# MATERIAL SAFETY DATA SHEET

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMIS</th>
<th>Personal Protective Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>![ nfpa ]</td>
<td>![ hmis ]</td>
<td>![ protective_equipment ]</td>
</tr>
</tbody>
</table>

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product code:</th>
<th>L1195</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Name:</td>
<td>LITHIUM IODIDE, REAGENT</td>
</tr>
<tr>
<td>Chemical Name:</td>
<td>Lithium Iodide trihydrate</td>
</tr>
<tr>
<td>Synonyms:</td>
<td>No information available</td>
</tr>
<tr>
<td>Recommended use:</td>
<td>No information available</td>
</tr>
<tr>
<td>CAS #:</td>
<td>7790-22-9</td>
</tr>
<tr>
<td>Formula:</td>
<td>Li-I.3H2O</td>
</tr>
<tr>
<td>RTECS #:</td>
<td>Not available</td>
</tr>
<tr>
<td>CI#:</td>
<td>Not available</td>
</tr>
</tbody>
</table>
| Supplier: | Spectrum Chemicals and Laboratory Products, Inc.  
14422 South San Pedro St.  
Gardena, CA 90248  
(310) 516-8000 |
| Order Online At: | [https://www.spectrumchemical.com](https://www.spectrumchemical.com) |
| Emergency Telephone Number: | CHEMTREC: 1-800-424-9300 |
| Contact Person: | Regina Wachenheim (East Coast) |
| Contact Person: | Martin LaBenz (West Coast) |

## 2. HAZARDS IDENTIFICATION

See Section 8.
2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
May cause skin and eye irritation. May cause irritation of respiratory tract.

<table>
<thead>
<tr>
<th>Odor:</th>
<th>Physical state:</th>
<th>Appearance:</th>
<th>Color:</th>
</tr>
</thead>
</table>

OSHA Regulatory Status
This material is not considered hazardous by the OSHA Hazard Communication Standard (29 1910.1200)

POTENTIAL HEALTH EFFECTS

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Potential Health Effects:

Skin Contact:
May cause skin irritation.

Eye Contact:
Contact with eyes may cause irritation.

Inhalation:
May cause irritation of respiratory tract.

Ingestion:
May cause digestive (gastrointestinal) tract irritation. May cause vomiting. May cause diarrhea. May cause respiration. It may affect the kidneys. May affect the cardiovascular system. May cause central nervous system effects. It may affect the thyroid. May affect the blood. It may affect the skin.

Chronic Potential Health Effects:

<table>
<thead>
<tr>
<th>Component</th>
<th>Carcinogen Status:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium iodide, trihydrate</td>
<td>No information available</td>
</tr>
<tr>
<td>7790-22-9 (100)</td>
<td></td>
</tr>
</tbody>
</table>

Target Organs:
Thyroid. Kidneys. Central nervous system. Skin.

Teratogenic Effects:
Lithium/Lithium compounds and Iodides pass through the placental barrier and enter human breast milk. It should be noted that the role for Lithium/Lithium compounds in producing human birth defects is not universally accepted. It has been debated as to whether or not the use of lithium or lithium compounds during pregnancy increase the risk of congenital heart disease or malformations. Teratogenicity studies in laboratory mammals give conflicting results. Some studies have found lithium administration to pregnant rats and mice to be associated with an increase in birth defects in some offspring, while others have given negative results in mice, rats, rabbits and monkeys. A comprehensive assessment of the developmental toxicity of lithium/lithium compounds concluded that occupational and environmental exposures to lithium/lithium compounds are not likely to have adverse effects. Case reports have described the induction of goiter and hypothyroidism in neonates prenatally exposed to lithium/lithium compounds and iodides.

Mutagenic Effects:
No information available

Aggravated Medical Conditions:
No information available

Product code: L1195
Product name: LITHIUM IODIDE, REAGENT
POTENTIAL ENVIRONMENTAL EFFECTS

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium Iodide, trihydrate</td>
<td>7790-22-9</td>
<td>100</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

General Advice: Poison information centres in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

Eye Contact: Flush eye with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Notes to Physician: Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Properties

Flashpoint (°C/°F): Not applicable. The product is not flammable.

Flash Point Tested according to: Not available

Lower Explosion Limit (%): Not applicable

Upper Explosion Limit (%): Not applicable

Autoignition Temperature (°C/°F): Not applicable.

Suitable Extinguishing Media: The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media: No information available.

Hazardous Combustion Products: Not applicable

Specific hazards: No information available.

Product code: L1195  Product name: LITHIUM IODIDE, REAGENT
Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific Methods: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation.

Environmental Precautions: No information available.

Methods for Cleaning Up: Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Handling

Technical Measures/Precautions: Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice: Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not ingest. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice.

Storage


8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure: Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protective Equipment

Eye protection: Safety glasses. Safety glasses with side-shields.

Skin and body protection: Long sleeved clothing. Chemical resistant apron. Gloves.
Respiratory protection: Effective dust mask. Wear respirator with dust filter.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

National occupational exposure limits

United States
U.S Occupational Exposure Limits: Not determined

<table>
<thead>
<tr>
<th>Components</th>
<th>OSHA</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WHEEL</th>
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<tbody>
<tr>
<td>Lithium iodide, trihydrate - 7790-22-9</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
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</table>

Canada
Canada Occupational Exposure Limits: Not determined

<table>
<thead>
<tr>
<th>Components</th>
<th>Alberta</th>
<th>British Columbia</th>
<th>Ontario</th>
<th>Quebec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium iodide, trihydrate 7790-22-9</td>
<td>None</td>
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Australia and Mexico
Occupational Exposure Limits for Australia and Mexico: Not determined

<table>
<thead>
<tr>
<th>Components</th>
<th>Australia</th>
<th>Mexico</th>
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</thead>
<tbody>
<tr>
<td>Lithium iodide, trihydrate 7790-22-9</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid.
Odor: None.
Flash point (°C): Not applicable.
Autoignition Temperature (°C/°F): Not applicable.
Boiling point/range(°C/°F): No information available.
Density (g/cm3): 3.49
Evaporation rate: No information available
Odor threshold (ppm): No information available

Appearance: Crystals. Crystalline.
Taste: No information available.
Lower Explosion Limit (%): Not applicable.
Upper Explosion Limit (%): Not applicable.
pH: No information available.
Decomposition temperature(°C/°F): No information available.
Specific gravity: No information available.
Vapor pressure @ 20°C (kPa): No information available.
VOC content (g/L): No information available.
Partition coefficient (n-octanol/water): No information available.
Miscibility: No information available.

Solubility:
Freely soluble in Acetone
Freely soluble in water
Freely soluble in Amyl alcohol
Solubility in Water: 151 g/100 ml water
10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions

Conditions to avoid: Exposure to light. Exposure to air. Becomes yellow on exposure to air. Incompatible materials.


Hazardous decomposition products: No information available.

Possibility of Hazardous Reactions: No information available

Polymerization: Hazardous polymerisation does not occur

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

*Lithium Iodide, trihydrate - 7790-22-9*

LD50/oral/rat = No information available
LD50/oral/mouse = No information available
LD50/dermal/rat = No information available
LD50/dermal/rabbit = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LD50/oral/mouse = No information available
LD50/oral/rat = No information available

Local Effects

Skin irritation: May cause skin irritation.

Eye irritation: Contact with eyes may cause irritation.

Inhalation: May cause irritation of respiratory tract.
**Ingestion:**
Ingestion of large amounts of lithium compounds may cause dehydration, thirst, anorexia/loss of appetite, nausea, vomiting, diarrhea, abdominal pain, and gastrointestinal tract irritation. It may also affect behavior/central nervous system (central nervous system depression - headache, ataxia, hallucinations, convulsions, stupor, dizziness, blurred vision, sensory loss, tremor, lethargy, drowsiness, disorientation, confusion, giddiness, twitching, weakness, agitation, hypertonia, muscle rigidity, slurred speech, fatigue, clonus and hyperactive reflexes), kidneys (oliguria, renal tubular disorder, polyuria, nephrosis, renal failure), heart/cardiovascular system (hypotension, dysrhythmias, myocardial infarction), respiration (respiratory depression), blood (leukocytosis) Acute exposure to iodides may cause a serum-sickness type of hypersensitivity reaction with symptoms such as fever, arthralgia, lymph node enlargement and eosinophilia. Thrombotic thrombocytopenic purpura and fatal periarteritis nodosa attributed to hypersensitivity to iodides has also been described. It may affect behavior/central nervous system (somnolence, convulsions, speech disorder, dementia)

**Sensitization:**
No information available

**Chronic Toxicity**
Chronic ingestion of lithium or lithium compounds can cause kidney damage, gastrointestinal disturbances, dehydration, loss of appetite, weight loss, and dermatological effects. It may also affect the thyroid (goiter, hypothyroidism), the blood (leukocytosis), heart function, central nervous system (see acute ingestion) Prolonged exposure to iodides may result in "Iodism" which is characterized by skin rash, runny nose, headache, increased salivation, metallic taste, nausea, vomiting, epigastric pain, diarrhea, bronchitis, stomatitis, fever, conjunctivitis, and irritation of the mucous membranes and anemia. In severe cases, the skin may show pimples, boils, redness, black and blue spots, hives and blisters. It may also affect the thyroid gland (goiter, hypothyroidism)

**Carcinogenic effects:**
No information available.

<table>
<thead>
<tr>
<th>Components</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA HCS - Carcinogens</th>
<th>ACGIH - Carcinogens</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
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<tbody>
<tr>
<td>Lithium iodide, trihydrate</td>
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<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

**Teratogenic Effects:**
Lithium/Lithium compounds and Iodides pass through the placental barrier and enter human breast milk. It should be noted that the role for Lithium/Lithium compounds in producing human birth defects is not universally accepted. It has been debated as to whether or not the use of lithium or lithium compounds during pregnancy increase the risk of congenital heart disease or malformations. Teratogenicity studies in laboratory mammals give conflicting results. Some studies have found lithium administration to pregnant rats and mice to be associated with an increase in birth defects in some offspring, while others have given negative results in mice, rats, rabbits and monkeys. A comprehensive assessment of the developmental toxicity of lithium/lithium compounds concluded that occupational and environmental exposures to lithium/lithium compounds are not likely to have adverse effects. Case reports have described the induction of goiter and hypothyroidism in neonates prenatally exposed to lithium/lithium compounds and iodides.

**Target Organs:**
Thyroid. Kidneys. Central nervous system. Skin.

**Product code:** L1195

**Product name:** LITHIUM IODIDE, REAGENT
12. ECOLOGICAL INFORMATION

ECOTOXICITY

Toxicity to terrestrial and aquatic plants and animals: No information available

Ecotoxicity effects: No data available.

Aquatic toxicity: No information available

Mobility: No information available

Persistence and degradability: No information available

Bioaccumulative potential: No information available

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Lithium iodide, trihydrate</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
UN-No: Not regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: None
Subsidiary Risk: Not applicable
Marine Pollutant: No data available
ERG No: No information available
DOT RQ (lbs): No information available

TDG (Canada)
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Description: No information available

ADR
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available
IMO / IMDG
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
MFAG: No information available
Maximum Quantity: No information available

RID
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available

ICAO
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Description: No information available

IATA
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Description: No information available

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Components</th>
<th>U.S. TSCA</th>
<th>Philippines (PICCS)</th>
<th>KOREA KECL</th>
<th>Japan ENCS</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
<th>EINECS-No.</th>
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</thead>
<tbody>
<tr>
<td>Lithium iodide, trihydrate</td>
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<td>Not present</td>
<td>Not present</td>
<td>Not present</td>
<td>Not present</td>
<td>Not present</td>
<td>Not present</td>
</tr>
</tbody>
</table>

U.S. Regulations


Chemicals Known to the State of California to Cause Cancer:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

<table>
<thead>
<tr>
<th>Components</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity</th>
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</thead>
<tbody>
<tr>
<td>Lithium iodide, trihydrate</td>
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<td>Not Listed</td>
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</tbody>
</table>

Product code: L1195  Product name: LITHIUM IODIDE, REAGENT
CERCLA/SARA

<table>
<thead>
<tr>
<th>Components</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPQs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium iodide, trihydrate</td>
<td>None</td>
<td>None</td>
<td>None</td>
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</tr>
</tbody>
</table>

U.S. TSCA

<table>
<thead>
<tr>
<th>Components</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium iodide, trihydrate</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Canada

WHMIS hazard class:
Non-controlled

Lithium iodide, trihydrate
Uncontrolled product according to WHMIS classification criteria

Canada Controlled Products Regulation:
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

<table>
<thead>
<tr>
<th>Components</th>
<th>Canada (DSL)</th>
<th>Canada (NDSL)</th>
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</thead>
<tbody>
<tr>
<td>Lithium iodide, trihydrate</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

Characteristics

EU Classification

R-phrase(s)
not determined

S-phrase(s)
none

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
Not dangerous

Product code: L1195
Product name: LITHIUM IODIDE, REAGENT
16. OTHER INFORMATION

The MSDS format complies with ANSI Z400.1-2004 standards.

Preparation Date: 23-Apr-2013
Reason for revision: Not applicable
Prepared by: Sonia Owen
Literature reference: No information available

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. The physical properties reported in this MSDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.