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## Safety data sheet

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BASF Safety data sheet

Date / Revised: 16.10.2015

Product: **Sodium Nitrite free flowing food grade**

Version: 3.0

(51411842/SDS\_GEN\_AU/EN)

Date of print 07.12.2015

### 1. Substance/preparation and manufacturer/supplier identification

#### Sodium Nitrite free flowing food grade

Use: food additive(s)

Manufacturer/supplier:

BASF South East Asia Pte Ltd.

7 Temasek Boulevard,

#35-01 Suntec Tower One, 038987, SINGAPORE

Emergency information:

BASF Emergency Advice Number: 1800 803 440 (24h) [within Australia]

BASF Emergency Advice Number: + 61 3 8855 6666 [outside Australia]

### 2. Hazard identification

Classification of the substance and mixture:

Oxidising solids: Cat. 2

Acute toxicity: Cat. 3 (oral)

Serious eye damage/eye irritation: Cat. 2A

Hazardous to the aquatic environment - acute: Cat. 1

Label elements and precautionary statement:

Pictogram:

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Signal Word:

Danger

Hazard Statement:

Causes serious eye irritation. Toxic if swallowed. Very toxic to aquatic life. May intensify fire; oxidizer.

Precautionary Statements (Prevention):

Avoid release to the environment. Wear protective gloves and eye/face protection and fire/flammable resistant/retardant clothing. Wear eye/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not eat, drink or smoke when using this product. Wash with plenty of water and soap thoroughly after handling. Take any precaution to avoid mixing with combustibles ... Keep/Store away from clothing/combustible materials.

Precautionary Statements (Response):

Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF SWALLOWED: rinse mouth. Collect spillage. If eye irritation persists: Call a POISON CENTER or doctor/physician. In case of fire: Use water spray for extinction.

Precautionary Statements (Storage):

Store locked up. Store away from other materials.

Precautionary Statements (Disposal):

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

Other hazards which do not result in classification:

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.

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### 3.Composition/information on ingredients

#### Chemical nature

sodium nitrite

NaNO<sub>2</sub>

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Contains: anticaking agent

Hazardous ingredients

sodium nitrite

Content (W/W):  $\geq 99\%$   
CAS Number: 7632-00-0Ox. Sol.: Cat. 2  
Acute Tox.: Cat. 3 (oral)  
Eye Dam./Irrit.: Cat. 2A  
Aquatic Acute: Cat. 1  
M-factor acute: 1

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## 4. First-Aid Measures

General advice:

If danger of loss of consciousness, place patient in recovery position and transport accordingly.  
Apply artificial respiration if necessary.

If inhaled:

After inhalation of decomposition products, remove the affected person to a source of fresh air and keep calm. Provide medical aid. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

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

On ingestion:

Rinse mouth immediately and then drink plenty of water, induce vomiting, seek medical attention.

Note to physician:

Symptoms: Overexposure may cause: vomiting, convulsions, cyanosis, death, coma, methaemoglobinaemia, nausea

Hazards: Risk of pulmonary edema. Symptoms can appear later. Danger of methaemoglobin formation after ingestion.

Treatment: Treat according to symptoms (decontamination, vital functions), treat with toluonium chloride to reverse methaemoglobinanaemia.

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## 5. Fire-Fighting Measures

Suitable extinguishing media:  
water sprayUnsuitable extinguishing media for safety reasons:  
ABC powder, carbon dioxideSpecific hazards:  
nitrogen oxides

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The substances/groups of substances mentioned can be released in case of fire. Has a fire-promoting effect due to release of oxygen.

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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## 6. Accidental Release Measures

Personal precautions:

Use breathing apparatus if exposed to vapours/dust/aerosol. Avoid contact with eyes.

Environmental precautions:

Do not discharge into the subsoil/soil. Do not discharge into waterways or sewer systems without proper authorization.

Methods for cleaning up or taking up:

For residues: Pick up with suitable appliance and dispose of.

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## 7. Handling and Storage

### Handling

Keep container tightly sealed. Breathing must be protected when large quantities are decanted without local exhaust ventilation. Processing machines must be fitted with local exhaust ventilation. Protect against moisture. Protect against heat. Do not mix with combustible substances. Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:

The substance/product is non-combustible. Has a fire-promoting effect due to release of oxygen. Where required Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

### Storage

Segregate from oxidizable substances. Segregate from acids. Segregate from ammonium salts. Further information on storage conditions: Keep container tightly closed and in a well-ventilated place. This product is classified as a dangerous substance for storage. The authority permits and storage regulations must be observed. Keep away from food, drink and animal feeding stuffs.

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## 8. Exposure controls and personal protection

### Components with occupational exposure limits

No occupational exposure limits known.

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### Personal protective equipment

#### Respiratory protection:

Breathing protection if dusts are formed. Particle filter with high efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P3 or FFP3).

#### Hand protection:

Chemical resistant protective gloves (EN 374)

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

polyvinylchloride (PVC) - 0.7 mm coating thickness

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:

Safety glasses with side-shields (frame 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.

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## 9. Physical and Chemical Properties

|                |  |
|----------------|--|
| Form:          | crystalline  |
| Colour:        | white to slightly yellow   |
| Odour:         | faint odour  |
| pH value:      | 8 - 9<br>(100 g/l, 20 °C)  |
| Melting point: | 280 °C   |
| Boiling point: | The substance / product<br>decomposes therefore not<br>determined. |
| Flash point:   | Study scientifically not justified.                                |

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Flammability (solid/gas): not highly flammable

Lower explosion limit:

not applicable

Thermal decomposition: &gt; 320 °C

nitrogen monoxide, nitrogen dioxide,  
disodium oxide

Fire promoting properties: Oxidizing.

Radioactivity:

not radioactive for transport  
purposes

Vapour pressure:

Study scientifically not justified.

Density:

2.17 g/cm<sup>3</sup>

(ISO 2811-3)

(20 °C)

Relative density:

2.17

(20 °C)

Literature data.

Bulk density:

1,100 - 1,300 kg/m<sup>3</sup>

Solubility in water:

readily soluble, Formation of  
sediments

Hygroscopy:

hygroscopic

Partitioning coefficient n-octanol/water (log Pow):

Study scientifically not justified.

Surface tension:

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

Viscosity, dynamic:

Study scientifically not justified.

## 10. Stability and Reactivity

Conditions to avoid:

See MSDS section 7 - Handling and storage.

Thermal decomposition:

&gt; 320 °C

nitrogen monoxide, nitrogen dioxide, disodium oxide

Substances to avoid:

reducing agents, oxidizable substances, ammonium salts, amines, amine compounds, acids

Hazardous reactions:

Hazardous reactions in presence of mentioned substances to avoid.

Hazardous decomposition products:

disodium oxide

nitrogen oxides

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## 11. Toxicological Information

### Acute toxicity

Assessment of acute toxicity:

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

Experimental/calculated data:

LD50 rat (oral): 180 mg/kg

(by inhalation): Study scientifically not justified.

(dermal): Study scientifically not justified.

### Irritation

Assessment of irritating effects:

Not irritating to the skin. Eye contact causes irritation.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: Irritant. (OECD Guideline 405)

### Respiratory/Skin sensitization

Assessment of sensitization:

There is no evidence of a skin-sensitizing potential.

Experimental/calculated data:

Study scientifically not justified.

### 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 and mice in which the substance was given by drinking-water, a carcinogenic effect was not observed. Under certain conditions nitrites can enhance the formation of nitrosamines in vivo. 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.

### Developmental toxicity

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Assessment of teratogenicity:

In animal studies the substance did not cause malformations. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals. After the uptake of small doses toxicity to development will not be expected in humans.

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

Assessment of repeated dose toxicity:

After repeated administration the prominent effect is damage of the blood (methemoglobin formation).

**Aspiration hazard**

No aspiration hazard expected.

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**12. Ecological Information****Ecotoxicity**

Assessment of aquatic toxicity:

Very toxic (acute effect) 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) 0.54 - 26.3 mg/l, *Salmo gairdneri*, syn. *O. mykiss* (Flow through.)

Aquatic invertebrates:

LC50 (96 h) 4.93 mg/l, aquatic crustacea (static)

Literature data.

EC50 (48 h) 15.4 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

The statement of the toxic effect relates to the analytically determined concentration.

Aquatic plants:

EC50 (72 h) > 100 mg/l (growth rate), *Scenedesmus subspicatus* (OECD Guideline 201, static)

The statement of the toxic effect relates to the analytically determined concentration.

Microorganisms/Effect on activated sludge:

EC10 (3 h) 210 mg/l, activated sludge, domestic (OECD Guideline 209, static)

The details of the toxic effect relate to the nominal concentration.

EC50 (48 h) 421 mg/l, protozoa (other, static)

Chronic toxicity to fish:

No observed effect concentration (31 d) 6.16 mg/l, *Ictalurus punctatus*, syn: *I. robustus* (Flow through.)

Chronic toxicity to aquatic invertebrates:

No observed effect concentration (80 d), 9.86 mg/l, aquatic crustacea (*Daphnia* test chronic, static)

Assessment of terrestrial toxicity:



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Study scientifically not justified.

### **Mobility**

Assessment transport between environmental compartments:

Adsorption to solid soil phase is not expected.

### **Persistence and degradability**

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

Not applicable for inorganic substances.

Assessment of stability in water:

Study technically not feasible.

### **Bioaccumulation potential**

Assessment bioaccumulation potential:

Accumulation in organisms is not to be expected.

### **Additional information**

Other ecotoxicological advice:

Do not allow to enter soil, waterways or waste water channels. Do not release untreated into natural waters. Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

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## **13. Disposal Considerations**

Contact manufacturer regarding recycling.

Check for possible recycling.

Contact waste centre regarding recycling.

Contaminated packaging:

Contaminated packaging should be emptied as far as possible and disposed of in accordance with official regulations after being thoroughly cleaned.

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## **14. Transport Information**

### **Domestic transport:**

Hazard class: 5.1

Packing group: III

ID number: UN 1500

Hazard label: 5.1, 6.1, EHSM

Proper shipping name: SODIUM NITRITE

### **Further information**

Hazchem Code: 1Z

IERG Number: 31

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### Sea transport

#### IMDG

Hazard class: 5.1  
Packing group: III  
ID number: UN 1500  
Hazard label: 5.1, 6.1, EHSM  
Marine pollutant: YES  
Proper shipping name: SODIUM NITRITE

### Air transport

#### IATA/ICAO

Hazard class: 5.1  
Packing group: III  
ID number: UN 1500  
Hazard label: 5.1, 6.1  
Proper shipping name: SODIUM NITRITE

## 15. Regulatory Information

### Other regulations

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP): Schedule 7

### Registration status:

AICS, AU released / listed

## 16. Other Information

Recommended use: Raw material, Intermediate, food additive(s), corrosion inhibitor, Surface treatment agent

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

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. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.