



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name LITHIUM CHLORIDE, REAGENT (ACS)
Catalog # 308
Version # 02
Revision date 09-Sep-2009
CAS # 7447-41-8
Manufacturer information GFS Chemicals, Inc.
P.O. Box 245
Powell, OH 43065 US
www.gfschemicals.com
Fax 740-881-5989
Phone 740-881-5501
Toll Free 800-858-9682
Emergency Assistance Chemtrec 800-424-8300

2. Hazards Identification

Emergency overview CAUTION
May irritate eyes and skin. May cause irritation to the respiratory system.

OSHA regulatory status This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Routes of exposure Eye contact. Inhalation. Ingestion.

Eyes This product may cause slight irritation to the eyes.

Skin Substance may cause slight skin irritation.

Inhalation May be harmful by inhalation. Dust may irritate respiratory system or lungs.

Ingestion May be harmful if swallowed. Do not ingest.

Potential environmental effects May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
LITHIUM CHLORIDE	7447-41-8	90 - 100

4. First Aid Measures

First aid procedures

Eye contact Rinse with water. Get medical attention if irritation develops or persists.

Skin contact Rinse skin with water/shower. Get medical attention if irritation develops or persists.

Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Ingestion Have victim rinse mouth thoroughly with water. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If material is ingested, immediately contact a poison control center.

General advice If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Flammable properties The product is not flammable. Not a fire hazard.

Extinguishing media

Suitable extinguishing media Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂). Use extinguishing agent suitable for type of surrounding fire.

Protection of firefighters

Protective equipment and precautions for firefighters In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out.

Specific methods In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

6. Accidental Release Measures

Personal precautions Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for cleaning up Should not be released into the environment. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Following product recovery, flush area with water.

7. Handling and Storage

Handling Use only with adequate ventilation. Wash thoroughly after handling. Avoid release to the environment. Handle and open container with care.

Storage Keep container tightly closed and dry. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Engineering controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Respiratory protection In case of insufficient ventilation wear suitable respiratory equipment. No personal respiratory protective equipment normally required.

Hand protection Not normally needed.

Eye / face protection Wear chemical goggles.

Skin protection No special protective equipment required.

General hygiene considerations Wash hands after handling and before eating. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance Crystalline.
Color White.
Odor Odorless.
Odor threshold Not available.
Physical state Solid.
Form Solid.
pH 6 (1% aqueous solution)
Melting point 1130 °F (610 °C)
Freezing point Not available.
Boiling point 2480 °F (1360 °C)
Flash point Not available.
Evaporation rate Not available.
Flammability Not available.
Flammability limits in air, upper, % by volume Not available.
Flammability limits in air, lower, % by volume Not available.
Vapor pressure Not available.
Vapor density Not available.
Specific gravity 2.07

Relative density	2.0698 g/cm ³ estimated
Solubility (water)	545 g/l approximately @ 25 C
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Molecular weight	42.3900 g/mol
Molecular formula	LiCl

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Hazardous decomposition products	No hazardous decomposition products are known.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Acute effects

Acute Oral: LD 50

LITHIUM CHLORIDE	7447-41-8	Rat 757 mg/kg
LITHIUM CHLORIDE	7447-41-8	Mouse 1165 mg/kg
LITHIUM CHLORIDE	7447-41-8	Rabbit 850 mg/kg

Acute Toxicity other routes: LD 50

LITHIUM CHLORIDE	7447-41-8	Mouse 600 mg/kg Intraperitoneal
LITHIUM CHLORIDE	7447-41-8	Rat 4.8 mg/kg Intracerebral
LITHIUM CHLORIDE	7447-41-8	Rat 441 mg/kg Subcutaneous
LITHIUM CHLORIDE	7447-41-8	Mouse 970 mg/kg Subcutaneous
LITHIUM CHLORIDE	7447-41-8	Rat 513 mg/kg Intraperitoneal
LITHIUM CHLORIDE	7447-41-8	Mouse 828 mg/kg Subcutaneous
LITHIUM CHLORIDE	7447-41-8	Mouse 363 mg/kg Intravenous
LITHIUM CHLORIDE	7447-41-8	Cat 492 mg/kg Intraperitoneal

Toxicology data for the preparation

Acute LD50: 757 mg/kg, Rat, Oral

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

12. Ecological Information

Ecotoxicity Components of this product have been identified as having potential environmental concerns.

Invertebrate Toxicity: EC 50

LITHIUM CHLORIDE	7447-41-8	Water flea (Daphnia magna) 1.2 mg/l 64 h Static Intoxication
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Environmental effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Persistence and degradability Not available.

13. Disposal Considerations

Disposal instructions Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.

Waste from residues / unused products Not applicable.

14. Transport Information

DOT

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings Health: 1
Flammability: 0
Physical hazard: 0

NFPA ratings Health: 1
Flammability: 0
Instability: 0

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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This data sheet contains changes from the previous version in section(s): This document has undergone significant changes and should be reviewed in its entirety.