# SAFETY DATA SHEET

**Australian statement of hazardous nature :** Classified as hazardous according to criteria of Safe Work Australia

## Section 1 - Identification

| | |
|---|---|
| **Product Name** | **Lithium nitrate** |
| **CAS No** | 7790-69-4 |
| **Synonyms** | Nitric acid, lithium salt. |

| | |
|---|---|
| **Product Code** | **211320000; 211320010; 211320050; 211322500** |
| **Address** | ThermoFisher Scientific Australia Pty Ltd<br>5 Caribbean Drive, Scoresby<br>VICTORIA 3179, Australia |
| **Emergency Tel.** | **CHEMTREC®**<br>**03 9757 4559 or +613 9757 4559** |
| **Telephone / Fax Numbers** | Tel: 1300 735 292<br>Fax: 1800 067 639 |
| **E-mail address** | ANZinfo@thermofisher.com |

| | |
|---|---|
| **Recommended Use** | Laboratory chemicals. |
| **Uses advised against** | This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list. This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction. This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern. |

## Section 2 - Hazard(s) Identification

**Classification under Safe Work Australia**

Classified as hazardous according to criteria of Safe Work Australia

**Physical hazards**

| | |
|---|---|
| Oxidizing solids | Category 3 |

**Health hazards**

| | |
|---|---|
| Acute Oral Toxicity | Category 4 |
| Serious Eye Damage/Eye Irritation | Category 2 |

**Environmental hazards**
No hazards identified

**Label Elements**



Flame Over Circle



Exclamation Mark

**Signal Word** **Warning**

**Hazard Statements**
H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed
H319 - Causes serious eye irritation

**Precautionary Statements**
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P220 - Keep away from clothing and other combustible materials
P221 - Take any precaution to avoid mixing with combustibles
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P330 - Rinse mouth
P337 + P313 - If eye irritation persists: Get medical advice/attention
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
P403 - Store in a well-ventilated place
P501 - Dispose of contents/ container to an approved waste disposal plant

**Other information**

# Section 3 - Composition and Information on Ingredients

| Component | CAS No | Weight % |
|---|---|---|
| Lithium nitrate | 7790-69-4 | >95 |

# Section 4 - First Aid Measures

**Inhalation** Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

**Ingestion** Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

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

**General Advice** If symptoms persist, call a physician.

| | |
|---|---|
| **Self-Protection of the First Aider** | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. |
| **First Aid Facilities** | Eyewash, safety shower and washroom. |
| **Most important symptoms and effects** | None reasonably foreseeable. |
| **Notes to Physician** | Treat symptomatically. |

# Section 5 - Fire Fighting Measures

**Suitable Extinguishing Media**
Water spray.

**Extinguishing media which must not be used for safety reasons**
Carbon dioxide ($CO_2$). Dry chemical.

**Hazardous Decomposition Products**
Nitrogen oxides (NOx).

**Decomposition Temperature**
> 600°C

**Specific Hazards Arising from the Chemical**
Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.). Non-combustible. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

**Special protective equipment and precautions for fire fighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

# Section 6 - Accidental Release Measures

**Emergency procedures**
Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.

**Environmental Precautions**
Should not be released into the environment.

**Methods for Containment and Clean Up**

**Clean-up methods - small spillage**
Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

**Clean-up methods - large spillage**
Typically only supplied is small quantiites as packaged goods.
If extremely toxic or used in larger quantities ensure a spillage action plan is in place. Evacuate area. Control the source and/or contain the spill if safe and able to do so. Use temporary diking, sand bags, dry sand, earth or proprietary booms/absorbent pads if available. Obtain advice on containment, neutralisation and clean-up from local emergency responders.

**Reference to Other Sections**
Refer to protective measures listed in Sections 8 and 13.

# Section 7 - Handling and Storage

**Precautions for Safe Handling**
Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid dust formation. Avoid ingestion and inhalation. Do not get in eyes, on skin, or on clothing. Keep away from clothing and other combustible materials.

**Conditions for Safe Storage, Including any Incompatibilities**
Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

# Section 8 - Exposure Controls and Personal Protection

**Exposure limits**
**DE** - MAK and BAT values of Hazardous Chemical Compounds in the Work Area. Published by German Research Foundation on July 1, 2011

| Component | Australia | New Zealand WEL | ACGIH TLV | The United Kingdom | Germany |
|---|---|---|---|---|---|
| Lithium nitrate | | | | | TWA: 0.2 mg/m³ (8 Stunden). MAK inorganic compounds, except Lithium and strong irritant Lithium compounds such as Lithium amide, Lithium hydride, Lithium hydroxide, Lithium nitride, Lithium oxide, Lithium tetrahydro aluminate, Lithium tetrahydroborate Höhepunkt: 0.2 mg/m³ |

**Biological limit values**
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

**Exposure Controls**
**Engineering Measures**
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Personal protective equipment**

**Eye Protection** — Goggles (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

**Hand Protection** — Protective gloves

| Glove material | Breakthrough time | Glove thickness | AUS/NZ Standard | Glove comments |
|---|---|---|---|---|
| Natural rubber<br>Nitrile rubber<br>Neoprene<br>PVC | See manufacturers recommendations | - | AS/NZS 2161 | (minimum requirement) |

Inspect gloves before use.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)
Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
Remove gloves with care avoiding skin contamination.

| | |
|---|---|
| **Skin and body protection** | Long sleeved clothing |
| **Repiratory Protection** | Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of repiratory protective devices (or AUS/NZ equivalent) |
| **Hygiene Measures** | Handle in accordance with good industrial hygiene and safety practice. |
| **Environmental exposure controls** | No information available. |

# Section 9 - Physical and Chemical Properties

**Information on basic physical and chemical properties**

| | | |
|---|---|---|
| **Appearance** | White | |
| **Physical State** | Solid | |
| **Odor** | Odorless | |
| **Odor Threshold** | No data available | |
| **pH** | No information available | |
| **Melting Point/Range** | 251 °C / 483.8 °F | |
| **Softening Point** | No data available | |
| **Boiling Point/Range** | 600 °C / 1112 °F | @ 760 mmHg |
| **Flash Point** | No information available | **Method -** No information available |
| **Evaporation Rate** | Not applicable | Solid |
| **Flammability (solid,gas)** | No information available | |
| **Explosion Limits** | No data available | |
| **Vapor Pressure** | No information available | |
| **Vapor Density** | Not applicable | Solid |
| **Specific Gravity / Density** | 2.380 | |
| **Bulk Density** | No data available | |
| **Water Solubility** | 90 g/L (28°C) | |
| **Solubility in other solvents** | No information available | |
| **Partition Coefficient (n-octanol/water)** | | |
| **Autoignition Temperature** | No data available | |
| **Decomposition Temperature** | > 600°C | |
| **Viscosity** | Not applicable | Solid |
| **Explosive Properties** | No information available | |
| **Oxidizing Properties** | Oxidizer | |

**Other information**

| | |
|---|---|
| **Molecular Formula** | Li N O3 |
| **Molecular Weight** | 68.95 |

# Section 10 - Stability and Reactivity

| | |
|---|---|
| **Reactivity** | Yes |
| **Stability** | Oxidizer: Contact with combustible/organic material may cause fire. Hygroscopic. |
| **Conditions to Avoid** | Avoid dust formation, Incompatible products, Excess heat, Combustible material, Exposure to moist air or water. |
| **Incompatible Materials** | Strong oxidizing agents, Strong reducing agents, Acids, Combustible material. |

**Hazardous Decomposition Products** Nitrogen oxides (NOx).

**Hazardous Polymerization** Hazardous polymerization does not occur.

# Section 11 - Toxicological Information

**Information on Toxicological Effects**

**Product Information**

**(a) acute toxicity;**

**Oral** Category 4

**Dermal** Based on available data, the classification criteria are not met

**Inhalation** Based on available data, the classification criteria are not met

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Lithium nitrate | 1426 mg/kg (Rat) | >2000 mg/kg (Rat) | LC50 > 5.93 mg/L ( Rat ) 4 h |

**(b) skin corrosion/irritation;** No data available

**(c) serious eye damage/irritation;** Category 2

**(d) respiratory or skin sensitization;**

**Respiratory** No data available

**Skin** No data available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;** No data available

There are no known carcinogenic chemicals in this product

**(g) reproductive toxicity;** No data available

**(h) STOT-single exposure;** No data available

**(i) STOT-repeated exposure;** No data available

**Target Organs** No information available.

**(j) aspiration hazard;** Not applicable
Solid

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Symptoms / effects,both acute and delayed** No information available

# Section 12 - Ecological Information

**Ecotoxicity effects** Do not empty into drains. .

**Persistence and Degradability**

**Persistence** Soluble in water, Persistence is unlikely, based on information available.

**Degradability** Not relevant for inorganic substances.

**Bioaccumulative Potential** Bioaccumulation is unlikely

| | |
|---|---|
| **Mobility** | The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility Highly mobile in soils |
| **Endocrine Disruptor Information** | This product does not contain any known or suspected endocrine disruptors |
| **Persistent Organic Pollutant** | This product does not contain any known or suspected substance |
| **Ozone Depletion Potential** | This product does not contain any known or suspected substance |

# Section 13 - Disposal Considerations

| | |
|---|---|
| **Waste from Residues/Unused Products** | Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations. |
| **Contaminated Packaging** | Dispose of this container to hazardous or special waste collection point. |
| **Other Information** | Chemical wastes should be disposed through a licensed commercial waste collection service. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. |

# Section 14 - Transport Information

**IMDG/IMO**

| | |
|---|---|
| **UN-No** | UN2722 |
| **Proper Shipping Name** | LITHIUM NITRATE |
| **Hazard Class** | 5.1 |
| **Packing Group** | III |

**ADG**

| | |
|---|---|
| **UN-No** | UN2722 |
| **Proper Shipping Name** | LITHIUM NITRATE |
| **Hazard Class** | 5.1 |
| **Packing Group** | III |

| Component | Hazchem Code |
|---|---|
| Lithium nitrate<br>7790-69-4 ( >95 ) | 1Z |

**IATA**

| | |
|---|---|
| **UN-No** | UN2722 |
| **Proper Shipping Name** | LITHIUM NITRATE |
| **Hazard Class** | 5.1 |
| **Packing Group** | III |

| | |
|---|---|
| **Environmental hazards** | No hazards identified |
| **Special Precautions** | No special precautions required |
| **Additional information** | None known |

# Section 15 - Regulatory Information

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**National Regulations** **Australia**

See section 8 for national exposure control parameters.

**Standard for the Uniform Scheduling of Medicines and Poisons**
Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons.

| Component | Standard for the Uniform Scheduling of Medicines and Poisons |
|---|---|
| Lithium nitrate - 7790-69-4 | Schedule 2 listed<br>Schedule 4 listed - for therapeutic use except: when included in Schedule 2, when present as an excipient in preparations for dermal use containing <=0.25% of Lithium, or in preparations containing <=0.01% of Lithium |

**Australian Industrial Chemicals Introduction Scheme (AICIS)**

| Component | Australian Industrial Chemicals Introduction Scheme (AICIS) | Additional information |
|---|---|---|
| Lithium nitrate - 7790-69-4 | Present | - |

**Australian - Illicit Drug Precursors/Reagents Substance List**
This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

**Chemicals of Security Concern**
This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern

**National pollutant inventory** Not applicable

**Prohibition or notification/licensing requirements**
Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction.

**International Inventories**

| Component | AICS | NZIoC | EINECS | ELINCS | TSCA | DSL | NDSL | PICCS | ENCS | ISHL | IECSC | KECL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium nitrate | X | X | 232-218-9 | - | X | X | - | X | X | X | X | KE-22582 |

**Legend:** X - Listed. '-' - Not Listed. **KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

**International Regulations**

**Ozone Depletion Potential** This product does not contain any known or suspected substance

**Persistent Organic Pollutant** This product does not contain any known or suspected substance

**Rotterdam Convention (PIC)** Not applicable

**Basel convention on the control of transboundary movements of hazardous wastes and their dispoal**
Not applicable.

| Component | CAS No | OECD HPV | Restriction of Hazardous Substances (RoHS) | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|---|---|---|---|---|---|
| Lithium nitrate | 7790-69-4 | Not applicable | Not applicable | Not applicable | Not applicable |

**Authorisation/Restrictions according to EU REACH** Not applicable

# Section 16 - Other Information

**Legend**

**AICS** - Australian Inventory of Chemical Substances
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**IECSC** - Chinese Inventory of Existing Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**TWA** - Time Weighted Average
**IARC** - International Agency for Research on Cancer
**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association
**MARPOL** - International Convention for the Prevention of Pollution from Ships
**NZS 5433:2012** - Transport of Dangerous Goods on Land
**LD50** - Lethal Dose 50%
**EC50** - Effective Concentration 50%
**WEL** - Workplace Exposure Limit
**DNEL** - Derived No Effect Level
**POW** - Partition coefficient Octanol:Water
**vPvB** - very Persistent, very Bioaccumulative
**VOC** - (Volatile Organic Compound)

**NZIoC** - New Zealand Inventory of Chemicals
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
**ENCS** - Japanese Existing and New Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances
**CAS** - Chemical Abstracts Service
**ACGIH** - American Conference of Governmental Industrial Hygienists Predicted No Effect Concentration (PNEC)
**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code
**ADG** Australian Code for the Transport of Dangerous Goods by Road and Rail
**OECD** - Organisation for Economic Co-operation and Development
**LC50** - Lethal Concentration 50%
**ATE** - Acute Toxicity Estimate
**RPE** - Respiratory Protective Equipment
**NOEC** - No Observed Effect Concentration
**BCF** - Bioconcentration factor
**PBT** - Persistent, Bioaccumulative, Toxic

**Key literature references and sources for data**
https://echa.europa.eu/information-on-chemicals
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**Training Advice**
Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.
Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.
First aid for chemical exposure, including the use of eye wash and safety showers.

**Revision Date** 17-Nov-2022
**Revision Summary** Not applicable.

**This Safety Data Sheet (SDS) is prepared in accordance to and complies with the requirements of Safe Work Australia - Work Health and Safety Regulations (WHS Regulations).**

**Disclaimer**

**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**

# End of Safety Data Sheet