

## SAFETY DATA SHEET

### Section 1: Identification

Product name: Lithium  
Product use: For laboratory research purposes.  
Supplier: Trace Sciences International  
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CANADA  
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### Section 2: Hazard(s) Identification

#### 2.1 GHS Classification

Substances and mixtures which in contact with water emit flammable gases (Category 1), H260  
Skin corrosion (Category 1B), H314  
Serious eye damage (Category 1), H318

#### 2.2 GHS Label elements, including precautionary statements

##### Pictogram



##### Signal word

Danger

##### Hazard statement(s):

H260 In contact with water releases flammable gases which may ignite spontaneously.

H314 Causes severe skin burns and eye damage.

##### Precautionary statement(s):

P223 Do not allow contact with water.

P231 + P232 Handle and store contents under inert gas. Protect from moisture.

P260 Do not breathe dusts or mists.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302 + P335 + P334 IF ON SKIN: Brush off loose particles from skin. Immerse in cool water.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + IF IN EYES: Rinse cautiously with water for several minutes.

P310 Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P402 + P404 Store in a dry place. Store in a closed container.

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

### Section 3: Composition/ Information on Ingredients

**Formula** : Li  
**Molecular Weight** : 6.94 g/mol

Material	CAS-No.	EC-No.	Index-No.	Concentration
Lithium	7439-93-2	231-102-5	003-001-00-4	<=100%

### 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. Move person out of dangerous area if safe to do so.

##### 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 for at least 15 minutes. Use chemical shower if available. Consult a physician.

##### In case of eye contact

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

##### If swallowed

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

### Section 5: Fire-Fighting Measures

#### 5.1 Conditions of flammability

May burn in presence of air or emit a flammable gas in the presence of water or water vapour. Keep away from heat/sparks/open flame/hot surface/air/water. No smoking.

#### 5.2 Suitable extinguishing media

Use approved class D extinguishers or smother with dry sand, dry ground limestone, or dry clay. Dry powder

#### 5.3 Hazardous combustion products

Hazardous decomposition products formed under fire conditions: Lithium oxides

#### 5.4 Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.5 Further information

No data available

## Section 6: Accidental Release Measures

### 6.1 Personal precautions

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

### 6.2 Environmental precautions

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

### 6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal.

## Section 7: Handling and Storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

### 7.2 Conditions for safe storage

Store and handle under argon.  
Never allow product to get in contact with water during storage.  
Keep container tightly closed in a dry and well-ventilated place.

## Section 8: Exposure Controls/Personal Protection

### 8.1 Components with workplace control parameters

No data available

### 8.2 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. 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.

#### Eye protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin and body protection

Complete suit protecting against chemicals. Flame retardant protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Hygiene measures

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

### Specific engineering controls

Use mechanical exhaust or laboratory fume hood to avoid exposure.

## Section 9: Physical and Chemical Properties

### Appearance

Form	Granular/Soft Chunks
Colour	Grey/White

### Safety Data

pH	No data available
Melting point/freezing point	180 °C (356 °F)
Boiling point	1,342 °C (2,448 °F)
Flash point	Not applicable
Flammability (solid, gas)	No data available
Ignition temperature	No data available
Auto-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
Partition coefficient: n-octanol/water	No data available
Relative vapour density	No data available
Odour	No data available
Odour Threshold	No data available
Evaporation rate	No data available

## Section 10: Stability and Reactivity

### 10.1 Chemical stability

Stable under recommended storage conditions

### 10.2 Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapours with:

Water, acids, halogenated hydrocarbon, carbon dioxide, boron trifluoride, halogen-halogen compounds, chromyl chloride, chromium(VI) oxide, boranes, fluorine, halogen compounds, phosphorus, platinum, mercury, rust, nitric acid, nitrogen, sulfides, metallic oxides, sodium carbonate, hydrogen

Risk of explosion with:

Water, nitrogen, halogens, sulfur, bromine, bromoform, chlorine, chloroform, diazonium compounds, dichloromethane, halogenated hydrocarbon, iodine, methyl iodine, peroxides, mineral acids, oxygen, tetrachloromethane, thionyl chloride, trichloroethene, sulphur dioxide, Sulphuric acid, silver salt

### 10.3 Conditions to avoid

Exposure to moisture. Do not store near acids.

### 10.4 Materials to avoid

Forms shock-sensitive mixtures with certain other materials, iron and iron salts, heavy metals, phosphorus, sulphur compounds, oxygen, nickel, metals, chlorinated solvents, water, nitrogen

## 10.5 Hazardous decomposition products

See section 5

## Section 11: Toxicological Information

### Acute toxicity

#### Oral

No data available

#### Inhalation

No data available

#### Dermal

No data available

#### Other information on acute toxicity

LD50 Intraperitoneal - mouse - 1,000 mg/kg

### 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

### Reproductive toxicity

No data available

### Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available

### Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available

### Aspiration hazard

No data available

### 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

### Additional Information

RTECS: OJ5540000

## Section 12: Ecological Information

### 12.1 Toxicity

No data available

### 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 PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

No data available

## Section 13: Disposal Considerations

### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

### Contaminated packaging

Dispose of as unused product.

## Section 14: Transport Information

### IATA

UN number: UN1415 Class: 4.3 Packing group: I  
Proper shipping name: Lithium

## Section 15: Regulatory Information

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR

## Section 16: Other Information

### **Further information**

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