

 **ALBEMARLE®**  
**SAFETY DATA SHEET**

051-GHS

**LITHIUM CARBONATE**

Preparation Date : 13-Apr-2016

Revision Date: 13-Apr-2018

Revision Number 2.01

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

**Product Identifier**

**Product Name** LITHIUM CARBONATE

**Other means of identification**

**Synonyms**

401260 Lithium Carbonate BG <40 micron  
401223 Lithium Carbonate, "fines"

**Chemical Family**

Inorganic Salt

**CAS-No**

554-13-2

**Formula**

Li<sub>2</sub>CO<sub>3</sub>

**Recommended use of the chemical and restrictions on use**

**General function** Raw material for chemical industry, pharmaceutical and the glass industry.

**Uses advised against** No information available

**Details of the supplier of the safety data sheet**

**Company**

Albemarle Corporation  
451 Florida Street  
Baton Rouge, LA 70801

Albemarle U.S., Inc.  
348 Holiday Inn Drive  
Kings Mountain, NC 28086

**For Non-Emergency**

704-739-2501 (8AM-5PM M-Th; 8AM-12PM Fri)

**'Competent Body for SDS'**

Department of product safety  
productsafety@albemarle.com

**Emergency telephone number**

**Emergency Telephone Numbers** In case of emergency, call Albemarle emergency response at +1 225 344 7147

**2. HAZARDS IDENTIFICATION**

**Classification**

Acute Toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 2
Chronic aquatic toxicity	Category 3

**Label elements**

**Emergency Overview**

**Warning**

**Hazard Statements**

Harmful if swallowed  
Causes serious eye irritation

Harmful to aquatic life with long lasting effects



**Physical state** Crystalline powder.

**Color** White.

**Odor** Odorless.

**Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Wear eye/face protection  
 Avoid release to the environment

**Response**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 If eye irritation persists: Get medical advice/attention  
 IF ON SKIN: Wash with plenty of soap and water  
 IF INHALED: Move to fresh air.  
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell Rinse mouth

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other Information**

No data available

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Synonyms**

401260 Lithium Carbonate BG <40 micron  
 401223 Lithium Carbonate, "fines"

**Pure substance/mixture**

Substance

Component	CAS-No	Weight %
Lithium carbonate	554-13-2	<=100

Note: The exact concentrations of the above listed chemicals are being withheld as a trade secret.

**4. FIRST AID MEASURES**

**First aid measures**

**General Advice**

Take off contaminated clothing and shoes immediately. First aid responders should pay attention to self-protection and use the recommended protective clothing. Move out of dangerous area. Keep warm and in a quiet place.

**Eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

**Skin contact**

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

<b>Inhalation</b>	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing has stopped, apply artificial respiration. If symptoms persist, call a physician.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician immediately.
<b>Protection of First-aiders</b>	Use personal protective equipment as required.
<b><u>Most important symptoms and effects, both acute and delayed</u></b>	
<b>Symptoms</b>	Discomfort. Irritating to eyes. Harmful if swallowed. Symptoms of overexposure include nausea, vomiting, rashes, dizziness, drowsiness, central nervous system effects.
<b><u>Indication of any immediate medical attention and special treatment needed</u></b>	
<b>Notes to Physician</b>	Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

### **Extinguishing media**

**Suitable extinguishing media** Water spray jet, Dry powder, Carbon dioxide (CO<sub>2</sub>), Foam.

**Unsuitable Extinguishing Media** High volume water jet.

### **Specific Hazards Arising from the Chemical**

**Combustion/explosion hazards** High temperatures may liberate toxic or corrosive gases.

**Hazardous Combustion Products** Carbon monoxide, Carbon dioxide (CO<sub>2</sub>).

### **Explosion Data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

### **Protective Equipment and Precautions for Firefighters**

Wear self-contained breathing apparatus and protective suit. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

## 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation. Wear suitable protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe dust. Keep people away from and upwind of spill/leak. Handle in accordance with good industrial hygiene and safety practice

**For emergency responders** Use personal protective equipment as required.

### **Environmental Precautions**

**Environmental precautions** Do not flush into surface water or sanitary sewer system. Avoid release to the environment

### **Methods and material for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Cleaning up** Take up mechanically and collect in suitable container for disposal. Avoid dust formation.

## 7. HANDLING AND STORAGE

### **Precautions for safe handling**

**Handling** Mechanical ventilation is recommended. Wear personal protective equipment. Avoid dust formation. Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture.
<b>Incompatible Materials</b>	Avoid strong acids and oxidizers. Fluorine.
<b>Dust Explosion Properties</b>	Avoid dust formation.

<b>8. EXPOSURE CONTROLS/PERSONAL PROTECTION</b>
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**Control parameters**

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Component	CAS-No	ACGIH TLV (TWA)	OSHA PEL (TWA)	NIOSH IDLH
Lithium carbonate	554-13-2	-	-	-

Component	CAS-No	Alberta	British Columbia	Ontario	Quebec
Lithium carbonate	554-13-2	-	-	-	-

**Appropriate engineering controls**

**Engineering Controls** Showers.  
Eyewash stations.  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

<b>Eye/face Protection</b>	Tightly fitting safety goggles.
<b>Skin Protection</b>	If repeated or prolonged skin contact or contamination of clothing is likely, protective clothing should be worn. Rubber gloves resistant to chemical permeation
<b>Hand protection</b>	Gloves resistant to chemical permeation.
<b>Respiratory protection</b>	Whenever workplace conditions warrant, wear properly fitted, approved respirator with high-efficiency (dust/fume/mist) filter cartridges.

**General Hygiene Considerations** When using, do not eat, drink or smoke. Wash hands before breaks and at the end of workday. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection. Handle in accordance with good industrial hygiene and safety practice.

<b>9. PHYSICAL AND CHEMICAL PROPERTIES</b>
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**Information on basic physical and chemical properties**

<b>Physical state</b>	Crystalline powder.
<b>Color</b>	White.
<b>Odor</b>	Odorless.
<b>Odor Threshold</b>	None
<b>Molecular Weight</b>	73.89 g/mol
<b>pH</b>	9 - 11 at 1 g/l (as aqueous solution)
<b>Melting point/freezing point</b>	722 °C / 1332 - °F Method: OECD Test Guideline 102
<b>Boiling Point/Range</b>	ca 1,310 °C / 2390 - °F
<b>Flash Point</b>	Not applicable
<b>Evaporation Rate</b>	No data available.
<b>Flammability (solid, gas)</b>	No data available
<b>Flammability Limit in Air</b>	
<b>Upper flammability limit:</b>	No data available
<b>Lower flammability limit:</b>	No data available
<b>Vapor Pressure</b>	1 hPa ( 610 °C )
<b>Vapor Density</b>	No data available

<b>Density</b>	2.11 g/cm <sup>3</sup> (20°C), ca. 750 kg/m <sup>3</sup> (Bulk Density)
<b>Solubility(ies)</b>	
<b>Water Solubility</b>	8.4 g/l (20 °C) Method: OECD Test Guideline 102
<b>Solubility in other solvents</b>	No data available
<b>Partition coefficient</b>	No data available
<b>Autoignition temperature</b>	No data available
<b>Decomposition temperature</b>	>600 °C
<b>Viscosity, kinematic</b>	No data available
<b>Dynamic viscosity</b>	No data available
<b>Explosive Properties</b>	No data available
<b>Oxidizing Properties</b>	No data available

**10. STABILITY AND REACTIVITY**

<b>Reactivity Hazard</b>	No data available.
<b>Stability</b>	Stable.
<b>Hazardous Reactions</b>	May react with strong acids generating heat with boiling and spattering.
<b>Conditions to Avoid</b>	Avoid moisture. Excess heat.
<b>Materials to avoid</b>	Fluorine, Avoid strong acids and oxidizing agents.
<b>Hazardous decomposition products</b>	Thermal decomposition of this product can produce lithium and carbon oxides.

**11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure

<b>Inhalation</b>	No.
<b>Eye contact</b>	Yes.
<b>Skin contact</b>	No.
<b>Ingestion</b>	Yes. Harmful if swallowed.

Potential Health Effects

Acute Effects

<b>Skin Corrosion/irritation</b>	Not irritating. (. OECD Test No. 404: Acute Dermal Irritation/Corrosion. ).
<b>Serious eye damage/eye irritation</b>	Irritating to eyes. (. OECD Test No. 405: Acute Eye Irritation/Corrosion. ).
<b>Respiratory irritation</b>	No data available
<b>Sensitization</b>	Buehler Test: Not a skin sensitizer. (guinea pig). (. OECD Test No. 406: Skin Sensitization. ).
<b>STOT - single exposure</b>	No information available.

Chronic Effects

**Mutagenic Effects**

OECD Test No. 476: In vitro Mammalian Cell Gene Mutation Test: negative. (with or without metabolic activation).  
 OECD Test No. 473: In vitro Mammalian Chromosome Aberration Test: negative. (with or without metabolic activation).  
 Not mutagenic in AMES Test.

**Carcinogenicity**

There are no known carcinogenic chemicals in this product.

Component	CAS-No	ACGIH	IARC	NTP	OSHA
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		<b>Carcinogens</b>			<b>Carcinogens</b>
Lithium carbonate	554-13-2	-	-	-	

**Reproductive Effects** Two-generation reproductive toxicity: (rat). oral: Maternal toxicity: NOAEL (No observed adverse effect level). 15 mg/kg bw/day. Developmental Toxicity: NOAEL (No observed adverse effect level). 45 mg/kg bw/day. (. OECD Test No. 416: Two-Generation Reproduction Toxicity. ).

**STOT - repeated exposure** No information available.

**Chronic Effects** No information available

**Aspiration hazard** No information available.

**Numerical measures of toxicity**

**Product Information**

The following values are calculated based on chapter 3.1 of the GHS document .

**LD50 Oral:** Rat Oral LD50: 525 mg/kg (Lit).

**LD50 Dermal:** Rat Dermal LD50: > 3000 mg/kg

**Inhalation LC50:** LC50/inhalation/4h/rat : > 2.17 mg/L

**Component Information**

Component	Rat Oral LD50:	Rabbit Dermal LD50:	Rat Dermal LD50 :	Rat Inhalation LC50:
Lithium carbonate 554-13-2	525 mg/kg	-	>3000 mg/kg	> 2.17 mg/L (4 h)

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Harmful to aquatic life with long lasting effects

Component	Freshwater Algae EC50/72h :	Freshwater Fish LC50/96h :	Water Flea EC50/48h :
Lithium carbonate (CAS #: 554-13-2)	>400 mg/l	30.3 mg/l	33 mg/l

**Persistence/Degradability** Not applicable: inorganic.

**Bioaccumulation/ Accumulation** Not likely to bioaccumulate.

**Mobility in Environmental Media** No information available.

**Other adverse effects** Slightly water endangering. Avoid subsoil penetration.

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste Disposal Method** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging** Do not reuse container.

**14. TRANSPORT INFORMATION**

**DOT**

Proper Shipping Name NOT REGULATED FOR TRANSPORTATION  
 Hazard Class Not regulated  
 UN No. Not regulated  
 Packing Group Not regulated  
 Description Not regulated

**TDG**

Not regulated

**IMDG/IMO**

IMO Class Not regulated  
 Packing Group Not regulated  
 UN-No Not regulated  
 IMO Labelling and Marking Not regulated  
 Proper Shipping Name Not regulated  
 Transport Description Not regulated

**IATA/ICAO**

IATA/ICAO Class Not regulated  
 Packing Group Not regulated  
 UN-No Not regulated  
 IATA/ICAO Labelling/Marking Not regulated  
 Proper shipping name Not regulated  
 Transport Description Not regulated

15. REGULATORY INFORMATION											
International Inventories	TSCA	DSL	NDSL	AICS	EINECS	ENCS	KECL	PICCS	IECSC	NZIoC	TCSI
LITHIUM CARBONATE	X	X	-	X	X	X	X	X	X	X	X

(X) Complies (-) Does not Comply

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Component	Weight %	SARA 313 - De minimis
Lithium carbonate (CAS #: 554-13-2)	<=100	1.0

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard Yes  
 Chronic Health Hazard No  
 Fire Hazard No  
 Sudden Release of Pressure Hazard No  
 Reactive Hazard No

**Reportable and Threshold Planning Quantities**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**State Right-to-Know**

This product contains the following chemicals regulated in the states listed below.

Component	California Prop. 65	New Jersey	Massachusetts	Pennsylvania
Lithium carbonate (CAS #: 554-13-2)	Developmental	X	X	-

**WHMIS Hazards**

D2B Toxic materials

<b>16. OTHER INFORMATION</b>
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<b>NFPA</b>	Health 2	Flammability 0	Instability 0	Physical Hazards 0
<b>HMIS</b>	Health 2	Flammability 0		Physical Hazards 0

**Prepared By** Health & Environment Department Albemarle Corporation

FOR ADDITIONAL NONEMERGENCY PRODUCT INFORMATION, CONTACT:

HEALTH AND ENVIRONMENT DEPARTMENT  
 ALBEMARLE CORPORATION  
 451 FLORIDA ST.  
 BATON ROUGE, LA. 70801  
 (800) 535-3030

**Preparation Date :** 13-Apr-2016

**Revision Date:** 13-Apr-2018

**Disclaimer:**

The information contained herein is accurate to the best of our knowledge. The Company makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances.

**End of Safety Data Sheet**