

## SAFETY DATA SHEET

Version 6.16  
Revision Date 04/28/2025  
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## SECTION 1. IDENTIFICATION

## 1.1 Product identifiers

Product name : Sodium nitrite

Product Number : S2252  
Brand : SIGALD  
Index-No. : 007-010-00-4  
CAS-No. : 7632-00-0

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

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

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

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

## 1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-  
527-3887 CHEMTREC (International) 24  
Hours/day; 7 Days/week

## SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Oxidizing solids : Category 3

Acute toxicity (Oral) : Category 3

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Eye irritation : Category 2A

Short-term (acute) aquatic hazard : Category 1

### Other hazards

None known.

### GHS label elements

Hazard pictograms :



Signal Word : Danger

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

Precautionary Statements :

#### Prevention:

P210 Keep away from heat.  
P220 Keep/Store away from clothing/ combustible materials.  
P221 Take any precaution to avoid mixing with combustibles.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ eye protection/ face protection.

#### Response:

P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.  
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 + P313 If eye irritation persists: Get medical advice/ attention.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
P391 Collect spillage.

#### Storage:

P405 Store locked up.

#### Disposal:

P501 Dispose of contents/ container to an approved

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Substance

**Components**

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
sodium nitrite	7632-00-0*	>= 90 - <= 100	-

\* Indicates that the identifier is a CAS No.

Actual concentration is withheld as a trade secret

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**SECTION 4. FIRST AID MEASURES**

General advice : Show this material safety data sheet to the doctor in attendance.

If inhaled : After inhalation: fresh air.

In case of skin contact : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact : After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed : If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

Most important symptoms and effects, both acute and delayed : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Protection of first-aiders : For personal protection see section 8.

Notes to physician : No data available

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**SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media	: For this substance/mixture no limitations of extinguishing agents are given.
Specific hazards during fire fighting	: Not combustible.
	Has a fire-promoting effect due to release of oxygen.
	Ambient fire may liberate hazardous vapours.
Hazardous combustion products	: Nitrogen oxides (NO <sub>x</sub> )
	Sodium oxides
Specific extinguishing methods	: No data available
Further information	: Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Special protective equipment for fire-fighters	: Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.
Environmental precautions	: Do not let product enter drains.
Methods and materials	: Cover drains. Collect, bind, and pump off spills.

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for containment and cleaning up

Observe possible material restrictions (see sections 7 and 10).  
Take up carefully. Dispose of properly. Clean up affected area.  
Avoid generation of dusts.

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## SECTION 7. HANDLING AND STORAGE

For precautions see section 2.2.

Advice on protection against fire and explosion	:	Keep away from open flames, hot surfaces and sources of ignition.
Further information on storage conditions	:	Tightly closed. Keep locked up or in an area accessible only to qualified or authorized persons. Do not store near combustible materials.
Storage class	:	5.1B, Oxidizing hazardous materials
Recommended storage temperature	:	Recommended storage temperature see product label.
Further information on storage stability	:	hygroscopic

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

**Engineering measures** : No data available

### Personal protective equipment

Respiratory protection : required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: : Filter type P3

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

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Hand protection	
Material	: Nitrile rubber
Break through time	: 480 min
Glove thickness	: 0.11 mm
Protective index	: Full contact
Manufacturer	: KCL 741 Dermatril® L
Material	: Nitrile rubber
Break through time	: 480 min
Glove thickness	: 0.11 mm
Protective index	: Splash contact
Manufacturer	: KCL 741 Dermatril® L
Remarks	: This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: <a href="http://www.kcl.de">www.kcl.de</a> ).
Eye protection	: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Skin and body protection	: protective clothing
Hygiene measures	: Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: solid, Crystalline powder
Color	: white, light yellow
Odor	: odorless
Odor Threshold	: Not applicable
pH	: No data available
Melting point/ range	: 520 °F / 271 °C

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Method: lit.

Boiling point/boiling range	: No data available
Flash point	: Not applicable
Evaporation rate	: No data available
Burning rate	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapor pressure	: No data available
Relative vapor density	: No data available
Relative density	: No data available
Density	: 2.168 g/cm <sup>3</sup> (68 °F / 20 °C)
Solubility(ies) Water solubility	: 820 g/l (68 °F / 20 °C) pH: 9
Partition coefficient: n- octanol/water	: Not applicable for inorganic substances
Autoignition temperature	: 914 °F / 490 °C
Decomposition temperature	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Flow time	: No data available
Explosive properties	: Not classified as explosive.
Oxidizing properties	: The substance or mixture is classified as oxidizing with the category 3.
Molecular weight	: 69.00 g/mol
Particle characteristics Particle size	: No data available

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No data available
Chemical stability	: The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	: Risk of explosion with: combustible substances Aluminum Sulfides Cyanides potassium cyanide urea hydrazine and derivatives oxidisable substances unsaturated hydrocarbons sodium amide phenol Ethylene oxide strong reducing agents Ammonium salts amides hydrochloric acid Potassium hexacyanoferrate (II) A risk of explosion and/or of toxic gas formation exists with the following substances: Acids with Amines Release of: Nitrosamine Risk of ignition or formation of inflammable gases or vapours with: butadiene Exothermic reaction with: Ethylene oxide
Conditions to avoid	: Exposure to moisture.  no information available
Incompatible materials	: Acids Powdered metals Ammonia Cyanides Amines Activated carbon
Hazardous decomposition	: In the event of fire: see section 5

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## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - 186 mg/kg

Remarks: (RTECS)

Inhalation: No data available

Dermal: No data available

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Moderate eye irritation  
(OECD Test Guideline 405)

#### Respiratory or skin sensitization

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### Reproductive toxicity

No data available

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available

### 11.2 Additional Information

RTECS: RA1225000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Headache, Nausea, Incoordination., Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

##### **sodium nitrite:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.54 - 26.3 mg/l  
End point: mortality  
Exposure time: 96 h  
Test Type: flow-through test  
Analytical monitoring: yes  
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 15.4 mg/l  
End point: Immobilization  
Exposure time: 48 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 202  
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC (Cyprinus carpio (Carp)): 1.05 mg/l  
Exposure time: 29 d  
Analytical monitoring: yes  
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Penaeus duorarum (Pink shrimp)): 9.86 mg/l  
Exposure time: 80 d  
Test Type: semi-static test  
Analytical monitoring: yes  
Remarks: (ECHA)

Toxicity to : EC50 (activated sludge): 510 mg/l

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microorganisms

Exposure time: 3 h

Test Type: static test

Method: OECD Test Guideline 209

GLP: yes

## **Persistence and degradability**

### **Components:**

#### **sodium nitrite:**

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

## **Bioaccumulative potential**

### **Components:**

#### **sodium nitrite:**

Partition coefficient: n-octanol/water : Remarks: Not applicable for inorganic substances

## **Mobility in soil**

No data available

## **Other adverse effects**

### **Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

### **Disposal methods**

Waste from residues : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

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## **SECTION 14. TRANSPORT INFORMATION**

### **International Regulations**

#### **IATA-DGR**

UN/ID No. : UN 1500

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Proper shipping name : Sodium nitrite  
 Class : 5.1  
 Subsidiary risk : 6.1  
 Packing group : III  
 Labels : Division 5.1 - Oxidizing substances, Division 6.1 - Toxic substances  
 Packing instruction (cargo aircraft) : 563  
 Packing instruction (passenger aircraft) : 559

#### IMDG-Code

UN number : UN 1500  
 Proper shipping name : SODIUM NITRITE

Class : 5.1  
 Subsidiary risk : 6.1  
 Packing group : III  
 Labels : 5.1 (6.1)  
 EmS Code : F-A, S-Q  
 Marine pollutant : yes

#### Transport in bulk according to IMO instruments

Not applicable for product as supplied.

#### National regulation

##### 49 CFR Road

UN/ID/NA number : UN 1500  
 Proper shipping name : Sodium nitrite

Class : 5.1  
 Subsidiary risk : 6.1  
 Packing group : III  
 Labels : Division 5.1 - Oxidizing substances, Division 6.1 - Toxic substances  
 ERG Code : 141  
 Marine pollutant : no

Poison Inhalation Hazard : No

#### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

#### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
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sodium nitrite	7632-00-0	100	100
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### **SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

### **SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Reactivity Hazard  
Acute Health Hazard  
Chronic Health Hazard

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

sodium nitrite    7632-00-0    >= 90 - <= 100 %

### **Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

### **Clean Water Act**

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

sodium nitrite    7632-00-0    >= 90 - <= 100 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

sodium nitrite    7632-00-0    >= 90 - <= 100 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

### **US State Regulations**

#### **Massachusetts Right To Know**

sodium nitrite    7632-00-0

#### **Pennsylvania Right To Know**

sodium nitrite    7632-00-0

#### **Maine Chemicals of High Concern**

Product does not contain any listed chemicals

#### **Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

#### **Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**The ingredients of this product are reported in the following inventories:**

TSCA : All substances listed as active on the TSCA inventory

**TSCA list**

The following substance(s) is/are subject to a Significant New Use Rule:

sodium nitrite	7632-00-0	See 40 CFR § 721.4740; Proposed Rule
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The following substance(s) is/are subject to TSCA 12(b) export notification requirements:

sodium nitrite	7632-00-0
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**SECTION 16. OTHER INFORMATION**

**Full text of other abbreviations**

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United

States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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