

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
Substance name : Lithium Nitrate  
CAS No : 7790-69-4  
Product code : LC16250  
Formula : LiNO<sub>3</sub>  
Synonyms : nitric acid, lithium salt  
BIG no : 11532

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : For laboratory and manufacturing use only.

#### 1.3. Details of the supplier of the safety data sheet

LabChem Inc  
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court  
Zelienople, PA 16063 - USA  
T 412-826-5230 - F 724-473-0647  
[info@labchem.com](mailto:info@labchem.com) - [www.labchem.com](http://www.labchem.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Ox. Sol. 3 H272  
Skin Irrit. 2 H315  
Eye Irrit. 2A H319

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Warning

Hazard statements (GHS-US) :  
H272 - May intensify fire; oxidiser  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation

Precautionary statements (GHS-US) :  
P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking  
P220 - Keep/Store away from clothing, combustible materials  
P221 - Take any precaution to avoid mixing with combustibles  
P264 - Wash exposed skin thoroughly after handling  
P280 - Wear protective gloves, protective clothing, eye protection, face protection  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse  
P370+P378 - In case of fire: Use carbon dioxide (CO<sub>2</sub>), powder, alcohol-resistant foam for extinction  
P501 - Dispose of contents/container to comply with local, state and federal regulations

#### 2.3. Other hazards

Other hazards not contributing to the : None under normal conditions.

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classification

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Substance type : Mono-constituent

Name	Product identifier	%	GHS-US classification
Lithium Nitrate (Main constituent)	(CAS No) 7790-69-4	100	Ox. Sol. 3, H272 Skin Irrit. 2, H315 Eye Irrit. 2A, H319

Full text of H-phrases: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
- First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
- First-aid measures after skin contact : Wash immediately with lots of water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
- First-aid measures after ingestion : Rinse mouth with water. Call Poison Information Centre ([www.big.be/antigif.htm](http://www.big.be/antigif.htm)). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : AFTER INHALATION OF DUST: Irritation of the respiratory tract. Irritation of the nasal mucous membranes.
- Symptoms/injuries after skin contact : Tingling/irritation of the skin.
- Symptoms/injuries after eye contact : Irritation of the eye tissue.
- Symptoms/injuries after ingestion : Headache. Gastrointestinal complaints. AFTER ABSORPTION OF HIGH QUANTITIES: Feeling of weakness. Dizziness. Vomiting. Nausea. Blood in stool.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Preferably: water spray.
- Unsuitable extinguishing media : Dry chemical powder. Carbon dioxide.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : INDIRECT FIRE HAZARD. Promotes combustion. Reactions involving a fire hazard: see "Reactivity Hazard".
- Explosion hazard : DIRECT EXPLOSION HAZARD. No data available on direct explosion hazard. INDIRECT EXPLOSION HAZARD. No data available on indirect explosion hazard.
- Reactivity : On burning: release of toxic and corrosive gases/vapours (nitrous vapours). Reacts with combustible materials: (increased) risk of fire.

### 5.3. Advice for firefighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
- Firefighting instructions : Dilute toxic gases with water spray.
- Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit.
- Emergency procedures : Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.
- Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

##### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection. Do not breathe dust.
- Emergency procedures : If a major spill occurs, all personnel should be immediately evacuated and the area ventilated. Ventilate area.

#### 6.2. Environmental precautions

Prevent spreading in sewers.

#### 6.3. Methods and material for containment and cleaning up

- For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray.
- Methods for cleaning up : Stop dust cloud by covering with sand/earth or dry soda ash. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. See "Material-handling" for suitable container materials. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

#### 6.4. Reference to other sections

No additional information available

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Avoid raising dust. Keep away from naked flames/heat. Reduce/avoid exposure and/or contact. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Incompatible products : combustible materials. Strong reducing agents.
- Incompatible materials : combustible materials.
- Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.
- Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: reducing agents. combustible materials. organic materials. water/moisture.
- Storage area : Store in a dry area. Keep only in the original container. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: synthetic material. glass.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

- Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.
- Materials for protective clothing : GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: No data available. GIVE LESS RESISTANCE: No data available. GIVE POOR RESISTANCE: No data available.
- Hand protection : Gloves.

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Eye protection	: Face shield. In case of dust production: protective goggles.
Skin and body protection	: Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing.
Respiratory protection	: Dust production: dust mask with filter type P2.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline solid. Crystalline powder.
Molecular mass	: 68.94 g/mol
Colour	: Colourless to white.
Odour	: No data available on odour.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 264 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: 600 °C
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 2.4
Density	: 2380 kg/m <sup>3</sup>
Solubility	: Soluble in water. Soluble in ethanol. Soluble in other organic solvents. Water: 43 g/100ml
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: May intensify fire; oxidiser.
Explosive limits	: No data available

#### 9.2. Other information

VOC content	: Not applicable
Other properties	: Hygroscopic.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

On burning: release of toxic and corrosive gases/vapours (nitrous vapours). Reacts with combustible materials: (increased) risk of fire.

#### 10.2. Chemical stability

Hygroscopic.

#### 10.3. Possibility of hazardous reactions

Reacts exothermically with combustible materials: (increased) risk of fire.

#### 10.4. Conditions to avoid

Finely divided metals. Incompatible materials.

#### 10.5. Incompatible materials

combustible materials. Organic compounds. metals.

#### 10.6. Hazardous decomposition products

lithium oxide. Nitrogen oxides.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: AFTER INHALATION OF DUST: Irritation of the respiratory tract. Irritation of the nasal mucous membranes.
Symptoms/injuries after skin contact	: Tingling/irritation of the skin.
Symptoms/injuries after eye contact	: Irritation of the eye tissue.
Symptoms/injuries after ingestion	: Headache. Gastrointestinal complaints. AFTER ABSORPTION OF HIGH QUANTITIES: Feeling of weakness. Dizziness. Vomiting. Nausea. Blood in stool.
Likely routes of exposure	: Skin and eye contact;Inhalation

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - water	: Maximum concentration in drinking water: 50 mg/l (nitrate) (Directive 98/83/EC). May cause eutrophication. No data available on ecotoxicity.
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#### 12.2. Persistence and degradability

Lithium Nitrate (7790-69-4)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

#### 12.3. Bioaccumulative potential

Lithium Nitrate (7790-69-4)	
Bioaccumulative potential	No bioaccumulation data available.

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations	: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Do not discharge into surface water.
Additional information	: Hazardous waste according to Directive 2008/98/EC.

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### SECTION 14: Transport information

In accordance with DOT

Transport document description : UN2722 Lithium nitrate, 5.1, III  
UN-No.(DOT) : 2722  
DOT NA no. : UN2722  
DOT Proper Shipping Name : Lithium nitrate  
Department of Transportation (DOT) Hazard Classes : 5.1 - Class 5.1 - Oxidizer 49 CFR 173.128  
Hazard labels (DOT) : 5.1 - Oxidiser



Packing group (DOT) : III - Minor Danger  
DOT Special Provisions (49 CFR 172.102) : A1 - Single packagings are not permitted on passenger aircraft.  
IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).  
IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.  
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)  
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.  
DOT Packaging Exceptions (49 CFR 173.xxx) : 152  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 213  
DOT Packaging Bulk (49 CFR 173.xxx) : 240  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 25 kg  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 100 kg  
DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

#### Additional information

Other information : No supplementary information available.

State during transport (ADR-RID) : as solid.

#### ADR

Transport document description : UN 2722 Lithium nitrate, 5.1, III, (E)  
Packing group (ADR) : III  
Class (ADR) : 5.1 - Oxidizing substances  
Hazard identification number (Kemler No.) : 50  
Classification code (ADR) : O2  
Danger labels (ADR) : 5.1 - Oxidizing substances



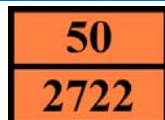
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Orange plates

:



Tunnel restriction code

: E

### Transport by sea

UN-No. (IMDG)

: 2722

Class (IMDG)

: 5.1 - Oxidizing substances

EmS-No. (1)

: F-A

EmS-No. (2)

: S-Q

### Air transport

UN-No.(IATA)

: 2722

Class (IATA)

: 5 - Oxidizing substances

Packing group (IATA)

: III - Minor Danger

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Lithium Nitrate (7790-69-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes

Reactive hazard

### 15.2. International regulations

#### CANADA

#### Lithium Nitrate (7790-69-4)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification

Class C - Oxidizing Material

### EU-Regulations

No additional information available

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Ox. Sol. 3 H272

Eye Irrit. 2 H319

Skin Irrit. 2 H315

Full text of H-phrases: see section 16

### Classification according to Directive 67/548/EEC or 1999/45/EC

O; R8

Xi; R36/38

Full text of R-phrases: see section 16

### 15.2.2. National regulations

#### Lithium Nitrate (7790-69-4)

Not listed on the Canadian Ingredient Disclosure List

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

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Full text of H-phrases: see section 16:

Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Ox. Sol. 3	Oxidising Solids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H272	May intensify fire; oxidiser
H315	Causes skin irritation
H319	Causes serious eye irritation

NFPA health hazard

: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard

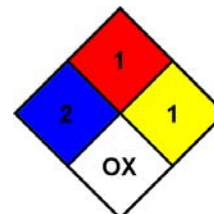
: 1 - Must be preheated before ignition can occur.

NFPA reactivity

: 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.

NFPA specific hazard

: OX - This denotes an oxidizer, a chemical which can greatly increase the rate of combustion/fire.



### HMIS III Rating

Health

: 2 Moderate Hazard - Temporary or minor injury may occur

Flammability

: 1 Slight Hazard

Physical

: 1 Slight Hazard

Personal Protection

: F

SDS US (GHS HazCom 2012)

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