



LITHIUM CARBONATE (13C, 89%)

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 14/12/2010

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Version: 2.0

CLM-1994-90

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Substance name : LITHIUM CARBONATE (13C, 89%)
EC no : 209-062-5 (Unlabeled)
CAS No : 554-13-2 (Unlabeled)
Product code : CLM-1994-90
Formula : Li_2CO_3

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810
USA

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)
International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Oral) H302
Eye Irrit. 2 H319

Full text of H-statements: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xn; R22
Xi; R36

Full text of R-phrases: see section 16

GHS-US classification

Acute Tox. 4 (Oral) H302
Eye Irrit. 2A H319

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H302 - Harmful if swallowed
H319 - Causes serious eye irritation

Precautionary statements (CLP) :

P264 - Wash hands, forearms and face thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective clothing, protective gloves
P301+P312 - IF SWALLOWED: Call a doctor, a POISON CENTER if you feel unwell
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P330 - Rinse mouth
P337+P313 - If eye irritation persists: Get medical advice/attention
P501 - Dispose of contents/container to Comply with applicable regulations

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H302 - Harmful if swallowed
H319 - Causes serious eye irritation

Precautionary statements (GHS-US) :

P264 - Wash hands, forearms and face thoroughly after handling
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P301+P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P330 - If swallowed, rinse mouth
P337+P313 - If eye irritation persists: Get medical advice/attention
P501 - Dispose of contents/container to Comply with applicable regulations

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%	Classification according to Directive 67/548/EEC
LITHIUM CARBONATE (13C, 89%) (Main constituent)	(CAS No) 554-13-2 (Unlabeled) (EC no) 209-062-5 (Unlabeled) (EC index no)	100	Xn; R22 Xi; R36
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
LITHIUM CARBONATE (13C, 89%) (Main constituent)	(CAS No) 554-13-2 (Unlabeled) (EC no) 209-062-5 (Unlabeled) (EC index no)	100	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319

Full text of R- and H-statements: see section 16

Name	Product identifier	%	GHS-US classification
LITHIUM CARBONATE (13C, 89%) (Main constituent)	(CAS No) 554-13-2 (Unlabeled)	100	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319

Full text of H-statements: see section 16

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3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Wash with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: May be harmful if inhaled. May cause respiratory tract irritation.
Symptoms/injuries after skin contact	: May be harmful if absorbed through skin. May cause skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Reactivity : Not available.

5.3. Advice for firefighters

Firefighting instructions	: Wear self contained breathing apparatus for fire fighting if necessary.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

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

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

For containment : Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Keep container tightly closed in a dry and well-ventilated place.
Storage conditions	: Store at room temperature away from light and moisture.

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

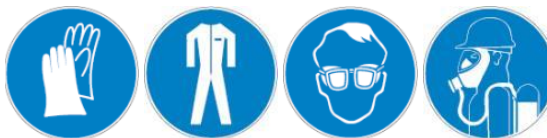
8.1. Control parameters

No additional information available

8.2. Exposure controls

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

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Materials for protective clothing : Wear suitable protective clothing and gloves.

Hand protection : Wear suitable protective clothing and gloves.

Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.

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

Respiratory protection : When appropriate, use NIOSH/CEN approved respirator.

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Molecular mass	: 74.88 g/mol (Labeled)
Colour	: white.
Odour	: Odourless.
Odour threshold	: No data available
pH	: 9 - 11 at 1 g/l
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 618 °C (1,144 °F) - lit.
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 2.11 g/cm ³ at 25 °C (77 °F)
Solubility	: Water: 8.4 g/l at 20 °C (68 °F) - OECD Test Guideline 105
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Not available.

10.2. Chemical stability

Stable if stored under recommended conditions.

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10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Not available.

10.5. Incompatible materials

Strong oxidizing agent. Oxidizing agents.

10.6. Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

LITHIUM CARBONATE (13C, 89%) (554-13-2 (Unlabeled))	
LD50 oral rat	525 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	2.17 mg/l/4h
ATE CLP (oral)	500.000 mg/kg bodyweight

Skin corrosion/irritation	: Not classified pH: 9 - 11 at 1 g/l
Serious eye damage/irritation	: Eyes - Rabbit Result: Eye irritation pH: 9 - 11 at 1 g/l
Respiratory or skin sensitisation	: Buehler Test - guinea pig - Did not cause sensitization on laboratory animals. (OECD Test Guideline 406)
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Did not show teratogenic effects in animal experiments.
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Nausea. Anorexia. Stomach - Irregularities - Based on Human Evidence. 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. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Symptoms/injuries after inhalation	: May be harmful if inhaled. May cause respiratory tract irritation.
Symptoms/injuries after skin contact	: May be harmful if absorbed through skin. May cause skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

LITHIUM CARBONATE (13C, 89%) (554-13-2 (Unlabeled))	
LC50 fish 1	30.3 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h
EC50 Daphnia 1	33.2 mg/l Daphnia magna (Water flea) - 48 h
EC50 other aquatic organisms 1	> 400 mg/l static test EC50 - Desmodesmus subspicatus (green algae) - 72 h

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.

Waste disposal recommendations : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Ecology - waste materials : Dispose of as unused product.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : Not dangerous goods.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

14.4. Environmental hazards

Other information : No supplementary information available.

14.5. Special precautions for user

Special transport precautions : Not dangerous goods.

14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

LITHIUM CARBONATE (13C, 89%) (554-13-2 (Unlabeled))	
Subject to reporting requirements of United States SARA Section 313	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

15.2. International regulations

CANADA

LITHIUM CARBONATE (13C, 89%) (554-13-2 (Unlabeled))
Listed on the Canadian DSL (Domestic Substances List)

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15.2.1. National regulations

No additional information available

15.3. US State regulations

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State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List WARNING! This product contains a chemical known by the state of California to cause birth defects or other reproductive harm.
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SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

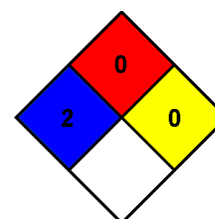
Full text of R-, H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed
H319	Causes serious eye irritation
R22	Harmful if swallowed
R36	Irritating to eyes
Xi	Irritant
Xn	Harmful

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 0 - Materials that will not burn under typical dire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal Hazard

Physical : 0 Minimal Hazard

CIL Multi-Solvent Mixture SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product