

SAFETY DATA SHEET

Preparation Date: 4/27/2017

Revision Date: 4/27/2017

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: L1120
Product Name: LITHIUM NITRATE, CRYSTAL, REAGENT

Other means of identification

Synonyms: Nitric acid, lithium salt
CAS #: 7790-69-4
RTECS # QU9330000
Cl#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

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

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 3
Oxidizing solids	Category 3

Label elements

Warning

Hazard statements

Harmful if swallowed
 Causes skin irritation
 Causes serious eye irritation
 May cause respiratory irritation
 May intensify fire; oxidizer



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep/Store away from clothing and other combustible materials
Take any precaution to avoid mixing with combustibles
Wear eye/face protection
Wear protective gloves

Precautionary Statements - Response

IN CASE OF FIRE: Use water to extinguish. Do not use dry chemicals or foams. CO₂ or Halon may provide limited control.
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 water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Lithium Nitrate	7790-69-4	100

4. FIRST AID MEASURES

First aid measures

General Advice:

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. First aider needs to protect himself. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect

themselves.

- Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.
- Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention.
- 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. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

- Symptoms**
- Irritating to eyes and skin
 - Irritating to respiratory system
 - May cause digestive (gastrointestinal) tract irritation
 - May cause abdominal pain, nausea, vomiting, diarrhea
 - May cause methemoglobinemia and cyanosis
 - May cause central nervous system effects
 - May affect the cardiovascular system
 - It may affect the thyroid
 - It may affect the kidneys
 - May affect the blood

Indication of any immediate medical attention and special treatment needed

- Notes to Physician:** Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Water. CO2 may be of no value in extinguishing fires involving oxidizers and may only provide limited control.

Unsuitable Extinguishing Media: Dry chemical. Foam. Halons.

Specific hazards arising from the chemical

Hazardous Combustion Products: If it is involved in a fire the following can be released:
Nitrogen Oxides. Lithium oxides.

Specific hazards: Oxidizer. Keep away from combustible materials (wood, paper, oil, clothing, etc.). The product is not flammable, but it may cause fire when in contact with other material. Contact with combustible or organic materials may cause fire. Will accelerate burning when involved in a fire. Container explosion may occur under fire conditions or when heated.

Special Protective Actions for Firefighters

Specific Methods: Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out. DO

NOT use combustible materials such as sawdust.

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Remove all sources of ignition. Keep combustibles (wood, paper, oil, clothing, etc.) away from spilled material.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Do not use combustible materials such as paper towels, sawdust, clothing, etc. to clean up spill. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe 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. Keep away from combustible material. Do not ingest. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Deliquescent. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store in a segregated and approved area. Do not store near combustible materials. Store away from incompatible materials.

Incompatible Materials:

Reducing agents
Combustible materials
Organic materials
Powdered metals

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Lithium Nitrate	7790-69-4	None	None	None	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Lithium Nitrate	7790-69-4	None	None	None	None

Australia and Mexico

Components	CAS-No.	Australia	Mexico
Lithium Nitrate	7790-69-4	None	None

Appropriate engineering controls

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.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

- Eye protection:** Goggles
- Skin and body protection:** Chemical resistant apron
Long sleeved clothing
Gloves
- Respiratory protection:** 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid	Appearance: Crystals. Granular.	Color: White.
Odor: Odorless.	Taste No information available.	Formula: LiNO ₃
Molecular/Formula weight: 68.95	Flammability: No information available	Flashpoint (°C/°F): No information available.
Flash Point Tested according to: Not available	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): 251°C/483 °F	Decomposition temperature(°C/°F): 600 °C/1112 °F
Boiling point/range(°C/°F):		

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600 °C/1112 °F

Bulk density:
No information available

Density (g/cm³):
No information available

Specific gravity:
1.2-1.3 @ 25 °C

pH:
No information available

Vapor pressure @ 20°C (kPa):
No information available

Evaporation rate:
No information available

Vapor density:
No information available

VOC content (g/L):
No information available

Odor threshold (ppm):
No information available

**Partition coefficient
(n-octanol/water):**
No information available

Viscosity:
No information available

Miscibility:
No information available

Solubility:
Soluble in Water
Solubility in Water: 15 g/L @ 25°C; 23
g/L @ 40°C; 30 g/L @ 50°C; 55 g/L @
70°C

10. STABILITY AND REACTIVITY

Reactivity

No information available

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Avoid dust formation. Contact with combustible materials (wood, paper, oil, clothing, etc.).

Incompatible Materials:
Reducing agents
Combustible materials
Organic materials
Powdered metals

Hazardous decomposition products: Nitrogen oxides (NO_x). Lithium oxides.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Toxicity

Component Information

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Lithium Nitrate	
CAS-No.	7790-69-4

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

LD50/oral/rat =
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Irritating to skin.

Eye Contact: Moderately irritating to the eyes.

Inhalation Irritating to respiratory system. Symptoms may include coughing and shortness of breath.

Ingestion May cause abdominal pain, nausea, vomiting, hypermotility and diarrhea. Ingestion of large doses can cause gastroenteritis, abdominal pain, vomiting, diarrhea. The toxicity of nitrates is due to the in vivo conversion to nitrites. The primary toxic effects of nitrites include orthostatic hypotension(due to peripheral vasodilation) and methemoglobinemia (the formation of methemoglobin in the blood which causes deficient oxygenation of the blood due to decreased availability of hemoglobin). Other symptoms may include chocolate-brown colored blood, muscular weakness, flushing, sweating, syncope, dizziness, lightheadedness, fatigue, throbbing headache, mental impairment, ataxia, incoordination, seizures/convulsions, bradycardia or tachycardia (slow or fast heartbeat), dysrhythmias, dyspnea (shortness of breath and difficulty breathing).Furthermore, methemoglobinemia due to inadequate oxygenation of the blood can lead to progressive cyanosis, and coma, and possible death. Cyanosis is first visible as a bluish discoloration of the mucous membranes and unpigmented areas of the body. May cause blurred or foggy vision. It may cause

twitching or tremors/trembling. May affect behavior/central nervous system (confusion).

Aspiration hazard No information available.

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

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). Chronic ingestion of Lithium Nitrate may affect the blood (normocytic anemia, changes in white blood cell count), and may cause hyperglycemia.

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Lithium Nitrate	7790-69-4	Not listed	Group 2A - Probably Carcinogenic to Humans - monograph 94 [2010](covers ingested nitrates under conditions that result in endogenous nitrosation)	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target Organs: Central nervous system. Kidneys. Thyroid. Blood. Methemoglobin formation. Cardiovascular system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

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

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Lithium Nitrate	7790-69-4	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN2722
Proper Shipping Name: Lithium nitrate
Hazard Class: 5.1
Subsidiary Class No information available
Packing group: III
Emergency Response Guide Number No information available
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions No Information available
Symbol(s): No information available
Description: UN2722,Lithium nitrate ,5.1,,PG III

TDG (Canada)

UN-No: UN2722
Proper Shipping Name: Lithium nitrate
Hazard Class: 5.1
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant No Information available
Description: LITHIUM NITRATE,5.1,UN2722,PG III

ADR

UN-No: UN2722
Proper Shipping Name: Lithium nitrate
Hazard Class: 5.1
Packing Group: III
Subsidiary Risk: No information available
Description: UN2722 Lithium nitrate,5.1,III

IMO / IMDG

UN-No: UN2722
Proper Shipping Name: Lithium nitrate
Hazard Class: 5.1
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant: No information available
EMS: F-A

RID

UN-No: UN2722
Proper Shipping Name: Lithium nitrate
Hazard Class: 5.1
Subsidiary Risk: 5.1
Packing Group: III
Description: UN2722 Lithium nitrate,5.1,III,RID

ICAO

UN-No: UN2722
Proper Shipping Name: Lithium nitrate
Hazard Class: 5.1
Subsidiary Risk: No information available
Packing Group: III
Description: Lithium nitrate,5.1,UN2722,PG III

IATA

UN-No: UN2722
Proper Shipping Name: Lithium nitrate
Hazard Class: 5.1
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 5L
Special Provisions: No information available
Description: UN2722,Lithium nitrate,5.1,PG III

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Lithium Nitrate	7790-69-4	Present	Present KE-22582	Present	Present (1)-765	Present	Present	Present 232-218-9

U.S. Regulations

Lithium Nitrate

New Jersey RTK Hazardous Substance List: sn 1130

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**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)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:

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Lithium Nitrate	7790-69-4	Not Listed	Not Listed	Not Listed	Not Listed
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CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Lithium Nitrate	7790-69-4	None	None	None	Nitrate compounds	None

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Lithium Nitrate	7790-69-4	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component
Lithium Nitrate
7790-69-4 (100)

WHMIS 2015 Hazard Classification
Oxidizing solids - Category 3: H272 May intensify fire, oxidizer.;
Acute toxicity - Oral - Category 4: H302 Harmful if swallowed.;
Serious Eye Damage/Eye Irritation - Category 2B: H320 Causes eye irritation.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class

C Oxidizing materials

Components
Lithium Nitrate

WHMIS 1988
C

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

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Lithium Nitrate	7790-69-4	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Lithium Nitrate	7790-69-4	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Lithium Nitrate	7790-69-4	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Lithium Nitrate	7790-69-4	No information

EU - CLP (1272/2008)

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R-phrase(s)

R 8 - Contact with combustible material may cause fire.
R36/38 - Irritating to eyes and skin.

S -phrase(s)

none

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Lithium Nitrate	7790-69-4	R8 R36/38	No information	

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

Indication of danger:

O - Oxidising.

O

**16. OTHER INFORMATION**

Preparation Date: 4/27/2017
Revision Date: 4/27/2017
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) 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 SDS. The physical properties reported in this SDS 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 SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet