1. Identification

Product Name: Lithium chloride, ultra dry
Cat No.: 44762
CAS-No: 7447-41-8
Synonyms: Lithium monochloride.
Recommended Use: Laboratory chemicals.
Uses advised against: Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet
Company:
Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Emergency Telephone Number
During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.
After normal business hours, call Carechem 24 at (866) 928-0789.

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Label Elements

Signal Word
Warning

Hazard Statements
Harmful if swallowed
Causes skin irritation
Causes serious eye irritation
Precautionary Statements

Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Response
Get medical attention/advice if you feel unwell

Inhalation
If INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell

Skin
If ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse

Eyes
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

Ingestion
If SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Storage
Store in a well-ventilated place. Keep container tightly closed

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

Hazards not otherwise classified (HNOC)
None identified

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium chloride</td>
<td>7447-41-8</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

4. First-aid measures

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.

Inhalation
Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

Ingestion
Do NOT induce vomiting. Call a physician or poison control center immediately.

Most important symptoms and effects
No information available.

Notes to Physician
Treat symptomatically
5. Fire-fighting measures

Suitable Extinguishing Media

Unsuitable Extinguishing Media
No information available

Flash Point
No information available

Method -
No information available

Autoignition Temperature

Explosion Limits
Upper
No data available
Lower
No data available

Sensitivity to Mechanical Impact
No information available

Sensitivity to Static Discharge
No information available

Specific Hazards Arising from the Chemical
Non-combustible. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products
Chlorine. Hydrogen chloride gas.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

Personal Precautions
Use personal protective equipment as required. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid dust formation. Keep people away from and upwind of spill/leak.

Environmental Precautions
See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up
Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

7. Handling and storage

Handling
Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Protect from moisture.

Storage
Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed. Protect from direct sunlight. Store under an inert atmosphere.

8. Exposure controls / personal protection

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

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.
9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>7-8 50 g/l aq.sol</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>605 °C / 1121 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>1382 °C / 2519.6 °F @ 760 mmHg</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid.gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>1.33 hPa @ 547 °C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>2.060</td>
</tr>
<tr>
<td>Solubility</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>Cl Li</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>42.38</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactive Hazard</td>
<td>None known, based on information available</td>
</tr>
<tr>
<td>Stability</td>
<td>Hygroscopic. Absorbs moisture from air and becomes liquid.</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Exposure to light. Incompatible products. Exposure to moist air or water.</td>
</tr>
<tr>
<td>Incompatible Materials</td>
<td>Acids, Strong oxidizing agents, Halogens, Metals</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Chlorine, Hydrogen chloride gas</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Hazardous polymerization does not occur.</td>
</tr>
<tr>
<td>Hazardous Reactions</td>
<td>None under normal processing.</td>
</tr>
</tbody>
</table>

11. Toxicological information

Acute Toxicity

Product Information
Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium chloride</td>
<td>LD50 = 526 mg/kg (Rat)</td>
<td>&gt;2000 mg/kg (Rat)</td>
<td>&gt;5.57 mg/L/4h (Rat)</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products

- No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation

- Irritating to eyes and skin

Sensitization

- No information available

Carcinogenicity

- The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium chloride</td>
<td>7447-41-8</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects

- No information available

Reproductive Effects

- No information available

Developmental Effects

- No information available

Teratogenicity

- No information available

STOT - single exposure

- None known

STOT - repeated exposure

- None known

Aspiration hazard

- No information available

Symptoms / effects, both acute and delayed

- No information available

Endocrine Disruptor Information

- No information available

Other Adverse Effects

- The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

- Do not empty into drains.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium chloride</td>
<td>Not listed</td>
<td>EC50: 158 mg/L/96h (rainbow trout)</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Persistence and Degradability

- Soluble in water
- Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation

- No information available

Mobility

- Will likely be mobile in the environment due to its water solubility

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium chloride</td>
<td>-2.66</td>
</tr>
</tbody>
</table>

13. Disposal considerations

Waste Disposal Methods

- Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

DOT

- Not regulated

14. Transport information
15. Regulatory information

United States of America Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active/Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium chloride</td>
<td>7447-41-8</td>
<td>X</td>
<td>ACTIVE</td>
<td></td>
</tr>
</tbody>
</table>

Legend:
- TSCA - Toxic Substances Control Act, (40 CFR Part 710)
- X - Listed
- '-' - Not Listed
- TSCA 12(b) - Notices of Export

Not applicable

International Inventories
Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium chloride</td>
<td>7447-41-8</td>
<td>X</td>
<td>-</td>
<td>231-212-3</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-22552</td>
</tr>
</tbody>
</table>

U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations Not applicable

U.S. Department of Transportation

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

16. Other information
End of SDS