

## Safety Data Sheet Sodium Nitrite (non-food grade)

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### 1. Identification

**Product identifier used on the label**

#### **Sodium Nitrite (non-food grade)**

**Recommended use of the chemical and restriction on use**

Recommended use\*: for industrial use only

Raw material; Intermediate; corrosion inhibitor; Surface treatment agent

Suitable for use in industrial sector: chemical industry; metal-working

\* The "Recommended use" identified for this product is provided solely to comply with a US Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

**Details of the supplier of the safety data sheet**

Company:

Silver Fern Chemical, Inc.  
2226 Queen Anne Avenue North Suite C  
Seattle, WA 98109 USA

Telephone: 1-866-282-3384; Website: [www.silverfernchemical.com](http://www.silverfernchemical.com); Email: [info@silverfernchemical.com](mailto:info@silverfernchemical.com)

**Emergency telephone number**

INFOTRAC: +1-800-535-5053

Outside USA & Canada +1-352-323-3500

**Other means of identification**

Molecular formula: NANO(2)

### 2. Hazards Identification

**According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200**

**Classification of the product**

Ox. Sol.	2	Oxidising solid
Acute Tox.	3 (oral)	Acute toxicity
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Aquatic Acute	1	Hazardous to the aquatic environment - acute

**Label elements**

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Pictogram:



Signal Word:

Danger

Hazard Statement:

H272 May intensify fire; oxidizer.  
H319 Causes serious eye irritation.  
H301 Toxic if swallowed.  
H400 Very toxic to aquatic life.

Precautionary Statements (Prevention):

P273 Avoid release to the environment.  
P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
P280 Wear protective gloves and eye/face protection.  
P270 Do not eat, drink or smoke when using this product.  
P264 Wash with plenty of water and soap thoroughly after handling.  
P221 Take any precaution to avoid mixing with combustibles ...  
P220 Keep/Store away from clothing/combustible materials.

Precautionary Statements (Response):

P310 Immediately call a POISON CENTER or doctor/physician.  
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 + P330 IF SWALLOWED: rinse mouth.  
P391 Collect spillage.  
P370 + P378 In case of fire: Use water spray for extinction.

Precautionary Statements (Storage):

P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

### Hazards not otherwise classified

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.

**According to Regulation 1994 OSHA Hazard Communication Standard: 29 CFR Part 1910.1200**

### Emergency overview

DANGER:

TOXIC.

OXIDIZER.

TOXIC IF SWALLOWED.

May cause pulmonary edema.

Avoid contact with the skin, eyes and clothing.

Avoid inhalation of dusts.

Use with local exhaust ventilation.

Wear a NIOSH-certified (or equivalent) particulate respirator.

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Wear NIOSH-certified chemical goggles.  
Wear chemical resistant protective gloves.  
Wear protective clothing.  
Eye wash fountains and safety showers must be easily accessible.

### 3. Composition / Information on Ingredients

**According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200**

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
7632-00-0	>= 99.0 %	sodium nitrite
7631-99-4	<= 1.0 %	sodium nitrate
7732-18-5	<= 0.5 %	water

### 4. First-Aid Measures

#### Description of first aid measures

##### General advice:

Remove contaminated clothing.

##### If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

##### If on skin:

Wash affected areas thoroughly with soap and water. Seek medical attention.

##### If in eyes:

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. If irritation develops, seek medical attention.

##### If swallowed:

Rinse mouth and then drink plenty of water. Induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

#### Most important symptoms and effects, both acute and delayed

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.

#### Indication of any immediate medical attention and special treatment needed

### 5. Fire-Fighting Measures

#### Extinguishing media

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Suitable extinguishing media:  
water spray

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

### Special hazards arising from the substance or mixture

Hazards during fire-fighting:  
nitrogen oxides

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

### Advice for fire-fighters

Protective equipment for fire-fighting:  
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

### Impact Sensitivity:

Remarks: Based on the chemical structure there is no shock-sensitivity.

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## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

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

### Environmental precautions

This product is regulated by CERCLA ('Superfund').

### Methods and material for containment and cleaning up

Spills should be contained and placed in suitable containers for disposal.

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## 7. Handling and Storage

### Precautions for safe 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.

### Conditions for safe storage, including any incompatibilities

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/Personal Protection

**Advice on system design:**

Provide local exhaust ventilation to control dust.

**Personal protective equipment**

**Respiratory protection:**

Wear a NIOSH-certified (or equivalent) particulate respirator.

**Hand protection:**

Suitable materials, polyvinylchloride (Pylox), nitrile rubber (Buna N), chloroprene rubber (Neoprene), Consult with glove manufacturer for testing data.

**Eye protection:**

Tightly fitting safety goggles (chemical goggles).

**General safety and hygiene measures:**

Eye wash fountains and safety showers must be easily accessible. Avoid inhalation of dust. Wear protective clothing as necessary to prevent contact. Take off immediately all contaminated clothing.

### 9. Physical and Chemical Properties

Form:	crystalline	
Odour:	faint odour	
Colour:	white to slightly yellow	
pH value:	8 - 9	( 100 g/l, 20 °C)
Melting point:	280 °C	
Boiling point:		The substance / product decomposes therefore not determined.
Flammability:	not flammable	
Lower explosion limit:		not applicable
Density:	2.17 g/cm <sup>3</sup>	( 20 °C) (ISO 2811-3)
Relative density:	2.17	( 20 °C) Literature data.
Bulk density:	1,100 - 1,300 kg/m <sup>3</sup>	
Partitioning coefficient n-octanol/water (log Pow):		Study scientifically not justified.
Thermal decomposition:	> 320 °C	
Viscosity, dynamic:	nitrogen monoxide, nitrogen dioxide, disodium oxide	Study scientifically not justified.
Solubility in water:		readily soluble
Evaporation rate:		The product is a non-volatile solid.

### 10. Stability and Reactivity

**Reactivity**

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

Oxidizing properties:

Oxidizing.

**Chemical stability**

The product is chemically stable.

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### Possibility of hazardous reactions

Hazardous reactions in presence of mentioned substances to avoid.

### Conditions to avoid

See MSDS section 7 - Handling and storage.

### Incompatible materials

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

### Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: disodium oxide, nitrogen oxides

Thermal decomposition:

> 320 °C

Possible thermal decomposition products:

nitrogen monoxide, nitrogen dioxide, disodium oxide

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## 11. Toxicological information

### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

### Acute Toxicity/Effects

#### 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.

#### Oral

Type of value: LD50

Species: rat

Value: 180 mg/kg

#### Inhalation

Study scientifically not justified.

#### Dermal

Study scientifically not justified.

#### Irritation / corrosion

Assessment of irritating effects: Not irritating to the skin. Eye contact causes irritation.

#### Skin

Species: rabbit

Result: non-irritant

Method: OECD Guideline 404

#### Eye

Species: rabbit

Result: Irritant.

Method: OECD Guideline 405

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### Sensitization

Assessment of sensitization: There is no evidence of a skin-sensitizing potential.

Study scientifically not justified.

### Aspiration Hazard

No aspiration hazard expected.

## **Chronic Toxicity/Effects**

### Repeated dose toxicity

Assessment of repeated dose toxicity: After repeated administration the prominent effect is damage of the blood (methemoglobin formation).

### 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.

### Teratogenicity

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.

## **Symptoms of Exposure**

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

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## **12. Ecological Information**

### **Toxicity**

#### Aquatic toxicity

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)

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

### 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

Study scientifically not justified.

## Microorganisms/Effect on activated sludge

### Toxicity to microorganisms

OECD Guideline 209 static

activated sludge, domestic/EC10 (3 h): 210 mg/l

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

other static

other protozoa/EC50 (48 h): 421 mg/l

## Persistence and degradability

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

Inorganic product which cannot be eliminated from water by biological purification processes. Can be oxidized to nitrate, or be reduced to nitrogen, by microorganisms.

### Assessment of stability in water

Study technically not feasible.

## Bioaccumulative potential

### Assessment bioaccumulation potential

Accumulation in organisms is not to be expected.

## Mobility in soil

### Assessment transport between environmental compartments

Adsorption to solid soil phase is not 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

### **Waste disposal of substance:**

Do not discharge substance/product into sewer system. Dispose of in accordance with national, state and local regulations.

### **Container disposal:**

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.



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### 14. Transport Information

#### Land transport

USDOT

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

#### Sea transport

IMDG

Hazard class: 5.1  
Packing group: III  
ID number: UN 1500  
Hazard label: 5.1, 6.1, EHS  
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

#### Federal Regulations

##### Registration status:

Chemical TSCA, US released; restriction on use / listed

TSCA § 5 final Significant New Use Restriction (SNUR)

**EPCRA 311/312 (Hazard categories):** Acute; Chronic; Reactivity

##### EPCRA 313:

<u>CAS Number</u>	<u>Chemical name</u>
7632-00-0	sodium nitrite

#### State regulations

<u>State RTK</u>	<u>CAS Number</u>	<u>Chemical name</u>
MA, NJ, PA	7632-00-0	sodium nitrite

##### NFPA Hazard codes:

Health : 2 Fire: 0 Reactivity: 1 Special:

##### HMIS III rating

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Health: 3 $\square$  Flammability: 0 Physical hazard: 1

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

Ox. Sol.	2	Oxidising solid
Acute Tox.	3 (oral)	Acute toxicity
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Aquatic Acute	1	Hazardous to the aquatic environment - acute

## 16. Other Information

### **DISCLAIMER OF RESPONSIBILITY**

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume damage or expense arising out of or in any way responsibility and expressly disclaim liability for loss, connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.