

MSDS # 415.00

# Lithium

**Scholar**  
Chemistry**Section 1: Product and Company Identification****Lithium****Synonyms/General Names:** Alkali metal**Product Use:** For educational use only**Manufacturer:** Columbus Chemical Industries, Inc., Columbus, WI 53925.**24 Hour Emergency Information Telephone Numbers****CHEMTREC (USA):** 800-424-9300**CANUTEC (Canada):** 613-424-6666

Scholar Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

**Section 2: Hazards Identification***Soft, silvery metal immersed in heavy mineral oil, no odor***HMIS (0 to 4)**

Health	10
Flammability	2
Reactivity	3

**WARNING!** Water reactive material and body tissue irritant. Contact with water produces heat, flammable hydrogen gas and possibly fire.

Target organs: None available.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Section 3: Composition / Information on Ingredients**

Lithium (7439-93-2), &gt;99%

**Section 4: First Aid Measures***Always seek professional medical attention after first aid measures are provided.***Eyes:** Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.**Skin:** Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.**Ingestion:** Call Poison Control immediately. Rinse mouth with cold water. Give victim 1-2 tbsp of activated charcoal mixed with 8 oz water.**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration.**Section 5: Fire Fighting Measures**Flammable solid. When heated to decomposition, emits acrid fumes of  $\text{NaO}_2$ .**Protective equipment and precautions for firefighters:** Do Not Use carbon dioxide, foam, water or halogenated extinguishing agents. Use class D extinguisher or smother with soda ash, dry sand, dry clay, dry sodium chloride or dry graphite. Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA).

Material is not sensitive to mechanical impact or static discharge.

**Section 6: Accidental Release Measures**

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all ignition sources and ventilate area. Water-reactive metal – keep away from all water. Pick up pieces and place material in a dry container and cover completely with pure mineral oil for disposal. See Section 13 for disposal information.

**Section 7: Handling and Storage****Red****Handling: Water-Reactive,** keep away from water. Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling.**Storage:** Store in Flammable Area [Red Storage] with other flammable materials and away from any strong oxidizers. Store in a dedicated flammables cabinet. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials. Keep lithium metal immersed in mineral oil.**Section 8: Exposure Controls / Personal Protection**

Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Exposure guidelines: Lithium: OSHA PEL: N/A and ACGIH TLV: N/A, STEL: N/A.

## Section 9: Physical and Chemical Properties

Molecular formula	Li.	Appearance	Soft, silvery metal in mineral oil.
Molecular weight	6.94.	Odor	No odor.
Specific Gravity	0.53 g/mL @ 20°C.	Odor Threshold	N/A
Vapor Density (air=1)	N/A.	Solubility	Reacts violently.
Melting Point	180°C.	Evaporation rate	N/A. (Butyl acetate = 1).
Boiling Point/Range	1340°C.	Partition Coefficient	N/A. (log $P_{ow}$ ).
Vapor Pressure (20°C)	N/A.	pH	N/A.
Flash Point:	N/A.	LEL	N/A.
Autoignition Temp.:	N/A. UEL	N/A	

N/A = Not available or applicable

## Section 10: Stability and Reactivity

Avoid heat and ignition sources. Contact with water produces heat and flammable hydrogen gas.

**Stability:** Stable under normal conditions of use.

**Incompatibility:** Water, acids, oxidizing agents, oxygen, nitrogen and carbon dioxide.

**Shelf life:** Indefinite if stored properly.

## Section 11: Toxicology Information

**Acute Symptoms/Signs of exposure:** *Eyes:* Stinging pain, burns, watering of eyes, inflammation of eyelids and conjunctivitis. *Skin:* Irritation, redness, burns. Metal ignites readily on skin causing burns. *Ingestion:* Nausea, vomiting and headache. *Inhalation:* Rapid irregular breathing, headache, burns to mucous membranes. Inhalation of dust or fumes causes metal fume fever.

**Chronic Effects:** Repeated/prolonged skin contact may cause dryness or rashes.

**Sensitization:** none expected

*Lithium:* LD50 [oral, rat]; N/A; LC50 [rat]; N/A; LD50 Dermal [rabbit]; N/A

*Material has not been found to be a carcinogen nor produce genetic, reproductive, or developmental effects.*

## Section 12: Ecological Information

**Ecotoxicity (aquatic and terrestrial):** Ecological impact has not been determined

## Section 13: Disposal Considerations

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Use a licensed chemical waste disposal firm for proper disposal.

## Section 14: Transport Information

DOT Shipping Name:	Lithium.	Canada TDG:	Lithium.
DOT Hazard Class:	4.3, pg I.	Hazard Class:	4.3, pg I.
Identification Number:	UN1415.	UN Number:	UN1415.

## Section 15: Regulatory Information

**EINECS:** Listed (231-102-5).

**WHMIS Canada:** B6, E: Reactive flammable material, Corrosive.

**TSCA:** All components are listed or are exempt.

**California Proposition 65:** Not listed.

*The product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.*

## Section 16: Other Information

**Current Issue Date:** January 13, 2012

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