

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## Sodium nitrate pure

Revision date: 18.09.2023

Product code: 15299

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

Sodium nitrate pure

REACH Registration Number: 01-2119488221-41-XXXX  
CAS No: 7631-99-4  
EC No: 231-554-3

**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  
E-mail: info@analytichem.de  
Contact person: Abteilung Produktsicherheit  
E-mail: produktsicherheit@analytichem.de  
Internet: www.analytichem.de  
Responsible Department: Abteilung Produktsicherheit

Telefax: 0203/5194-290

Telephone: 0203/5194-107/117

**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**

No data available

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

Ox. Sol. 3; H272  
Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

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

Signal word: Danger

Pictograms:

**Hazard statements**

H272 May intensify fire; oxidiser.  
H319 Causes serious eye irritation.

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**Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**2.3. Other hazards**

No data available

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Sum formula: NaNO<sub>3</sub>  
Molecular weight: 84,99 g/mol

**Hazardous components**

| CAS No    | Chemical name                                 | Quantity |                       |       |
|-----------|---|----------|-----------------------|-------|
|           | EC No   | Index No | REACH No              |       |
|           | Classification (Regulation (EC) No 1272/2008) |          |                       |       |
| 7631-99-4 | sodium nitrate                                |          |                       | 100 % |
|           | 231-554-3                                     |          | 01-2119488221-41-XXXX |       |
|           | Ox. Sol. 3, Eye Irrit. 2; H272 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                 |                |          |  |
| 7631-99-4 | 231-554-3  | sodium nitrate | 100 %    |  |
|           | dermal: LD50 = > 5000 mg/kg; oral: LD50 = ca. 3430 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.  
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

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Gastrointestinal complaints  
Vomiting  
Headache  
Cardiac arrhythmias  
Blood pressure drop

#### **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 (NOx)

#### **5.3. Advice for firefighters**

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.  
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.

#### **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.

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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.  
Read label before use.

#### **Advice on protection against fire and explosion**

Keep away from combustible material.  
May intensify fire; oxidiser.

#### **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

#### **PNEC values**

| CAS No   | Substance      | Value   |
|--|----------------|---------|
| Environmental compartment                        |                |         |
| 7631-99-4  | sodium nitrate |         |
| Micro-organisms in sewage treatment plants (STP) |                | 18 mg/l |

### 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**

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#### Eye/face protection

Suitable eye protection: goggles.

#### Hand protection

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto: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](http://www.kcl.de)).

#### 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:   | colourless                       |
| Odour:  | odourless                        |
| Odour threshold:  | No data available                |
| Melting point/freezing point:                             | 308 °C                           |
| Boiling point or initial boiling point and boiling range: | No data available                |
| Flammability:   | not determined<br>not applicable |
| Lower explosion limits:                                   | not determined                   |
| Upper explosion limits:                                   | not determined                   |
| Flash point:  | X                                |
| Auto-ignition temperature:                                | No data available                |
| Decomposition temperature:                                | >380 °C                          |
| pH-Value (at 20 °C):                                      | 5,5-8,0 (50 g/l)                 |
| Viscosity / kinematic:                                    | No data available                |
| Water solubility:<br>(at 20 °C)                           | 874 g/L                          |

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Solubility in other solvents

not determined

Dissolution rate:

No data available

Partition coefficient n-octanol/water:

No data available

Dispersion stability:

No data available

Vapour pressure:

No data available

Vapour pressure:

No data available

Density (at 20 °C):

2,26 g/cm<sup>3</sup>

Relative density:

No data available

Bulk density:

~1200 kg/m<sup>3</sup>

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.

Oxidizing solids, Category 3

##### 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

Possibility of hazardous reactions. oxidising, Oxidising.

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

Metal powder, Acetic anhydride

SULPHUR, Combustible substance

Reducing agent

### 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

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**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**

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

| CAS No    | Chemical name  |                     |         |                     |                    |
|-----------|----------------|---------------------|---------|---------------------|--------------------|
|           | Exposure route | Dose                | Species | Source              | Method             |
| 7631-99-4 | sodium nitrate |                     |         |                     |                    |
|           | oral           | LD50 ca. 3430 mg/kg | Rat     | Study report (1980) | OECD Guideline 401 |
|           | dermal         | LD50 > 5000 mg/kg   | Rat     | Study report (2000) | OECD Guideline 402 |

**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**

**Other information**

No data available

**Further information**

Methaemoglobinaemia  
Irritant  
Gastrointestinal complaints  
Vomiting

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Headache  
Cardiac arrhythmias  
Blood pressure drop

**SECTION 12: Ecological information**

**12.1. Toxicity**

| CAS No    | Chemical name            |                 |           |  |  |  |
|-----------|--------------------------|-----------------|-----------|--|--|--|
|           | Aquatic toxicity         | Dose            | [h]   [d] | Species  | Source                                   | Method                                   |
| 7631-99-4 | sodium nitrate           |                 |           |  |  |  |
|           | Acute fish toxicity      | LC50 > 100 mg/l | 96 h      | Oncorhynchus mykiss                                | Study report (2000)                      | OECD Guideline 203                       |
|           | Acute crustacea toxicity | EC50 3581 mg/l  | 48 h      | Daphnia magna                                      | J. Water Pollut. Control Fed. 37(9):1308 | no data                                  |
|           | Fish toxicity            | NOEC 268 mg/l   | 30 d      | juvenile Topeka shiner and with juvenile Fathead m | Study report (2009)                      | Growth tests estimated the test chemical |

**12.2. Persistence and degradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

**12.3. Bioaccumulative potential**

No data available

**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.

No data available

**12.6. Endocrine disrupting properties**

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

No data available

**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.  
Do not empty into drains.

**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)**



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**14.1. UN number or ID number:** UN 1498  
**14.2. UN proper shipping name:** SODIUM 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  
Transport category: 3  
Hazard No: 50  
Tunnel restriction code: E

**Inland waterways transport (ADN)**

**14.1. UN number or ID number:** UN 1498  
**14.2. UN proper shipping name:** SODIUM 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 1498  
**14.2. UN proper shipping name:** SODIUM NITRATE  
**14.3. Transport hazard class(es):** 5.1  
**14.4. Packing group:** III  
Hazard label: 5.1  
Special Provisions: 964, 967  
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 1498  
**14.2. UN proper shipping name:** SODIUM 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**

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

##### **EU regulatory information**

Information according to 2012/18/EU (SEVESO III): P8 OXIDISING LIQUIDS AND SOLIDS

Marketing and use of explosives precursors (Regulation (EU) 2019/1148):

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

##### **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

#### **SECTION 16: Other information**

##### **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

Eye Irrit: Eye irritation

##### **Relevant H and EUH statements (number and full text)**

H272 May intensify fire; oxidiser.

H319 Causes serious eye irritation.