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Safety data sheet according to 1907/2006/EC, Article 31

revised on: 17.02.2023 Version number 8 (replaces version 7) Creation Date: 01.10.2015

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

· 1.1 Product identifier

· Trade name: Sodium nitrate

· Article number: 1309

• 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

· Sector of Use

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU9 Manufacture of fine chemicals

SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

SU24 Scientific research and development

Product category

PC19 Intermediate

PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents

PC21 Laboratory chemicals

PC29 Pharmaceuticals

PC39 Cosmetics, personal care products

PC40 Extraction agents

Process category

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC4 Chemical production where opportunity for exposure arises

PROC5 Mixing or blending in batch processes

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC15 Use as laboratory reagent

Environmental release category

ERC1 Manufacture of the substance

ERC2 Formulation into mixture

ERC3 Formulation into solid matrix

ERC6a Use of intermediate

· Application of the substance / the mixture

Laboratory chemicals Reagent for analysis

Industrial use

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

Th. Geyer GmbH & Co. KG Dornierstr. 4 – 6

D-71272 Renningen

Tel.: +49(0)7159-1637-0, Fax:+49 (0)7159/18417

www.thgeyer.de

sicherheitsdatenblaetter@thgeyer.de

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· Further information obtainable from: Product management department

· 1.4 Emergency telephone number:

National Poisons Information Service

City Hospital **Dudley Road**

Birmingham B18 7QH

Tel.:Emergency: (00 44) 87 06 00 62 66

Members of the public seeking specific information on poisons should contact:

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

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.



Eye Irrit. 2 H319 Causes serious eye irritation.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

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

· Hazard pictograms





GHS03 GHS07

- · Signal word Danger
- · Hazard statements

H272 May intensify fire; oxidiser.

H319 Causes serious eye irritation.

· Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

P220 Keep away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. P221

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

- · Additional information: For professional users only.
- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- vPvB: Not applicable.

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SECTION 3: Composition/information on ingredients

· 3.1 Substances

· CAS No. Description

CAS: 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:

First aider needs to protect himself.

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air.

If symptoms occur or in case of doubt, seek medical advice.

After skin contact:

Wash off with plenty of water.

Immediately remove any clothing soiled by the product.

Consult a doctor if symptoms persist.

· After eye contact:

Protect unharmed eye.

Rinse opened eye for several minutes under running water. Then consult a doctor.

Remove contact lenses

Continue rinsing.

Seek medical treatment.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Seek medical treatment.

· Information for doctor: Please observe safety data sheet/label.

4.2 Most important symptoms and effects, both acute and delayed

Gastric or intestinal disorders

Cramp

Vertigo

Disorientation

Methaemoglobinaemia

Profuse sweating

· Hazards

Danger of pneumonia.

Danger of pulmonary oedema.

Danger of circulatory collapse.

· 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: Use fire extinguishing methods suitable to surrounding conditions.
- · For safety reasons unsuitable extinguishing agents: Water with full jet.
- · 5.2 Special hazards arising from the substance or mixture

The product is oxidising.

In case of fire, the following can be released:

Carbon dioxides (CO, CO□)

Nitrogen oxides (NOx)

Sodium oxide

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Under certain fire conditions, traces of other toxic gases cannot be excluded.

Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters

· Protective equipment:

Wear fully protective suit.

Mouth respiratory protective device.

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

· Additional information

Cool endangered receptacles with water spray.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Evacuate the danger area.

Ensure adequate ventilation.

Avoid formation of dust.

Avoid contact with eyes and skin.

Do not inhale dust.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Mount respiratory protective device.

• 6.2 Environmental precautions: Do not allow to enter sewers/surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Cover drains.

Pick up mechanically.

Dispose contaminated material as waste according to item 13.

Dispose of the material collected according to regulations.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Store in cool, dry place in tightly closed receptacles.

Keep away from heat and direct sunlight.

Apply the general protection and hygiene measures for the handling with chemicals.

Prevent formation of dust.

- · Information about fire and explosion protection: Keep respiratory protective device available.
- · 7.2 Conditions for safe storage, including any incompatibilities
- Storage:
- · Requirements to be met by storerooms and receptacles:

Prevent any seepage into the ground.

Store only in the original receptacle.

· Information about storage in one common storage facility:

Store away from flammable substances.

Store away from reducing agents.

Further information about storage conditions:

Protect from humidity and water.

Keep container tightly sealed.

Storage class: 5.1B

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

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SECTION 8: Exposure controls/personal protection

- · 8.1 Control parameters
- Ingredients with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Appropriate engineering controls No further data; see item 7.
- · Individual protection measures, such as personal protective equipment
- General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device. If air-purifying respiratory protection is required according to the risk assessment, wear a respirator with full-face mask with combination filter (US) or with filter type ABEK (EN 14387) filter cartridge. If the respirator is the only protective measure, an ambient air self-contained breathing apparatus with afull face mask must be worn. Respirators and components must be approved to appropriate government standards (for example, NIOSH (US) or CEN (EU)). Translated with www.DeepL.com/Translator (free version)

· Hand protection



Protective gloves

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 Labsolute®protective

Material of gloves

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.

NBR: acrylonitrile-butadiene rubber

Material thickness > 0.11 mm

· Penetration time of glove material

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

level 6 for application > 480 min

Eye/face protection



Tightly sealed goggles

· Body protection:



Protective work clothing (e. g. safety shoes EN ISO 20345, long-sleeved protective working garments).

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state Solid · Colour: Colourless · Odour: Odourless Melting point/freezing point: 312 °C

· Boiling point or initial boiling point and boiling

range >600 °C

· Flammability Contact with combustible material may cause fire.

Lower and upper explosion limit

Not determined. · Lower: · Upper: Not determined. · Flash point: Not applicable.

· Decomposition temperature: Not determined.

5.5

· Viscosity:

· Kinematic viscosity Not applicable. · Dynamic: Not applicable.

· Solubility

· water: 874 g/l

· Partition coefficient n-octanol/water (log value) Not determined. · Vapour pressure: Not applicable.

· Density and/or relative density

Density at 20 °C: 2.26 g/cm³

Not determined. · Relative density Not determined. · Vapour density Not applicable. · Particle characteristics See item 3.

· 9.2 Other information

· Appearance:

· Form: Crystalline

· Important information on protection of health and environment, and on safety.

· Auto-ignition temperature: Not determined.

· Explosive properties: Product does not present an explosion hazard.

Void

· Molecular weight 84.99 g/mol

· Change in condition

· Evaporation rate Not applicable.

· Information with regard to physical hazard classes

· Explosives Void · Flammable gases Void · Aerosols Void · Oxidising gases Void · Gases under pressure Void · Flammable liquids Void · Flammable solids Void

· Self-reactive substances and mixtures Void · Pyrophoric liquids Void · Pyrophoric solids Void

· Self-heating substances and mixtures Substances and mixtures, which emit flammable

gases in contact with water Void · Oxidising liquids Void

 Oxidising solids May intensify fire; oxidiser.

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Organic peroxides
 Corrosive to metals
 Desensitised explosives

Void

SECTION 10: Stability and reactivity

- · 10.1 Reactivity No further relevant information available.
- · 10.2 Chemical stability Stable with proper storage and handling.
- · Thermal decomposition / conditions to be avoided: To avoid thermal decomposition do not overheat.
- · 10.3 Possibility of hazardous reactions

Violent reactions with strong alkalis and oxidising agents.

Can react violently with oxygen rich (oxidising) material. Danger of Explosion.

Reacts with oxygen.

Reacts with acids, alkalis and oxidising agents.

· 10.4 Conditions to avoid

Heat, flames and sparks

Protect from humidity.

- · 10.5 Incompatible materials: Avoid contact with other chemicals.
- · 10.6 Hazardous decomposition products: On fire: see chapter 5

SECTION 11: Toxicological information

- · 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- · Acute toxicity Based on available data, the classification criteria are not met.
- · LD/LC50 values relevant for classification:

Oral LD50 3,236 mg/kg (rat)

- · Skin corrosion/irritation Based on available data, the classification criteria are not met.
- · Serious eye damage/irritation Causes serious eye irritation.
- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- · Reproductive toxicity 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.
- Angiestion beautiful Dased on available data, the classification criteria are to
- Aspiration hazard Based on available data, the classification criteria are not met.
- · 11.2 Information on other hazards
- · Endocrine disrupting properties Substance is not listed.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- · 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

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- · 12.7 Other adverse effects
- · Additional ecological information:
- · General notes:

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

Observe local (country-specific) regulations and laws

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

- Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Chemicals must be disposed of in compliance with the respective national regulations.

· European waste catalogue		
06 00 00	WASTES FROM INORGANIC CHEMICAL PROCESSES	
06 03 00	wastes from the MFSU of salts and their solutions and metallic oxides	
06 03 99	wastes not otherwise specified	
HP2	Oxidising	
HP4	Irritant - skin irritation and eye damage	

- · Uncleaned packaging:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agents: Water, if necessary together with cleansing agents.

14.1 UN number or ID number		
ADR, IMDG	UN1498	
14.2 UN proper shipping name		
ADR	1498 SODIUM NITRATE	
IMDG	SODIUM NITRATE	
14.3 Transport hazard class(es)		
ADR		
Class	5.1 (O2) Oxidising substances.	
Label	5.1 (O2) Oxidising substances. 5.1	
IMDG, IATA	0.1	
8		
Class	5.1 Oxidising substances.	
Class		

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· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number:	Warning: Oxidising substances. 50 F-A,S-Q
· Stowage Category · Stowage Code	A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· 14.7 Maritime transport in bulk according to IM instruments	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category	5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g 3
Tunnel restriction code	Ē
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· UN "Model Regulation":	UN 1498 SODIUM NITRATE, 5.1, III

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Inventory of Hazardous Chemicals

CAS: 7631-99-4 | Sodium nitrate

- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I Substance is not listed.
- · Seveso category P8 OXIDISING LIQUIDS AND SOLIDS
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment Annex II

Substance is not listed.

- · REGULATION (EU) 2019/1148
- · Annex I RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

Substance is not listed.

- · Annex II REPORTABLE EXPLOSIVES PRECURSORS Substance is listed.
- · Regulation (EC) No 273/2004 on drug precursors Substance is not listed.
- Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

Substance is not listed.

- · National regulations:
- · Information about limitation of use:

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

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· 15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Application, use and handling of our products take place out of our control and are solely your responsibility.

- · Department issuing SDS: Product management
- Contact: Product management
- · Version number of previous version: 7
- Abbreviations and acronyms:

ADR: Accord relatif au transport international 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 Harmonised 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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Sol. 2: Oxidizing solids - Category 2

Eye Irrit. 2: Serious eye damage/eye irritation - Category 2

* Data compared to the previous version altered.

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Annex: Exposure scenario

- · Short title of the exposure scenario Chemicals for Laboratory and industrial use
- · Sector of Use
- SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
- SU9 Manufacture of fine chemicals
- SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
- SU24 Scientific research and development

· Product category

- PC19 Intermediate
- PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
- PC21 Laboratory chemicals
- PC29 Pharmaceuticals
- PC39 Cosmetics, personal care products
- PC40 Extraction agents

· Process category

- PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
- PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
- PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
- PROC4 Chemical production where opportunity for exposure arises
- PROC5 Mixing or blending in batch processes
- PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
- PROC15 Use as laboratory reagent

· Environmental release category

- ERC1 Manufacture of the substance
- ERC2 Formulation into mixture
- ERC3 Formulation into solid matrix
- ERC6a Use of intermediate

· Description of the activities / processes covered in the Exposure Scenario

See section 1 of the annex to the Safety Data Sheet.

- · Conditions of use
- · Duration and frequency 5 workdays/week.
- · Physical parameters
- Physical state Solid
- · Concentration of the substance in the mixture Raw material.
- · Other operational conditions Observe the general safety regulations when handling chemicals.
- · Other operational conditions affecting environmental exposure

Observe section 6 of the Safety Data Sheet (Accidental release measures).

· Other operational conditions affecting worker exposure

Avoid long-term or repeated skin contact.

Avoid contact with eyes.

Keep away from combustible material.

- Other operational conditions affecting consumer exposure No special measures required.
- Other operational conditions affecting consumer exposure during the use of the product Not applicable.
- · Risk management measures
- · Worker protection
- Organisational protective measures

Provide Internal Plant Instruction.

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

· Technical protective measures

Keep away from heat and direct sunlight.

Open and handle receptacle with care.

Ensure that suitable extractors are available on processing machines

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· Personal protective measures

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Do not inhale dust / smoke / mist.

Avoid contact with the eyes.

- Tightly sealed goggles
- · Measures for consumer protection Ensure adequate labelling.
- · Environmental protection measures
- · Water Do not allow to reach ground water, water bodies or sewage system, not even in small quantities.
- · Soil Prevent contamination of soil.
- · Disposal measures Ensure that waste is collected and contained.
- Disposal procedures

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- · Waste type Partially emptied and uncleaned packaging
- · Exposure estimation
- · Consumer Not relevant for this Exposure Scenario.
- Guidance for downstream users No further relevant information available.

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