

# Safety data sheet

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Date / Revised: 21.03.2023

Version: 2.0

Date previous version: 16.12.2022

Previous version: 1.0

Date / First version: 16.12.2022

Product: **Sodium Nitrate food grade E251**

(ID no. 30216103/SDS\_GEN\_DE/EN)

Date of print 23.03.2023

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

### 1.1. Product identifier

## Sodium Nitrate food grade E251

Chemical name: sodium nitrate

CAS Number: 7631-99-4

REACH registration number: 01-2119488221-41-0016, 01-2119488221-41-0017, 01-2119488221-41-0002, 01-2119488221-41-0018

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: food additive(s)

Recommended use: Raw material, process chemical, inorganic salts, Heat transfer agents, Agricultural industry, food additive(s), formulation agent

For the detailed identified uses of the product see appendix of the safety data sheet.

### 1.3. Details of the supplier of the safety data sheet

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Division Monomers

E-mail address: [pss.monomers@basf.com](mailto:pss.monomers@basf.com)

### 1.4. Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

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## SECTION 2: Hazards Identification

### 2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

Ox. Sol. 2

H272 May intensify fire; oxidizer.

Eye Dam./Irrit. 2

H319 Causes serious eye irritation.

For the classifications not written out in full in this section the full text can be found in section 16.

### 2.2. Label elements

According to Regulation (EC) No 1272/2008 [CLP]

Pictogram:



Signal Word:

Danger

Hazard Statement:

H319

Causes serious eye irritation.

H272

May intensify fire; oxidizer.

Precautionary Statements (Prevention):

P210

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

P280

Wear eye and face protection.

P280 + P283

Wear protective gloves and eye/face protection and fire/flame resistant/retardant clothing.

P221

Take any precaution to avoid mixing with combustibles ...

P220

Keep away from clothing and other combustible materials.

P264

Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338

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

P337 + P311

If eye irritation persists: Call a POISON CENTER or physician.

P370 + P378

In case of fire: Use water spray for extinction.

Precautionary Statements (Storage):

P420

Store separately.

Precautionary Statements (Disposal):

P501

Dispose of contents and container to hazardous or special waste collection point.

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### 2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture. No specific dangers known, if the regulations/notes for storage and handling are considered. The product does not contain a substance above legal limits fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria. Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

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## SECTION 3: Composition/Information on Ingredients

### 3.1. Substances

Chemical nature

NaNO<sub>3</sub>

Sodium nitrate

CAS Number: 7631-99-4  
EC-Number: 231-554-3Ox. Sol. 2  
Eye Dam./Irrit. 2  
H272, H319

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

### 3.2. Mixtures

Not applicable

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## SECTION 4: First-Aid Measures

### 4.1. Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention. After inhalation of decomposition products: Immediately administer a corticosteroid from a controlled/metered dose inhaler.

On skin contact:

Wash thoroughly with soap and water

On contact with eyes:

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Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

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

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

Hazards: Danger of methaemoglobin formation after ingestion.

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

Treatment: Treat according to symptoms (decontamination, vital functions), treat with toluonium chloride to reverse methaemoglobinanaemia. After inhalation of decomposition products: Pulmonary odema prophylaxis.

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### **SECTION 5: Fire-Fighting Measures**

#### **5.1. Extinguishing media**

Suitable extinguishing media:  
water spray

Unsuitable extinguishing media for safety reasons:  
ABC powder, carbon dioxide

#### **5.2. Special hazards arising from the substance or mixture**

Endangering substances: nitrogen oxides

Advice: The substances/groups of substances mentioned can be released if the product is involved in a fire.

#### **5.3. Advice for fire-fighters**

Special protective equipment:  
Wear a self-contained breathing apparatus.

Further information:

Substance/product is an oxidizing agent and can supply oxygen to stimulate or accelerate the combustion of organic or other combustible substances/products.

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## SECTION 6: Accidental Release Measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Use breathing apparatus if exposed to vapours/dust/aerosol.

### 6.2. Environmental precautions

Do not release untreated into natural waters.

### 6.3. Methods and material for containment and cleaning up

For large amounts: Sweep/shovel up. Dispose of absorbed material in accordance with regulations.

### 6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

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## SECTION 7: Handling and Storage

### 7.1. Precautions for safe handling

Keep container tightly sealed. Ensure suitable air extract/ventilation on process machinery and transportation equipment. Protect against moisture. Protect against heat. Keep away from sources of ignition - No smoking.

Protection against fire and explosion:

The substance/product is non-combustible.

### 7.2. Conditions for safe storage, including any incompatibilities

Segregate from oxidizable substances. Segregate from reducing agents. Segregate from ammonium salts.

Suitable materials for containers: Stainless steel 1.4541, Stainless steel 1.4571, High density polyethylene (HDPE), Low density polyethylene (LDPE), Polyester resin, glass reinforced (Palatal A410), glass, enamelled, Carbon steel (Iron), rubberized, Aluminium

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

Storage class according to TRGS 510 (originally VCI, Germany): (5.1B) Oxidising substances

### 7.3. Specific end use(s)

See exposure scenario(s) in the attachment to this safety data sheet.

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## SECTION 8: Exposure Controls/Personal Protection

### 8.1. Control parameters

Components with occupational exposure limits

No substance specific occupational exposure limits known.

#### PNEC

freshwater: 0,45 mg/l

marine water: 0,045 mg/l

intermittent release: 4,5 mg/l

STP: 18 mg/l

#### DNEL

worker:

Long-term exposure- systemic effects, Inhalation: 36,7 mg/m<sup>3</sup>

worker:

Long-term exposure- systemic effects, dermal: 20,8 mg/kg

consumer:

Long-term exposure- systemic effects, dermal: 12,5 mg/kg

consumer:

Long-term exposure- systemic effects, Inhalation: 10,9 mg/m<sup>3</sup>

consumer:

Long-term exposure- systemic effects, oral: 12,5 mg/kg

### 8.2. Exposure controls

#### Personal protective equipment

Respiratory protection:

Breathing protection if dusts are formed. Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1 or FFP1)

Hand protection:

Chemical resistant protective gloves (EN ISO 374-1)

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):

polyvinylchloride (PVC) - 0.7 mm coating thickness

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nitrile rubber (NBR) - 0.4 mm coating thickness  
 chloroprene rubber (CR) - 0.5 mm coating thickness  
 butyl rubber (butyl) - 0.7 mm coating thickness  
 fluoroelastomer (FKM) - 0.7 mm coating thickness

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Tightly fitting safety goggles (splash goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

#### General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust. Keep away from food, drink and animal feeding stuffs. No eating, drinking, smoking or tobacco use at the place of work. Take off immediately all contaminated clothing. Hands and/or face should be washed before breaks and at the end of the shift. Employees should shower at the end of the shift.

## **SECTION 9: Physical and Chemical Properties**

### **9.1. Information on basic physical and chemical properties**

State of matter:	solid	
Form:	crystalline, powder	
Colour:	white	
Odour:	odourless	
Odour threshold:		
	not applicable, odour not perceivable	
Melting point:	307 °C	
	Literature data.	
Boiling point:	(1.013,25 hPa)	
	The substance / product decomposes therefore not determined.	
Flammability:	not highly flammable	(other)
Lower explosion limit:		
	For solids not relevant for classification and labelling.	
Upper explosion limit:		
	For solids not relevant for classification and labelling.	

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Flash point:	Study scientifically not justified.	
Self-ignition temperature:		Test type: Self-ignition at high temperatures.
Thermal decomposition:	Study scientifically not justified. > 600 °C	
pH value:	oxygen, Nitrogen, Disodium oxide 8 - 9 (100 g/l, 20 °C)	(pH Meter)
Viscosity, dynamic:	Study scientifically not justified.	
Solubility in water:		(internal method)
	874 g/l (20 °C)	
Partitioning coefficient n-octanol/water (log Kow):	Study scientifically not justified.	
Vapour pressure:	The value has not be determined because of the high melting point.	
Relative density:	2,26	
Density:	Literature data. 2,26 g/cm <sup>3</sup> (20 °C) Literature data.	

#### Particle characteristics

Particle size distribution:	400 - 500 µm	(D50, measured)
Specific Surface Area:	0,1 m <sup>2</sup> /g	(MSSA, ISO 9227)
	0,1 m <sup>2</sup> /g	(VSSA, derived from BET)

## 9.2. Other information

### Information with regard to physical hazard classes

#### Explosives

Explosion hazard:	not explosive
Impact sensitivity:	not shock-sensitive
	Based on the chemical structure there is no shock-sensitivity.

#### Oxidizing properties

Fire promoting properties:	Oxidizing.	(Directive 92/69/EEC, A.17)
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#### Pyrophoric properties

Self-ignition temperature:		Test type: Spontaneous self-ignition at room-temperature.
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Based on its structural properties the product is not classified as self-igniting.

#### Self-heating substances and mixtures



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Self heating ability: It is not a substance capable of spontaneous heating.

#### Corrosion to metals

No data available.

#### **Other safety characteristics**

Bulk density: approx. 1.300 kg/m<sup>3</sup>

pKA: 14,8  
(25 °C)

Hygroscopy: hygroscopic

Adsorption/water - soil:

Study technically not feasible.

Surface tension:

Based on chemical structure, surface activity is not to be expected.

Molar mass:

84,99 g/mol

Evaporation rate:

The product is a non-volatile solid.

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## **SECTION 10: Stability and Reactivity**

### **10.1. Reactivity**

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: No data available.

### **10.2. Chemical stability**

The product is stable if stored and handled as prescribed/indicated.

Peroxides: The product does not contain peroxides. The product/the substance has not a tendency towards the formation of peroxide.

### **10.3. Possibility of hazardous reactions**

Reacts with reducing agents. Reacts with oxidizing agents.

### **10.4. Conditions to avoid**

See SDS section 7 - Handling and storage. Avoid heating while in contact with easily oxidizable materials.

### **10.5. Incompatible materials**

Substances to avoid:

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reducing agents, oxidizable substances, ammonium compound

## 10.6. Hazardous decomposition products

Hazardous decomposition products:

Disodium oxide

## SECTION 11: Toxicological Information

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

#### Acute toxicity

Assessment of acute toxicity:

There is a risk of damage to the blood (methemoglobinemia) after a single uptake of large quantities.

Experimental/calculated data:

LD50 rat (oral): 3.430 mg/kg (OECD Guideline 401)

(by inhalation): Study does not need to be conducted.

LD50 rat (dermal): > 5.000 mg/kg (OECD Guideline 402)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

#### Irritation

Assessment of irritating effects:

Not irritating to the skin. May cause slight irritation to the eyes.

Experimental/calculated data:

Skin corrosion/irritation

rabbit: non-irritant (OECD Guideline 404)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Serious eye damage/irritation

rabbit: no irreversible damage (OECD Guideline 405)

#### Respiratory/Skin sensitization

Assessment of sensitization:

Skin sensitizing effects were not observed in animal studies.

Experimental/calculated data:

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Mouse Local Lymph Node Assay (LLNA) mouse: Non-sensitizing. (OECD Guideline 429)

#### Germ cell mutagenicity

Assessment of mutagenicity:

The data available on mutagenic action are not consistent.

#### Carcinogenicity

Assessment of carcinogenicity:

In long-term studies in rats in which the substance was given by feed, a carcinogenic effect was not observed. Under certain conditions the substance can form nitrosamines. Nitrosamines are carcinogenic in animal studies.

#### Reproductive toxicity

Assessment of reproduction toxicity:

The results of animal studies gave no indication of a fertility impairing effect. The results were determined in a Screening test (OECD 421/422). The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

#### Developmental toxicity

Assessment of teratogenicity:

No indications of a developmental toxic / teratogenic effect were seen in animal studies. The results were determined in a Screening test (OECD 421/422). The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

#### Specific target organ toxicity (single exposure)

Assessment of STOT single:

There is a risk of damage to the blood (methemoglobinemia) after a single uptake.

Remarks: No data available.

#### Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

The substance may cause damage to the hematological system after repeated ingestion.

#### Aspiration hazard

Study does not need to be conducted.

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### Interactive effects

No data available.

## **11.2. Information on other hazards**

### Endocrine disrupting properties

The substance is not identified to have endocrine disrupting properties according to Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 nor is included in the Candidate List of substances of very high concern according to EU REACH Article 59 for having endocrine disrupting properties.

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## **SECTION 12: Ecological Information**

### **12.1. Toxicity**

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:

LC50 (96 h) 7.950 mg/l, *Oncorhynchus tshawytscha* (static)

Literature data. Nominal concentration.

Aquatic invertebrates:

EC50 (24 h) 8.609 mg/l, *Daphnia magna* (*Daphnia* test acute, static)

Aquatic plants:

EC50 (10 d) > 1.700 mg/l (chlorophyll content), algae (static)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Microorganisms/Effect on activated sludge:

EC10 (3 h) 180 mg/l, activated sludge, domestic (OECD Guideline 209, aquatic)

Chronic toxicity to fish:

Study scientifically not justified.

Chronic toxicity to aquatic invertebrates:

Study scientifically not justified.

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Assessment of terrestrial toxicity:

No data available.

## 12.2. Persistence and degradability

Assessment biodegradation and elimination (H<sub>2</sub>O):

Not applicable for inorganic substances. Can be oxidized to nitrate, or be reduced to nitrogen, by microorganisms.

Elimination information:

not applicable

Assessment of stability in water:

According to structural properties, hydrolysis is not expected/probable.  
Study scientifically not justified.

## 12.3. Bioaccumulative potential

Assessment bioaccumulation potential:

Accumulation in organisms is not to be expected.

Bioaccumulation potential:

Study scientifically not justified.

## 12.4. Mobility in soil

Assessment transport between environmental compartments:

Volatility: The substance will not evaporate into the atmosphere from the water surface.

Adsorption in soil: Adsorption to solid soil phase is not expected.

## 12.5. Results of PBT and vPvB assessment

The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

## 12.6. Endocrine disrupting properties

The substance is not identified to have endocrine disrupting properties according to Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 nor is included in the Candidate List of substances of very high concern according to EU REACH Article 59 for having endocrine disrupting properties.

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## 12.7. Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

## 12.8. Additional information

Other ecotoxicological advice:

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

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## SECTION 13: Disposal Considerations

### 13.1. Waste treatment methods

Contact manufacturer regarding recycling.

Check for possible recycling.

Contact waste centre regarding recycling.

Test for use in agriculture.

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## SECTION 14: Transport Information

### Land transport

ADR

UN number or ID number: UN1498

UN proper shipping name: SODIUM NITRATE

Transport hazard class(es): 5.1

Packing group: III

Environmental hazards: no

Special precautions for user: Tunnel code: E

RID

UN number or ID number: UN1498

UN proper shipping name: SODIUM NITRATE

Transport hazard class(es): 5.1

Packing group: III

Environmental hazards: no

Special precautions for user: None known

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### **Inland waterway transport**

ADN

UN number or ID number: UN1498  
UN proper shipping name: SODIUM NITRATE

Transport hazard class(es): 5.1  
Packing group: III  
Environmental hazards: no  
Special precautions for user: None known

### **Transport in inland waterway vessel**

Not evaluated

### **Sea transport**

IMDG

UN number or ID number: UN 1498  
UN proper shipping name: SODIUM NITRATE

Transport hazard class(es): 5.1  
Packing group: III  
Environmental hazards: no  
Marine pollutant: NO  
Special precautions for user: EmS: F-A; S-Q

### **Air transport**

IATA/ICAO

UN number or ID number: UN 1498  
UN proper shipping name: SODIUM NITRATE

Transport hazard class(es): 5.1  
Packing group: III  
Environmental hazards: No Mark as dangerous for the environment is needed  
Special precautions for user: None known

## **14.1. UN number or ID number**

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See corresponding entries for "UN number or ID number" for the respective regulations in the tables above.

#### **14.2. UN proper shipping name**

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

#### **14.3. Transport hazard class(es)**

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

#### **14.4. Packing group**

See corresponding entries for "Packing group" for the respective regulations in the tables above.

#### **14.5. Environmental hazards**

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

#### **14.6. Special precautions for user**

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

#### **14.7. Maritime transport in bulk according to IMO instruments**

Maritime transport in bulk is not intended.

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## **SECTION 15: Regulatory Information**

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

Classification according to 'TA-Luft' (Germany):

5.2.1: total dust, including fine dust

Water hazard class (§6 AwSV para.4 (Legal binding announcement of the substance in the Federal Gazette)): (1) Weakly water polluting. ID-No.: 378

The product contains a substance (Annex I / Annex II) regulated under Regulation (EU) 2019/1148 - "marketing and use of explosives precursors". This may result in obligations for your company according to the statutory requirements of the aforementioned regulation and the respective national implementing regulations.

### **15.2. Chemical Safety Assessment**

Chemical Safety Assessment performed

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## SECTION 16: Other Information

Assessment of the hazard classes according to UN GHS criteria (most recent version)

Ox. Sol. 2  
Eye Dam./Irrit. 2B  
Acute Tox. 5 (oral)

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

Ox. Sol.	Oxidising solids
Eye Dam./Irrit.	Serious eye damage/eye irritation
H319	Causes serious eye irritation.
H272	May intensify fire; oxidizer.

### Abbreviations

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road.  
ADN = The European Agreement concerning the International Carriage of Dangerous Goods by Inland waterways. ATE = Acute Toxicity Estimates. CAO = Cargo Aircraft Only. CAS = Chemical Abstract Service. CLP = Classification, Labelling and Packaging of substances and mixtures. DIN = German national organization for standardization. DNEL = Derived No Effect Level. EC50 = Effective concentration median for 50% of the population. EC = European Community. EN = European Standards. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IBC-Code = Intermediate Bulk Container code. IMDG = International Maritime Dangerous Goods Code. ISO = International Organization for Standardization. STEL = Short-Term Exposure Limit. LC50 = Lethal concentration median for 50% of the population. LD50 = Lethal dose median for 50% of the population. TLV = Threshold Limit Value. MARPOL = The International Convention for the Prevention of Pollution from Ships. NEN = Dutch Norm. NOEC = No Observed Effect Concentration. OEL = Occupational Exposure Limit. OECD = Organization for Economic Cooperation and Development. PBT = Persistent, Bioaccumulative and Toxic. PNEC = Predicted No Effect Level. PPM = Parts per million. RID = The European Agreement concerning the International Carriage of Dangerous Goods by Rail. TWA = Time Weight Average. UN-number = UN number at transport. vPvB = very Persistent and very Bioaccumulative.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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Vertical lines in the left hand margin indicate an amendment from the previous version.

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## Annex: Exposure Scenarios

### Index

#### 1. Industrial applications, Manufacture of substance

IS; SU8; ERC1; PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC15

#### 2. Industrial applications, Distribution of substance, (use in industrial settings)

IS; IS, SU10; ERC2, ERC4, ERC5, ERC6a, ERC6b, ERC7; PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC12, PROC13, PROC14, PROC15, PROC19, PROC20, PROC22, PROC23, PROC24, PROC26; PC1, PC4, PC11, PC12, PC14, PC16, PC17, PC19, PC20, PC35, PC37, PC0, PC10

#### 3. Professional applications

PW; PW; ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC8f, ERC9a, ERC9b; PROC2, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC19, PROC20, PROC26; PC1, PC4, PC11, PC12, PC14, PC16, PC17, PC20, PC37, PC0, PC10

#### 4. Consumer applications

C; C; ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC8f, ERC9a, ERC9b, ERC10a, ERC11a; PC1, PC4, PC12, PC16, PC17, PC35, PC39, PC0, PC10

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### 1. Short title of exposure scenario

Industrial applications, Manufacture of substance

IS; SU8; ERC1; PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC15

### Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	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 PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). PROC15: Use a laboratory reagent.

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	Use domain: industrial
<b>Operational conditions</b>	
Concentration of the substance	Sodium nitrate Content: >= 0 % - <= 100 %
Physical state	Solid
Duration and Frequency of activity	Exposure duration: 480 min 5 days per week
Indoor/Outdoor	Indoor
<b>Risk Management Measures</b>	
Ensure segregation of worker from the source Ensure minimization of manual phases Avoid skin contact. Avoid contact with eyes. Clean equipment and the work area every day. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Provide basic employee training to prevent/minimize exposures. Minimise number of staff exposed.	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour) Ensure containment of the emission source	
Use suitable eye protection.	
Risk Management Measures are based on qualitative risk characterisation.	
<b>Exposure estimate and reference to its source</b>	
Assessment method	Qualitative assessment
	Worker - contact with eyes
<b>Additional good practice advice</b>	
Segregate substance from incompatible materials.	
<b>Contributing exposure scenario</b>	
<b>Use descriptors covered</b>	As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

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## 2. Short title of exposure scenario

Industrial applications, Distribution of substance, (use in industrial settings)

IS; IS, SU10; ERC2, ERC4, ERC5, ERC6a, ERC6b, ERC7; PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC12, PROC13, PROC14, PROC15, PROC19,

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PROC20, PROC22, PROC23, PROC24, PROC26; PC1, PC4, PC11, PC12, PC14, PC16, PC17, PC19, PC20, PC35, PC37, PC0, PC10

### Control of exposure and risk management measures

<b>Contributing exposure scenario</b>	
<b>Use descriptors covered</b>	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 PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). PROC15: Use a laboratory reagent. Use domain: industrial
<b>Operational conditions</b>	
Concentration of the substance	Sodium nitrate Content: >= 0 % - <= 100 %
Physical state	Solid
Duration and Frequency of activity	Exposure duration: 480 min 5 days per week
Indoor/Outdoor	Indoor
<b>Risk Management Measures</b>	
Ensure segregation of worker from the source Ensure minimization of manual phases Avoid skin contact. Avoid contact with eyes. Clean equipment and the work area every day. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Provide basic employee training to prevent/minimize exposures. Minimise number of staff exposed.	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour) Ensure containment of the emission source	
Use suitable eye protection.	

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Risk Management Measures are based on qualitative risk characterisation.	
<b>Exposure estimate and reference to its source</b>	
Assessment method	Qualitative assessment
	Worker - contact with eyes
<b>Additional good practice advice</b>	
Segregate substance from incompatible materials.	

<b>Contributing exposure scenario</b>	
<b>Use descriptors covered</b>	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 PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). PROC15: Use a laboratory reagent. Use domain: industrial
<b>Operational conditions</b>	
Concentration of the substance	Sodium nitrate Content: $\geq 0\%$ - $\leq 100\%$
Physical state	liquid
Duration and Frequency of activity	Exposure duration: 480 min 5 days per week
Indoor/Outdoor	Indoor
<b>Risk Management Measures</b>	
Ensure segregation of worker from the source Ensure minimization of manual phases Avoid skin contact. Avoid contact with eyes. Clean equipment and the work area every day. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Provide basic employee training to prevent/minimize exposures. Minimise number of staff exposed.	
Provide a good standard of general	

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ventilation (not less than 3 - 5 air changes per hour) Ensure containment of the emission source	
Use suitable eye protection.	
Risk Management Measures are based on qualitative risk characterisation.	
<b>Exposure estimate and reference to its source</b>	
Assessment method	Qualitative assessment
	Worker - contact with eyes
<b>Additional good practice advice</b>	
Segregate substance from incompatible materials.	

<b>Contributing exposure scenario</b>	
<b>Use descriptors covered</b>	PROC5: Mixing or blending in batch processes PROC7: Industrial spraying PROC10: Roller application or brushing PROC12: Use of blowing agents in manufacture of foam PROC13: Treatment of articles by dipping and pouring. PROC14: Tableting, compression, extrusion, pelletisation, granulation PROC19: Manual activities involving hand contact PROC20: Use of functional fluids in small devices PROC22: Manufacturing and processing of minerals and/or metals at substantially elevated temperature PROC23: Open processing and transfer operations at substantially elevated temperature PROC24: High (mechanical) energy work-up of substances bound in /on materials and/or articles PROC26: Handling of solid inorganic substances at ambient temperature Use domain: industrial
<b>Operational conditions</b>	
Concentration of the substance	Sodium nitrate Content: $\geq 0\%$ - $\leq 100\%$
Physical state	Solid
Physical state	Liquid, low fugacity
Duration and Frequency of activity	Exposure duration: 480 min 5 days per week
Indoor/Outdoor	Indoor
<b>Risk Management Measures</b>	
Ensure segregation of worker from the source Ensure minimization of manual phases Avoid skin contact. Avoid contact with eyes. Clean equipment and the work area every day. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Provide basic employee training to	

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prevent/minimize exposures. Minimise number of staff exposed.	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour) Ensure containment of the emission source	
Use suitable eye protection.	
Risk Management Measures are based on qualitative risk characterisation.	
<b>Exposure estimate and reference to its source</b>	
Assessment method	Qualitative assessment
	Worker - contact with eyes
<b>Additional good practice advice</b>	
Segregate substance from incompatible materials.	

<b>Contributing exposure scenario</b>	
<b>Use descriptors covered</b>	As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

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### 3. Short title of exposure scenario

Professional applications

PW; PW; ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC8f, ERC9a, ERC9b; PROC2, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC19, PROC20, PROC26; PC1, PC4, PC11, PC12, PC14, PC16, PC17, PC20, PC37, PC0, PC10

### Control of exposure and risk management measures

<b>Contributing exposure scenario</b>	
<b>Use descriptors covered</b>	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 PROC5: Mixing or blending in batch processes PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring. PROC19:

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	Manual activities involving hand contact PROC20: Use of functional fluids in small devices PROC26: Handling of solid inorganic substances at ambient temperature Use domain: professional
<b>Operational conditions</b>	
Concentration of the substance	Sodium nitrate Content: $\geq 0\%$ - $\leq 100\%$
Physical state	Solid
Physical state	Liquid, low fugacity
Duration and Frequency of activity	Exposure duration: 480 min 5 days per week
Indoor/Outdoor	Indoor
Indoor/Outdoor	Outdoor
<b>Risk Management Measures</b>	
Avoid splashing. Ensure that no inhalable dusts are generated. Ensure segregation of worker from the source Ensure minimization of manual phases Avoid skin contact. Avoid contact with eyes. Clean equipment and the work area every day. Supervision in place to check that the RMMs in place are being used correctly and OCs followed. Provide basic employee training to prevent/minimize exposures. Minimise number of staff exposed.	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour) Ensure containment of the emission source	
Use suitable eye protection.	
Risk Management Measures are based on qualitative risk characterisation.	
<b>Exposure estimate and reference to its source</b>	
Assessment method	Qualitative assessment
	Worker - contact with eyes
<b>Additional good practice advice</b>	
Segregate substance from incompatible materials.	
<b>Contributing exposure scenario</b>	
<b>Use descriptors covered</b>	As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.



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#### 4. Short title of exposure scenario

Consumer applications

C; C; ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC8f, ERC9a, ERC9b, ERC10a, ERC11a; PC1, PC4, PC12, PC16, PC17, PC35, PC39, PC0, PC10

#### Control of exposure and risk management measures

<b>Contributing exposure scenario</b>	
<b>Use descriptors covered</b>	C: Consumer uses All relevant product categories
<b>Operational conditions</b>	
Physical state	liquid
<b>Risk Management Measures</b>	
Consumer Measures	Use suitable eye protection.
<b>Exposure estimate and reference to its source</b>	
Assessment method	Qualitative assessment
	Consumer - contact with eyes
	Contact is only accidental.

<b>Contributing exposure scenario</b>	
<b>Use descriptors covered</b>	As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

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