 15 minutes.

Assure adequate flushing by separating the eyelids with fingers. Consult a physician.

If swallowed

Do NOT induce vomiting.

Never give anything by mouth to an unconscious person.

If person is conscious, rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see Section 2) and/or in Section 11.

---

## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

No data available.

Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes for firefighting if necessary.

Further information

No data available.

---

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided

Methods and materials for containment and cleaning up

Sweep up. Keep in a suitable, closed container for disposal.

Reference to other sections

For disposal see section 13.

---

## **SECTION 7. HANDLING AND STORAGE**

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of powder. Normal measures for preventive fire protection.

For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Store under inert gas.

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

.

---

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Components with workplace control parameters

Contains no substances with occupational exposure limit values

Biological occupational exposure limits

No data available

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands at minimum before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Wear chemical safety glasses.

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

Skin protection

Handle with chemical safety 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.

Body Protection

Wear appropriate protective clothing.

Respiratory protection

Where risk assessment shows respirators are appropriate, wear full face respirator with appropriate air-purifying cartridges. Use of materials and components tested and approved by NIOSH and CEN (EU)

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

---

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

Appearance

Form: Solid, powder

Color: White

Odor

no data available

Odor threshold

no data available

pH

no data available

Melting point

127 -135 °C

Initial boiling point and boiling range

no data available

Flash point

no data available

Evaporation rate

no data available

Flammability (solid, gas)  
no data available  
Upper/lower flammability or explosive limits  
no data available  
Vapor pressure  
no data available  
Vapor density  
no data available  
Relative density  
no data available  
Water solubility  
Soluble in water  
Partition coefficient: n-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  
Molecular formula  
F2NO4S2Li  
Molecular weight  
187.07 g/mol  
Other safety information  
No data available

---

## SECTION 10. STABILITY AND REACTIVITY

Reactivity  
No data available.  
Chemical stability  
Stable under recommended storage conditions.  
Possibility of hazardous reactions  
No data available.  
Conditions to avoid  
No data available.  
Incompatible materials  
Strong acids.  
Hazardous decomposition products  
Hazardous decomposition products formed under fire conditions. nitrogen oxides, sulfur oxides, hydrogen fluoride.

---

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects  
The toxicological properties have not been thoroughly investigated.

Acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Chronic exposure

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Specific target organ toxicity -single exposure

Inhalation

May be harmful if inhaled. Material may be destructive to the tissue of the mucous membranes and upper respiratory tract.

Skin

no data available

Eyes

May cause eye burns.

Ingestion

May be toxic if swallowed. May cause burns.

Specific target organ toxicity -repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

No data available

---

## SECTION 12. ECOLOGICAL INFORMATION

Toxicity

No data available-An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Do not discharge into sewer or waterways.

Persistence and degradability

No data available

Bioaccumulative potential

No data available  
Mobility in soil  
No data available  
Results of PBT and vPvB assessment  
No data available  
Other adverse effects  
No data available

---

## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

---

## **SECTION 14. TRANSPORT INFORMATION**

IATA

UN-Number: 3288

Class: 6.1

Packing group: III

Proper shipping name: Toxic solid, inorganic, n.o.s(Lithium bis(fluorosulfonyl)imide)

---

## **SECTION 15. REGULATORY INFORMATION**

OSHA Hazards

Toxic by ingestion

DSL Status

This product contains the following components that are not on the Canadian DSL nor NDSL lists.

CAS-No. 171611-11-3, Lithium bis(fluorosulfonyl)imide

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Lithium bis(fluorosulfonyl)imide CAS-No. 171611-11-3

New Jersey Right To Know Components

Lithium bis(fluorosulfonyl)imide CAS-No. 171611-11-3

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

---

## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). 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. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.