

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Lithium nitrate > 98 % pure

Revision date: 21.08.2023

Product code: 26808

Page 1 of 11

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Lithium nitrate > 98 % pure

CAS No: 7790-69-4

EC No: 232-218-9

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH

Street: Stempelstraße 6

Place: D-47167 Duisburg

Telephone: 0203/5194-0

Telefax: 0203/5194-290

E-mail: info@analytichem.de

Contact person: Abteilung Produktsicherheit

Telephone: 0203/5194-107/117

E-mail: produktsicherheit@analytichem.de

Internet: www.analytichem.de

Responsible Department: Abteilung Produktsicherheit

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Ox. Sol. 3; H272

Acute Tox. 4; H302

Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008**

Signal word: Warning

Pictograms:

**Hazard statements**

H272

May intensify fire; oxidiser.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Lithium nitrate > 98 % pure

Revision date: 21.08.2023

Product code: 26808

Page 2 of 11

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.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378 In case of fire: Use extinguishing powder or sand to extinguish.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: LiNO₃
Molecular weight: 68,94 g/mol

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7790-69-4	lithium nitrate			100 %
	232-218-9			
	Ox. Sol. 3, Acute Tox. 4, Eye Irrit. 2; H272 H302 H319			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
7790-69-4	232-218-9	lithium nitrate	100 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 1317 mg/kg		

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.
Remove contact lenses, if present and easy to do. Continue rinsing.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Lithium nitrate > 98 % pure

Revision date: 21.08.2023

Product code: 26808

Page 3 of 11

Consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

Methaemoglobinaemia

Irritant

Gastrointestinal complaints

Vomiting

Circulatory collapse

Unconsciousness

Agitation

Spasms

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible solids

Oxidizing

Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NO_x)

5.3. Advice for firefighters

Do not inhale explosion and combustion gases.

Avoid contact with skin, eyes and clothes.

In case of fire: Wear self-contained breathing apparatus.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Lithium nitrate > 98 % pure

Revision date: 21.08.2023

Product code: 26808

Page 4 of 11

6.3. Methods and material for containment and cleaning up

For containment

- Cover drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).
- Collect in closed and suitable containers for disposal.
- Take up carefully when dry. Take up dust-free and set down dust-free.

For cleaning up

- Clean contaminated articles and floor according to the environmental legislation.

Other information

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

- Handle and open container with care.
- Provide adequate ventilation.
- Avoid contact with skin, eyes and clothes.
- Avoid dust formation. Do not breathe dust.

Advice on protection against fire and explosion

- Keep away from combustible material.

Advice on general occupational hygiene

- Take off contaminated clothing.
- Wash hands before breaks and after work.
- When using do not eat or drink.

Further information on handling

- Take off contaminated clothing and wash it before reuse.
- Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

- Keep container tightly closed and dry.

Hints on joint storage

- Keep away from combustible material.

Further information on storage conditions

- storage temperature +5°C - +30°C

7.3. Specific end use(s)

- Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Lithium nitrate > 98 % pure

Revision date: 21.08.2023

Product code: 26808

Page 5 of 11

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
7790-69-4	lithium nitrate		
Worker DNEL, long-term	inhalation	systemic	10 mg/m ³
Worker DNEL, long-term	dermal	systemic	41,1 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	6,12 mg/m ³
Consumer DNEL, long-term	dermal	systemic	41,1 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	4,11 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment	Value	
7790-69-4	lithium nitrate	
Freshwater	16,9 mg/l	
Freshwater (intermittent releases)	25,7 mg/l	
Marine water	1,69 mg/l	
Freshwater sediment	83,1 mg/kg	
Marine sediment	8,31 mg/kg	
Micro-organisms in sewage treatment plants (STP)	228 mg/l	
Soil	6,71 mg/kg	

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

Hand protection

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet (>, <)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Lithium nitrate > 98 % pure

Revision date: 21.08.2023

Product code: 26808

Page 6 of 11

Skin protection

Wear suitable protective clothing.
Take off immediately all contaminated clothing.
Wash hands before breaks and after work.

Respiratory protection

Respiratory protection necessary at: dust formation
Filtering device with filter or ventilator filtering device of type: P2

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid	
Colour:	white	
Odour:	odourless	
Odour threshold:	No data available	
Melting point/freezing point:		255 °C
Boiling point or initial boiling point and boiling range:		No data available
Flammability:		not determined not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		X
Auto-ignition temperature:		No data available
Decomposition temperature:		>600 °C
pH-Value (at 20 °C):		~ 7 - 9 (50 g/l)
Viscosity / kinematic:		No data available
Water solubility: (at 20 °C)		522 g/L
Solubility in other solvents		not determined
Dissolution rate:		No data available
Partition coefficient n-octanol/water:		log Pow -0,79
Dispersion stability:		No data available
Vapour pressure:		No data available
Vapour pressure:		No data available
Density (at 20 °C):		2,36 g/cm ³
Bulk density:		~910 kg/m ³
Relative vapour density:		not determined
Particle characteristics:		No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties	
No data available	
Sustaining combustion:	No data available
Self-ignition temperature	
Solid:	not determined
Gas:	not applicable
Oxidizing properties	
The product is: oxidising, Oxidising.	

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Lithium nitrate > 98 % pure

Revision date: 21.08.2023

Product code: 26808

Page 7 of 11

Other safety characteristics

Evaporation rate:	not determined
Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	100%
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
Viscosity / dynamic:	No data available
Flow time:	No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Oxidising.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Combustible substance
Ethanol

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

In case of fire may be liberated:
SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicokinetics, metabolism and distribution

No data available

Acute toxicity

Harmful if swallowed.
Irritating to respiratory system.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7790-69-4	lithium nitrate				
	oral	LD50 mg/kg	1317	Rat	Study report (1999) OECD Guideline 401
	dermal	LD50 mg/kg	> 2000	Rat	Study report (1999) OECD Guideline 402

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Lithium nitrate > 98 % pure

Revision date: 21.08.2023

Product code: 26808

Page 8 of 11

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information

Causes damage to organs.
(kidneys)

Further information

Methaemoglobinaemia
Irritant
Gastrointestinal complaints
Vomiting
Circulatory collapse
Unconsciousness
Agitation
Spasms

SECTION 12: Ecological information

12.1. Toxicity

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Lithium nitrate > 98 % pure

Revision date: 21.08.2023

Product code: 26808

Page 9 of 11

CAS No	Chemical name						
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method	
7790-69-4	lithium nitrate						
	Acute fish toxicity	LC50	158 mg/l	96 h	Oncorhynchus mykiss	Study report (1997)	OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	> 400	72 h	Desmodesmus subspicatus	Study report (2010)	OECD Guideline 201
	Acute crustacea toxicity	EC50	249 mg/l	48 h	Daphnia magna	Study report (1997)	OECD Guideline 202
	Fish toxicity	NOEC mg/l	17,35	34 d	Danio rerio	Study report (2012)	OECD Guideline 210
	Crustacea toxicity	NOEC	1,7 mg/l	21 d	Daphnia magna	Study report (2012)	OECD Guideline 211
	Acute bacteria toxicity	(EC50 mg/l)	180,8	3 h	activated sludge, domestic	Study report (2004)	EU Method C.11

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
7790-69-4	lithium nitrate	ca. -0,79

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

No data available

Further information

Avoid release to the environment.
Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Send to a physico-chemical treatment facility under observation of official regulations.
Do not mix with other wastes.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

- 14.1. UN number or ID number:** UN 2722
14.2. UN proper shipping name: LITHIUM NITRATE

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Lithium nitrate > 98 % pure

Revision date: 21.08.2023

Product code: 26808

Page 10 of 11

14.3. Transport hazard class(es): 5.1
14.4. Packing group: III
 Hazard label: 5.1
 Classification code: O2
 Limited quantity: 5 kg
 Excepted quantity: E1
 Transport category: 3
 Hazard No: 50
 Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 2722
14.2. UN proper shipping name: LITHIUM NITRATE
14.3. Transport hazard class(es): 5.1
14.4. Packing group: III
 Hazard label: 5.1
 Classification code: O2
 Limited quantity: 5 kg
 Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number or ID number: UN 2722
14.2. UN proper shipping name: LITHIUM NITRATE
14.3. Transport hazard class(es): 5.1
14.4. Packing group: III
 Hazard label: 5.1
 Special Provisions: -
 Limited quantity: 5 kg
 Excepted quantity: E1
 EmS: F-A, S-Q

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 2722
14.2. UN proper shipping name: LITHIUM NITRATE
14.3. Transport hazard class(es): 5.1
14.4. Packing group: III
 Hazard label: 5.1
 Special Provisions: A803
 Limited quantity Passenger: 10 kg
 Passenger LQ: Y546
 Excepted quantity: E1
 IATA-packing instructions - Passenger: 559
 IATA-max. quantity - Passenger: 25 kg
 IATA-packing instructions - Cargo: 563
 IATA-max. quantity - Cargo: 100 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Oxidising substances.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Lithium nitrate > 98 % pure

Revision date: 21.08.2023

Product code: 26808

Page 11 of 11

EU regulatory information

Information according to 2012/18/EU
(SEVESO III):

P8 OXIDISING LIQUIDS AND SOLIDS

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D):

1 - slightly hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 12.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Ox. Sol: Oxidising solid

Acute Tox: Acute toxicity

Eye Irrit: Eye irritation

Relevant H and EUH statements (number and full text)

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.