






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

- **Date of compilation:** 01.04.2006
- **1.1 Product identifier**
- **Trade name:** Sodium nitrate
- **CAS Number:**  
7631-99-4
- **EC number:**  
231-554-3
- **Registration number:** 01-2119488221-41-XXXX
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation:**  
Chemicals for various applications  
Fertilizer  
Oxidizing agent  
Glaze dye for ceramic inking  
Preservative
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer / Supplier:**  
BERGCHÉMIE J.C. Bröcking & Co. GmbH  
Rudolfstrasse 14  
D-42285 Wuppertal  
Germany  
Phone: ++49 202 / 45 60 60  
Fax: ++49 202 / 44 79 32
- **E-mail address of the competent person responsible for the Safety Data Sheet:** [sdb@csb-online.de](mailto:sdb@csb-online.de)
- **Informing department:** Environment & Safety Department
- **1.4 Emergency telephone number:**  
For Germany: Giftinformationszentrum Universitätsklinik Mainz  
Phone: +49 6131 / 19 24 0

## SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
- 
 GHS03 flame over circle  
 Ox. Sol. 2 H272 May intensify fire; oxidiser.
- 
 GHS07  
 Acute Tox. 4 H302 Harmful if swallowed.  
 Skin Irrit. 2 H315 Causes skin irritation.  
 Eye Irrit. 2 H319 Causes serious eye irritation.  
 STOT SE 3 H335 May cause respiratory irritation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
- 
 Xn; Harmful  
 R22: Harmful if swallowed.
- 
 Xi; Irritant  
 R36/37/38: Irritating to eyes, respiratory system and skin.
- 
 O; Oxidising

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R8: Contact with combustible material may cause fire.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS03 GHS07

· **Signal word Danger**

· **Hazard-determining components of labelling:**

Sodium nitrate

· **Hazard statements**

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

· **Precautionary statements**

P221 Take any precaution to avoid mixing with combustibles.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P260 Do not breathe dust.

P220 Keep/Store away from clothing/combustible materials.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

· **3.1 Chemical characterization: Substances**

· **CAS No. Designation:**

7631-99-4 Sodium nitrate

· **Identification number(s):**

· **EC number:** 231-554-3

### SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Immediately remove any clothing contaminated by the product.

Take affected persons into the open air.

Do not leave affected persons unsupervised.

Personal protection for the person providing first aid.

Symptoms of poisoning may occur after several hours. Medical observation for at least 48 hours after the accident is recommended.

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- **After inhalation:**  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
In case of unconsciousness bring patient into stable side position for transport.
- **After skin contact:**  
Rinse with plenty of water.  
If skin irritation continues, consult a doctor.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. Then consult doctor.  
Use eye protection.  
Remove contact lenses, if present and easy to do.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Call a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** symptomatic treatment

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**  
Carbon dioxide (CO<sub>2</sub>), extinguishing powder or water spray/fog. Fight larger fires with water spray/fog or alcohol-resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**  
Formation of poisonous gases during heating or in fires.  
Nitrogen oxides (NO<sub>x</sub>)  
Oxidising by development of oxygen
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained breathing apparatus.  
Do not inhale explosion gases or combustion gases.
- **Additional information**  
Collect contaminated fire fighting water separately. It must not enter drains.  
If without risk possible, move drums with material away from dangerous area.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation.  
Avoid contact with skin and eyes.  
Avoid causing dust.  
Do not breathe dust.  
Use breathing protection against the effects of fumes/dust/aerosol.
- **6.2 Environmental precautions:**  
Do not allow to enter drainage system, surface or ground water.  
Damp down dust with water spray jet.  
Inform respective authorities in case product reaches water or sewage system.
- **6.3 Methods and material for containment and cleaning up:**  
Ensure adequate ventilation.  
Collect mechanically.  
Send for recovery or disposal in suitable containers.  
Dispose of the material collected according to regulations.

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- **6.4 Reference to other sections**  
See Section 8 for information on personal protection equipment.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

- Ensure good ventilation/exhaustion at the workplace.
- Avoid contact with skin and eyes.
- Prevent formation of dust.
- Any deposit of dust which cannot be avoided must be removed regularly.
- Do not breathe dust.
- Make sure that all applicable workplace limits are observed.

**ATTENTION:**

Contaminated organic solids (like textiles/paper) may ignite without an external source of ignition (self ignition). Wash contaminated material at once with plenty of water.

- **Information about protection against explosions and fires:**

- Substance/product can reduce the ignition temperature of flammable substances.
- Potentially explosive when mixed with organic substances.
- Keep ignition sources away - Do not smoke.
- Protect from heat.
- Keep breathing equipment ready.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage**

- **Requirements to be met by storerooms and containers:**

- Observe all local and national regulations for storage of water polluting products.

- **Information about storage in one common storage facility:** Store away from flammable substances.

- **Further information about storage conditions:**

- Store container in a well ventilated position.
- Store in cool, dry conditions in well sealed containers.

- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **8.1 Control parameters**

- **Components with critical values that require monitoring at the workplace:**

- Observe all workplace limits for dust.
- **DNELs** no data available
- **PNECs** no data available
- **Additional information:** The lists that were valid during the compilation were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment**

- **General protective and hygienic measures**

- Keep away from foodstuffs, beverages and food.
- Instantly remove any contaminated garments.
- Do not carry cleaning cloths impregnated with the product in trouser pockets.
- Do not eat, drink or smoke while working.
- Avoid contact with the eyes and skin.
- Do not breathe dust.
- Use skin protection cream for preventive skin protection.
- Wash hands during breaks and at the end of the work.

- **Breathing equipment:**

- Dust proof mask - particle filter mask

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If all workplace limits are observed and good ventilation is ensured, no special precautions necessary.

· **Recommended filter device for short term use:** Partikelfilter EN 143 Type P2

· **Protection of hands:**

Protective gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

Check the permeability prior to each renewed use of the glove.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Sensibilization by the components in the glove materials is possible.

· **Material of gloves**

Nitrile rubber - NBR

Recommended thickness of the material:  $\geq 0.35$  mm

Fluorocarbon rubber (Viton) - FKM

Recommended thickness of the material:  $\geq 0.4$  mm

Butyl rubber - BR

Recommended thickness of the material:  $\geq 0.5$  mm

Polychloroprene

Recommended thickness of the material:  $\geq 0.5$  mm

Poly vinyl chloride - PVC

Recommended thickness of the material:  $\geq 0.5$  mm

Natural rubber - NR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

Penetration time:  $\geq 8$  hours

Protective gloves should be replaced at first signs of wear.

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Tightly sealed safety glasses

· **Body protection:**

Protective work clothing

Body protection must be chosen depending on activity and possible exposure.

## SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** crystalline

**Colour:** colourless

· **Smell:** odourless

· **Odour threshold:** not determined

· **pH-value (50 g/l) at 20 °C:** 5-8

· **Change in condition**

**Melting point/Melting range:** 306 - 312 °C

**Boiling point/Boiling range:** not determined

**Setting temperature / range:** not determined

· **Flash point:** not applicable

· **Inflammability (solid, gaseous)** Contact with combustible material may cause fire.

· **Ignition temperature:** not determined

· **Decomposition temperature:**  $> 380$  °C

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· <b>Self-inflammability:</b>	<i>Product is not selfigniting.</i>
· <b>Danger of explosion:</b>	<i>Explosive when mixed with combustible material.</i>
· <b>Critical values for explosion:</b>	
Lower:	<i>not determined</i>
Upper:	<i>not determined</i>
· <b>Oxidizing properties</b>	<i>oxidising</i>
· <b>Vapor pressure:</b>	<i>not determined</i>
· <b>Density at 20 °C:</b>	<i>2.26 g/cm<sup>3</sup></i>
· <b>Bulk density:</b>	<i>~1300 kg/m<sup>3</sup></i>
· <b>Relative density</b>	<i>not determined</i>
· <b>Vapour density (AIR = 1):</b>	<i>not determined</i>
· <b>Evaporation rate</b>	<i>not determined</i>
· <b>Solubility in / Miscibility with Water at 20 °C:</b>	<i>~880 g/l</i>
· <b>Partition coefficient (n-octanol/water):</b>	<i>-3.8 log POW</i>
· <b>Viscosity:</b>	
dynamic:	<i>not applicable</i>
kinematic:	<i>not applicable</i>
· <b>9.2 Other information</b>	<i>Further informations please refer to technical data sheet.</i>

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** see 10.3
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
*To avoid thermal decomposition do not overheat.*  
*Temperature over 380 °C*
- **10.3 Possibility of hazardous reactions**  
*Reacts with flammable substances*  
*Reacts with reducing agents*  
*Acts as an oxidizing agent on organic materials such as wood, paper and fats.*  
*Reacts with fabric soaked in the product (e.g. cleaning wool)*
- **10.4 Conditions to avoid** *No further relevant information available.*
- **10.5 Incompatible materials:**  
*Reducing agents*  
*Flammable materials*
- **10.6 Hazardous decomposition products:**  
*Nitrous vitriol gases*  
*Nitrogen oxides (NOx)*

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
  - **Acute toxicity:**
- |   |      |                  |
|---|------|------------------|
| · <b>LD/LC50 values that are relevant for classification:</b> |      |                  |
| <b>7631-99-4 Sodium nitrate</b>                               |      |                  |
| Oral  | LD50 | 1267 mg/kg (rat) |
- **Primary irritant effect:**
  - **on the skin:**  
*Mild irritant*

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- Irritant for skin and mucous membranes.*
- **on the eye:** Irritant effect
- **inhalation:** Irritating to respiratory system.
- **Sensitization:** No sensitizing effect known.
- **Repeated dose toxicity** no data / no sufficient data available
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
According to present knowledge no CMR-effects known.
- **carcinogenicity** not classified
- **mutagenicity** not classified
- **toxicity for reproduction** not classified

## SECTION 12: Ecological information

### · 12.1 Toxicity

#### · Aquatic toxicity:

**7631-99-4 Sodium nitrate**

EC50/24 h > 1000 mg/l (water flea (*daphnia magna*))

LC50/96 h > 1000 mg/l (rainbow trout (*oncorhynchus mykiss*))

- **12.2 Persistence and degradability** No further relevant information available.
- **Other information:**  
Methods for the determination of biodegradability are not applicable to inorganic substances.
- **12.3 Bioaccumulative potential**  
log P(o/w): -3.8  
An accumulation in organisms is not expected (log P(o/w) < 1).
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **Chemical Oxygen Demand (COD-value):** not determined
- **Biochemical Oxygen Demand (BOD5-value):** not determined
- **AOX-indication:** The product does not contain organically bounded halogens (AOX-free).
- **General notes:** Water hazard class 1 (Assessment by list): slightly hazardous for water
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Disposal must be made according to official regulations.
- **Waste disposal key number:** According to local/national regulations.
- **European waste catalogue:**  
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agent:** Water

## SECTION 14: Transport information

### · 14.1 UN-Number

· ADR, IMDG, IATA

UN1498

### · 14.2 UN proper shipping name

· ADR

UN 1498 SODIUM NITRATE

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Trade name: Sodium nitrate

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· **IMDG, IATA****SODIUM NITRATE**· **14.3 Transport hazard class(es)**· **ADR**· **Class**

5.1 (O2) Oxidising substances.

· **Label**

5.1

· **IMDG, IATA**· **Class**

5.1 Oxidising substances.

· **Label**

5.1

· **14.4 Packing group**· **ADR, IMDG, IATA**

III

· **14.6 Special precautions for user**

Warning: Oxidising substances.

· **Kemler Number:**

50

· **EMS Number:**

F-A,S-Q

· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

Transport by post may be prohibited or restricted.

· **ADR**· **Excepted quantities (EQ):**

E1

· **Limited quantities (LQ):**

5 kg

· **Transport category:**

3

· **Tunnel restriction code:**

E

· **UN "Model Regulation":**

UN1498, SODIUM NITRATE, 5.1, III

### SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**· **National regulations**· **Information about limitation of use:** Employment restrictions concerning young persons must be observed.· **Decree to be applied in case of technical fault:**

Quantity limits according to "EC Seveso directive" should be observed.

· **Water hazard class:**

Water hazard class 1 (Assessment by list): slightly hazardous for water

ID-Number: 378

· **Other regulations, limitations and prohibitive regulations**

Observe restrictions on the marketing and use according to Annex XVII of Regulation (EC) No 1907/2006.

· **Substances of very high concern (SVHC) according to REACH, Article 57**

The substance is not a SVHC and is not included in the Candidate List.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

GB

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**Trade name: Sodium nitrate**

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

*These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Reasons for changes:**

*The Material Safety Data Sheet has been revised. Changes in the respective chapters are characterized in the left side edge by \*.*

*Changes in classification and labelling*

· **Department issuing MSDS:**

*C.S.B. GmbH                      Phone: +49 - 2151 - 652086-0  
Düsseldorfer Str. 113        Fax: +49 - 2151 - 652086-9  
47809 Krefeld / Germany*

· **Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)*

*ICAO: International Civil Aviation Organization*

*ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)*

*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*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*DNEL: Derived No-Effect Level (REACH)*

*PNEC: Predicted No-Effect Concentration (REACH)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

· **Sources:** *These data are based on information submitted by pre-suppliers.*

· **\* Data compared to the previous version altered.**