

## SODIUM NITRITE

## Material Safety Data Sheet

Mallinckrodt Chemical, Inc.  
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Emergency Telephone Number  
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Effective Date: 11-01-94 Supersedes 07-17-91

## PRODUCT IDENTIFICATION:

Synonyms: Nitrous acid, sodium salt

Formula CAS No.: 7632-00-0

Molecular Weight: 69.00

Hazardous Ingredients: Sodium nitrite

Chemical Formula:  $\text{NaNO}_2$

## PRECAUTIONARY MEASURES

DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. HEAT, SHOCK, OR CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE OR EXPLOSIVE DECOMPOSITION. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

Keep from contact with clothing and other combustible materials.  
Store in a tightly closed container.  
Remove and wash contaminated clothing promptly.  
Avoid contact with eyes, skin and clothing.  
Avoid breathing dust.  
Use with adequate ventilation.  
Wash thoroughly after handling.

## EMERGENCY FIRST AID

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. In all cases call a physician.  
SEE SECTION 5.

## Physical Data

## SECTION 1

Appearance: White or yellowish-white crystalline granules.

Odor: Odorless.

Solubility: 85.2 g/100 g water @ 20 C (68 F)

Boiling Point: Decomposes above 320 C (608 F) Vapor Density (Air=1): No information found.

Melting Point: 271 C (520 F) Vapor Pressure (mm Hg): No information found.

Density: 2.17 Evaporation Rate: No information found.

NFPA Ratings: Health: 2 Flammability: 0 Reactivity: 1  
Other: Oxidizer

## Fire and Explosion

## SECTION 2

## Information

Fire: Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

Increases the flammability of any combustible material.

**Explosion:** Contact with oxidizable substances may cause extremely violent combustion. May explode when heated to 537 C (1000 F) or on severe impact or on contact with cyanides, ammonium salts, cellulose, lithium, potassium plus ammonia, and sodium thiosulfate.

**Fire Extinguishing Media:** Water or water spray in early stages of fire. Foam may also be used, but avoid the use of multi-purpose dry chemical fire extinguishers where contact with sodium nitrite may occur. Water streams may scatter molten material.

**Special Information:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Decomposition of sodium nitrite may leave a caustic residue.

#### Reactivity Data

#### SECTION 3

##### Stability:

This material is stable in closed containers at room temperature. Material slowly oxidizes to sodium nitrate when exposed to air. Very hygroscopic.

##### Hazardous Decomposition Products:

Oxides of nitrogen.

##### Hazardous Polymerization:

This substance does not polymerize.

##### Incompatibilities:

Reacts vigorously with reducing materials and is incompatible with many substances including ammonium salts, cellulose, cyanides, lithium, potassium plus ammonia, sodium thiosulfate, aminoguanide salts, butadiene, phthalic acid, phthalic anhydride, reductants, sodium amide, sodium disulphite, sodium thiocyanate, urea, wood and organic matter.

#### Leak/Spill Disposal Information

#### SECTION 4

Remove all sources of ignition. Ventilate area of leak or spill. Clean-up personnel may require protection from inhalation of dust. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools. Pick up spill for recovery or disposal and place in a closed container. Disposal: Whatever cannot be saved for recovery may be burned in an approved incinerator or disposed in an approved waste facility. Reportable Quantity (RQ) (CWA/CERCLA) : 100 lbs. Ensure compliance with local, state and federal regulations.

#### Health Hazard Information

#### SECTION 5

##### A. Exposure/Health Effects

##### Inhalation:

Toxic. Causes irritation to the respiratory tract and systemic poisoning with symptoms paralleling ingestion.

##### Ingestion:

Toxic. Can irritate the mouth, esophagus, stomach, etc. Excessive amounts effect the blood and blood vessels. Signs and symptoms of nitrite poisoning include intense cyanosis, nausea, dizziness,

vomiting, collapse, spasms of abdominal pain, rapid heart beat, irregular breathing, coma, convulsions, and death due to circulatory collapse. Estimated lethal dose 1 to 2 grams.

Skin Contact:

Causes irritation, redness and pain. May be absorbed through the skin causing systemic poisoning; symptoms may parallel ingestion.

Eye Contact:

Causes irritation, redness, and pain.

Chronic Exposure:

Repeated exposure through any route may cause symptoms similar to acute toxicity.

Aggravation of

Pre-existing Conditions: No information found.

B. FIRST AID

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

Skin Exposure:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician.

Eye Exposure:

Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

C. TOXICITY

(RTECS, 1994)

Oral rat LD50: 85 mg/kg; inhalation rat LC50: 5500 ug/m3; irritation: eye rabbit: 500 mg/24H mild; Substance investigated as: tumorigen, mutagen and reproductive effector.

Occupational Control Measures

SECTION 6

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL): 15 mg/m3 total dust, 5 mg/m3 respirable fraction for nuisance dusts. -ACGIH Threshold Limit Value (TLV): 10 mg/m3 total dust containing no asbestos and < 1% crystalline silica for Particulates Not Otherwise Classified (PNOC).

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

Personal Respirators  
(NIOSH Approved)

If the TLV is exceeded, a dust/mist respirator may be worn up to ten times the TLV. Consult respirator supplier for details.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.



## Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

## Storage and Special Information

## SECTION 7

Keep in a tightly closed container. Store in a cool, dry, ventilated area away from sources of heat or ignition. Separate from combustible, organic or any other readily oxidizable materials. Protect container from physical damage. Isolate from incompatible substances. Do not store on wooden floors.

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## Addendum to Material Safety Data Sheet

## REGULATORY STATUS

This Addendum Must Not Be  
Detached from the MSDS  
Identifies SARA 313 substance(s)

Any copying or redistribution of the MSDS  
must include a copy of this addendum

Hazard Categories for SARA  
Section 311/312 Reporting

Acute	Chronic	Fire	Pressure	Reactive
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X		X		X

Product or Components of Product:	SARA EHS		SARA Sec. 313 Chemicals		CERCLA	RCRA
	Sec. 302 RQ	TPQ	Name List	Chemical Category	Sec. 103 RQ lbs	Sec. 261.33
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SODIUM NITRITE (7632-00-0)	No	No	No	No	100	No

SARA Section 302 EHS RQ:  
Reportable Quantity of Extremely Hazardous Substance, listed at 40 CFR 355.

SARA Section 302 EHS TPQ:  
Threshold Planning Quantity of Extremely Hazardous substance. An asterisk (\*) following a Threshold Planning Quantity signifies that if the material is a solid and has a particle size equal to or larger than 100 micrometers, the Threshold Planning Quantity = 10,000 LBS.

SARA Section 313 Chemicals:  
Toxic Substances subject to annual release reporting requirements listed at 40 CFR 372.65.

CERCLA Sec. 103:

Comprehensive Environmental Response, Compensation and Liability Act (Superfund)  
Releases to air, land or water of these hazardous substances which exceed the  
Reportable Quantity (RQ) must be reported to the National Response Center,  
(800-424-8802); Listed at 40 CFR 302.4

RCRA:

Resource Conservation and Recovery Act. Commercial chemical product wastes  
designated as acute hazards or toxic under 40 CFR 261.33

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