

Section 1. Product and Company Identification

Product Name Lithium Carbonate
CAS Number 554-13-2

Parchem - fine & specialty chemicals
415 Huguenot Street
New Rochelle, NY 10801
📞 (914) 654-6800 📠 (914) 654-6899
🌐 parchem.com ✉ info@parchem.com

EMERGENCY RESPONSE NUMBER
CHEMTEL
Toll Free US & Canada: 1 (800) 255-3924
All other Origins: 1 (813) 248-0585
Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

GHS Classification

Health

Eye Corrosion/Irritation - Category 2

Acute Toxicity (Oral) - Category 4

Environmental

Acute Aquatic - Category 3

Physical

None

GHS Label Elements

Pictograms:



Signal word: WARNING

Hazard and precautionary statements

Hazard Statement

H302: Harmful if swallowed.

H319: Causes serious eye irritation.

H402: Harmful to aquatic life

Prevention

P264: Wash thoroughly after handling

P270: Do not eat, drink, or smoke when using this product

P273: Avoid Release to the environment.

P280: Wear protective gloves, eye protection, face protection.



Response

P301+ P312: IF SWALLOWED: Call a POISON Center or doctor/physician if you feel unwell.

P330: Rinse Mouth

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+ P313: If eye irritation persists: Get medical advice/attention

Disposal

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

Section 3. Composition / Information on Ingredients

Common Name	Lithium Carbonate
Synonym(s)	Carbonic Acid, Dilithium Salt; Dilithium Carbonate; Carbonic Acid, Lithium Salt
Formula	Li_2CO_3
CAS Number	554-13-2

COMPONENT	CAS NUMBER	CONCENTRATION
Lithium Carbonate	554-13-2	> 99%

Section 4. First Aid Measures

General Advice: Victims of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention if necessary. Take copy of label and SDS to physician or health professional with victim. Refer below to "Recommendations to Physicians" for specific information for physicians on treatment of poisoning of this product.

Skin Exposure: If Lithium Carbonate irritates the skin, begin decontamination with running water. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victims should seek medical attention if adverse effect occurs.

Eye Exposure: If Lithium Carbonate contaminates the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 20 minutes. Victims must seek immediate medical attention if any adverse effect occurs.

Inhalation: If Lithium Carbonate is inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Obtain immediate medical attention.

Ingestion: If Lithium Carbonate is swallowed, IMMEDIATELY CALL PHYSICIAN OR POISON CONTROL CENTER for most current information. Do not induce vomiting, unless directed by medical personnel. If conscious, have victim rinse mouth with water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

Most Important Symptoms/Effects, Acute and Delayed: Irritation of eyes, rash, ringing in the ears, nausea, vomiting, diarrhea, difficulty speaking, drowsiness, tremors, visual disturbances, and coma.

Indication of Immediate Medical Treatment and Special Treatment: Immediate medical



treatment is advised in the case of eye contact or ingestion.

Note to Physician: Treat symptomatically. For specialist advice physicians should contact their Poison Center.

Section 5. Firefighting Measures

Fire Extinguishing Media: Lithium Carbonate is not flammable. Use fire extinguishing media appropriate for surrounding fires.

Specific Fire and Explosion Hazards: This material presents a moderate contact hazard to firefighters. When involved in a fire, this material may decompose and produce irritating fumes and toxic gases (e.g., lithium compounds, carbon oxides).

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

Special Firefighting Equipment and Procedures: Fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. If possible, firefighters should control runoff water to prevent environmental contamination

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures: Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. (See Section 8, Exposure Controls/Personal Protection) In case of a spill, clear the affected area and protect people.

Methods and Materials for Containment/Cleanup: Sweep up or vacuum spilled Lithium Carbonate carefully, avoiding the generation of airborne dusts. Decontaminate the area thoroughly. Place all spill residues in a suitable container and seal. Dispose of in accordance with U.S. Federal, State, and local or Canadian solid waste disposal regulations (see Section 13, Disposal Considerations).

Section 7. Handling and Storage

Precautions for Safe Handling: As with all chemicals, avoid getting Lithium Carbonate ON YOU or IN YOU. Wash thoroughly after handling Lithium Carbonate. Avoid creating airborne dusts or particulates of Lithium Carbonate. Clean work areas periodically to avoid generation of dusts. Do not eat or drink while handling Lithium Carbonate. Remove contaminated clothing immediately. All employees who handle this material should be trained to handle it safely. Use in a well-ventilated location.

Storage: Store containers in a cool, dry location, away from direct sunlight, or sources of intense heat. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Keep container tightly closed when not in use. Empty containers may contain residual amounts of Lithium Carbonate; therefore, empty containers should be handled with care.



Section 8. Exposure Controls / Personal Protection

Exposure Limits in Air

ACGIH-TLVs

TWA: Not established

STEL: Not established

OSHA-PELs

TWA: 15 (Total dust); 5 (Respirable fraction) as Particulates not otherwise classified

STEL: Not established

Other: Not established

Derived No Effect Levels (DNEL)	Inhalation Acute Effects	Skin Contact Acute Effects	Inhalation Chronic Effects	Skin Contact Chronic Effects
Workers	7.02 mg/m ³	100 mg/kg	2.34 mg/m ³	26.61 mg/kg
Consumers	3.03 mg/m ³	50 mg/kg	-	-

Predicted No Effect Concentrations (PNEC) Fresh

Water: 1.05 mg/L **Fresh Water Sediment:** 4.09 mg/kg

Marine Water: 0.11 mg/L **Marine Sediment:** 0.41

mg/kg **Soil: 0.8381 mg/kg Behavior in Waste**

Water Treatment Plants: 122.2 mg/L

The information presented is based only on lithium carbonate. The Exposure Controls and Personal Protection required will be dependent on the conditions present in the workplace, including the presence of other chemicals. PPE should be based on a Hazard Assessment as required in 29CFR1910.132

Ventilation and Engineering Controls: Use with adequate ventilation, to ensure exposure levels are minimized. Mechanical exhaust may be needed.

Respiratory Protection: If ventilation is inadequate, an approved dust respirator may be required. For higher exposures or in potentially oxygen deficient atmospheres, a supplied air respirator may be required. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2, CSA Standard Z94.4-02 and good Industrial Hygiene practice.

Eye Protection: Splash goggles or safety glasses. If necessary, refer to U.S. OSHA 29 CFR 1910.133, and appropriate Canadian Standards.

Hand Protection: Wear neoprene gloves for routine industrial use. If necessary, refer to U.S. OSHA 29 CFR 1910.138 and appropriate Standards of Canada.

Body Protection: Use body protection appropriate for task (e.g., Apron or protective suit). If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the



soles of the feet or where employee's feet may be exposed to electrical hazards, wear foot protection, as described in U.S. OSHA 29 CFR 1910.136.

Where there is any possibility that an employee's eyes may be exposed to Lithium Carbonate, the employer should provide an eye wash fountain within the immediate work area for emergency use

Section 9. Physical and Chemical Properties

Appearance: White, odorless crystalline powder.

Odor: None

Odor Threshold: Not applicable.

pH: 9 - 11 (0.1% solution)

Melting/Freezing Point: 732°C (1350°F)

Boiling Point: 1310°C (2390°F) Decomposes

Flash Point: Not applicable

Evaporation Rate: Not applicable

Flammability: No data available

Flammable Limits (in air by volume): Not applicable

Vapor Pressure (610°C): 1 hPa

Vapor Density: Not applicable

Specific Gravity (Water= 1): 2.11 g/cm³ at 20°C

Solubility in Water (20°C): 13.3 g/L

Coefficient of Oil/Water Distribution (Partition Coefficient): Not established

Auto-ignition Temperature: Not applicable

Decomposition Temperature: > 600°C

Viscosity: Not applicable

Section 10. Stability and Reactivity

Reactivity: Not reactive or unstable under normal conditions of storage and use.

Stability: Stable.

Possibility of Hazardous Reactions: May react with strong oxidizers generating heat.

Conditions to Avoid: Avoid open flames, hot surfaces and sources of ignition. Protect from moisture. Take precautionary measures against static discharges

Incompatible Materials: Lithium Carbonate is not compatible with strong acids, strong oxidizers, and fluorine.

Hazardous Decomposition Products: Thermal decomposition of Lithium Carbonate can generate lithium and carbon oxides

Section 11. Toxicological Information

Symptoms of Overexposure by Route of Exposure: The most serious health consequences reported for Lithium Carbonate have been adverse effects on the central nervous system, heart,



kidney and thyroid from chronic overexposure through ingestion (during medical treatment). In terms of anticipated occupational overexposure situations for employees, the main health effect from overexposure would be irritation of contaminated skin and eyes.

Inhalation: Inhalation of airborne dusts may irritate the nose, throat, and other tissues of the respiratory system. Symptoms include burning sensation, coughing, wheezing, shortness of breath, and headache. Overexposure may cause systemic effects similar to those described under ingestion.

Contact with Skin or Eyes: Lithium Carbonate is a moderate to severe eye irritant. Eye contact can cause pain, tearing, and redness. Skin contact may cause irritation in some individuals with sensitive skin. Prolonged or repeated skin exposures can lead to dermatitis.

Skin Absorption: Skin absorption is not a significant route of exposure for Lithium Carbonate.

Ingestion: Ingestion is not anticipated to be a significant route of occupational exposure. Acute or chronic ingestion of Lithium Carbonate may cause rash, ringing in the ears, nausea, vomiting, diarrhea, difficulty speaking, drowsiness, tremors, visual disturbances, and coma. Chronic ingestion of Lithium Carbonate may adversely affect the central nervous system, heart, kidney, and thyroid. Severe ingestion overexposure may be fatal.

Target Organs

Acute: Eyes, skin.

Chronic: Central nervous system, heart, thyroid, kidney

Toxicity data for Lithium Carbonate: LD50 (Oral - Rat) 525 mg/kg

Skin Irritation: No irritation in rats (OECD 404) May cause skin irritation in susceptible persons

Eye Irritation: Irritating in rats (OECD 405)

Skin Sensitization: Negative in guinea pigs (OECD 406)

Germ Cell Mutagenicity: Negative in AMES test, chromosome aberration test in vitro, positive in Chinese hamster V79/HGPRT gene mutation assay.

Reproductive Toxicity: Rat offspring NOEL >90 mg/kg; maternal NOEL 30 mg/kg. 2-generation study on-going.

Carcinogenicity Status: Lithium Carbonate is not listed as a carcinogen or suspected carcinogen by IARC, NTP, OSHA, or ACGIH.

Irritancy of Product: Lithium Carbonate is expected to moderately to severely irritate the eyes and may irritate skin.

Sensitization to the Product: Lithium Carbonate is not known to be a human skin or respiratory sensitizer.

Reproductive Toxicity Information: While there have been reports that lithium carbonate treatment is associated with heart defects in the children of women treated while pregnant, epidemiological studies have not demonstrated a statistically significant effect. No embryotoxic effects were seen in a prenatal developmental toxicity study in rats (OECD 414) at a maternally toxic dose of 90 mg/kg/day. While lithium has been found in breast milk of women treated with lithium, no adverse effects were seen in babies in a 2007 study.

Mutagenicity: Lithium Carbonate causes changes in genetic material in some studies but did not in others. Not classified as a germ cell mutagen.



ACGIH Biological Exposure Indices (BEIs): Currently there are no ACGIH Biological Exposure Indices (BEIs) determined for Lithium Carbonate

Section 12. Ecological Information

All work practices must be aimed at eliminating environmental contamination.

Effect of Material on Plants or Animals: The effects on exposed animals would be primarily irritation of contaminated tissue. The main effect on plants would be the alteration of salinity of contaminated soils if large volumes of this solution are released.

Effect of Chemical on Aquatic Life: Releases of large quantities of this solution can be detrimental to an aquatic environment by altering the salinity of a body of water.

Aquatic Toxicity: The following aquatic toxicity data are available for the components of this product:

EC50 *Oncorhynchus mykiss* (rainbow trout) 30.3 mg/L/96 hr (OECD 203); NOEC 19.1 mg/L (OECD 210)

EC50 *daphnia magna* 33 mg/L/48hr (OECD 202); NOEC 20 mg/L (OECD 211)

ErC50 *Pseudokirchneriella subcapitata* (green algae) > 400 mg/L/72 hr; EyC50 123 mg/L/72 hr; NOEC 50 mg/L (OECD 201)

Toxicity To Bacteria: Respiration inhibition EC50 180 mg/L (lithium hydroxide OECD 209)

Persistence and Degradability: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative Potential: No data currently available.

Mobility In Soil: No data available

Other Adverse Effects: No data available

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

This Material is not Hazardous as defined by 49 CFR 172.101 by the U.S. Department of Transportation.

Proper Shipping Name: Not Regulated

Hazard Class Number and Description: Not Applicable

UN Identification Number: Not Applicable

Packing Group: Not Applicable

DOT Label(s) Required: Not Applicable

North American Emergency Response Guide Number (2008): Not Applicable

Marine Pollutant: Lithium Carbonate is not designated as a Marine Pollutant by the DOT (per 49 CFR 172.101, Appendix B).



Transport Canada Transportation of Dangerous Goods Regulations: This material is not considered as dangerous goods, per regulations of Transport Canada.

Section 15. Regulatory Information

US Regulations

US SARA Reporting Requirements: Lithium Carbonate is not subject to the reporting requirements of the Comprehensive Environmental Response, Compensation, and Liability Act and Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

CERCLA Section 103 (40 CFR 302.4) Listed CERCLA Extremely Hazardous Substance:
No

SARA Section 302 (40 CFR 355.30) Extremely Hazardous Substance: No

SARA Section 304 (40 CFR 355.40) RQ-CERCLA or SARA 302: No

SARA Section 313 (40 CFR 372.65) Toxic Chemical Release Inventory (TRI/Form R):
Yes

U.S. SARA Threshold Planning Quantity: There are no specific Threshold Planning Quantities for this compound. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,544 kg) may apply, per 40 CFR 370.20.

US CERCLA Reportable Quantity (RQ): Not applicable.

US TSCA Inventory Status: Lithium Carbonate is listed on the TSCA Inventory

US TSCA 12b Export Notification: TSCA 12(b) Notification is not required, per 40 CFR 707, for Lithium Carbonate.

Other U.S. Federal Regulations: Not applicable

US State Regulatory Information: Lithium Carbonate is covered under specific State regulations, as denoted below:

Massachusetts - Substance List: Lithium carbonate.

Michigan - Critical Materials Register: Lithium Compounds.

New Jersey - Right to Know Hazardous Substance List: Lithium Carbonate.

Pennsylvania - Hazardous Substance List: No.

California Proposition 65: WARNING! Lithium Carbonate is chemical known to the State of California to cause birth defects or other reproductive harm.

Canadian Regulations

Canadian Inventory Status: Lithium Carbonate is on the DSL.

Canadian WHMIS Classification: Class D, Division 2, Subdivision A (Very Toxic Material causing other Toxic Effects)

This SDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the SDS contains all of the information required by the CPR.



HMIS Rating

Health: 2

Flammability: 0

Reactivity: 0

NFPA Rating

Health: 2

Flammability: 0

Reactivity: 0

Section 16. Other Information

Disclaimer: 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.

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