

**Material Safety Data Sheet**

Version 3.2  
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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Lithium

Product Number : 62360  
Brand : Fluka

Company : Sigma-Aldrich Canada, Ltd  
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CANADA

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**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula : Li  
Molecular Weight : 6.94 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Lithium</b>			
7439-93-2	231-102-5	003-001-00-4	-

**3. HAZARDS IDENTIFICATION****WHMIS Classification**

B6 Reactive Flammable Material  
E

Water Reactive  
Corrosive

**HMIS Classification**

Health hazard: 3  
Flammability: 3  
Physical hazards: 3

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Skin** May be harmful if absorbed through skin. Causes skin burns.

**Eyes** Causes eye burns.

**Ingestion** May be harmful if swallowed. Causes burns.

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

**In case of skin contact**

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**5. FIRE-FIGHTING MEASURES****Flammable properties**

Flash point not applicable

Ignition temperature no data available

**Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>) Dry powder

**Extinguishing media which shall not be used for safety reasons**

Water

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

**Environmental precautions**

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

**Methods for cleaning up**

Pick up and arrange disposal without creating dust. Do not flush with water. Keep in suitable, closed containers for disposal.

**7. HANDLING AND STORAGE****Handling**

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking.

**Storage**

Keep container tightly closed in a dry and well-ventilated place. Store under argon. Handle under argon.

Never allow product to get in contact with water during storage.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves.

#### Eye protection

Face shield and safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form granular

### Safety data

pH	no data available
Melting point	180 °C (356 °F) - lit.
Boiling point	1,342 °C (2,448 °F) - lit.
Flash point	not applicable
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	1 hPa (1 mmHg) at 723 °C (1,333 °F)
Density	0.534 g/mL at 25 °C (77 °F)
Water solubility	no data available

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Conditions to avoid

Heat, flames and sparks. Exposure to moisture.

### Materials to avoid

Forms shock-sensitive mixtures with certain other materials., Iron and iron salts., Heavy metals, Phosphorus, Sulphur compounds, Oxygen, Nickel, Do not store near acids., Metals

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Lithium oxides

**Hazardous reactions**

Reacts violently with water.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

LD50 Intraperitoneal - mouse - 1,000 mg/kg

**Irritation and corrosion**

no data available

**Sensitisation**

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.

Genotoxicity in vivo - Human - Unreported

Cytogenetic analysis

**Signs and Symptoms of Exposure**

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., Cough, Shortness of breath, Headache, Nausea

**Potential Health Effects**

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**Additional Information**

RTECS: OJ5540000

**12. ECOLOGICAL INFORMATION****Elimination information (persistence and degradability)**

no data available

**Ecotoxicity effects**

no data available

**Further information on ecology**

no data available

**13. DISPOSAL CONSIDERATIONS**

**Product**

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

**14. TRANSPORT INFORMATION****DOT (US)**

UN-Number: 1415 Class: 4.3 Packing group: I  
Proper shipping name: Lithium  
Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**

UN-Number: 1415 Class: 4.3 Packing group: I EMS-No: F-G, S-N  
Proper shipping name: LITHIUM  
Marine pollutant: No

**IATA**

UN-Number: 1415 Class: 4.3 Packing group: I  
Proper shipping name: Lithium  
IATA Passenger: Not permitted for transport

**15. REGULATORY INFORMATION****DSL Status**

All components of this product are on the Canadian DSL list.

**WHMIS Classification**

B6 Reactive Flammable Material Water Reactive  
E Corrosive

**16. OTHER INFORMATION****Further information**

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