



Health	3
Fire	0
Reactivity	0
Personal Protection	C

## Material Safety Data Sheet Sodium nitrite MSDS

### Section 1: Chemical Product and Company Identification

**Product Name:** Sodium nitrite

**Catalog Codes:** SLS2356, SLS3778, SLS1558

**CAS#:** 7632-00-0

**RTECS:** RA1225000

**TSCA:** TSCA 8(b) inventory: Sodium nitrite

**CI#:** Not available.

**Synonym:**

**Chemical Name:** Sodium Nitrite

**Chemical Formula:** NaNO<sub>2</sub>

**Contact Information:**

**Sciencelab.com, Inc.**  
14025 Smith Rd.  
Houston, Texas 77396

US Sales: **1-800-901-7247**  
International Sales: **1-281-441-4400**

Order Online: [ScienceLab.com](http://ScienceLab.com)

**CHEMTREC (24HR Emergency Telephone), call:**  
1-800-424-9300

**International CHEMTREC, call:** 1-703-527-3887

**For non-emergency assistance, call:** 1-281-441-4400

### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Sodium nitrite	7632-00-0	100

**Toxicological Data on Ingredients:** Sodium nitrite: ORAL (LD50): Acute: 180 mg/kg [Rat]. 175 mg/kg [Mouse].

### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Very hazardous in case of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (irritant). Slightly hazardous in case of skin contact (permeator). Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation. Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching.

**Potential Chronic Health Effects:**

**CARCINOGENIC EFFECTS:** Not available.

**MUTAGENIC EFFECTS:** Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.

**TERATOGENIC EFFECTS:** Classified POSSIBLE for human.

**DEVELOPMENTAL TOXICITY:** Classified Reproductive system/toxin/female, Reproductive system/toxin/male [POSSIBLE].

The substance may be toxic to blood, cardiovascular system, Smooth Muscle.

Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

## Section 4: First Aid Measures

### Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

### Skin Contact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

### Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

### Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

### Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

### Ingestion:

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Serious Ingestion:** Not available.

## Section 5: Fire and Explosion Data

**Flammability of the Product:** Non-flammable.

**Auto-Ignition Temperature:** Not applicable.

**Flash Points:** Not applicable.

**Flammable Limits:** Not applicable.

**Products of Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** Not applicable.

### Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of static discharge: Not available.  
Slightly explosive in presence of shocks, of heat.

**Fire Fighting Media and Instructions:** Not applicable.

### Special Remarks on Fire Hazards:

When in contact with organic matter, it will ignite by friction.  
May ignite combustibles.

### Special Remarks on Explosion Hazards:

Explodes when heated over 1000 F (538 C).  
Sodium Nitrite + thiocyanate explodes on heating.  
A mixture of sodium nitrite and various cyanides explodes on contact.  
Mixture of sodium nitrite and phthalic acid or anhydride explode violently on heating.

Fusion of urea with sodium nitrite

Interaction of nitrites when heated with metal amidosulfates (sulfamates) may become explosively violent owing to liberation of nitrogen and steam mixed with ammonium sulfamate form.

Violent explosion occurs if an ammonium salt is melted with nitrite salt.

Shock may explode nitrites.

must be carried out exactly as described to avoid risk of explosion.

## Section 6: Accidental Release Measures

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container.

**Large Spill:**

Oxidizing material. Poisonous solid.

Stop leak if without risk. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## Section 7: Handling and Storage

**Precautions:**

Keep locked up.. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material.. Do not ingest. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, combustible materials, organic materials, metals, acids.

**Storage:**

Oxidizer. Hygroscopic. Air sensitive. Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers. Do not store above 23°C (73.4°F).

## Section 8: Exposure Controls/Personal Protection

**Engineering Controls:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Safety glasses. Synthetic apron. Gloves (impervious).

**Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid. (Powdered solid.)

**Odor:** Odorless.

**Taste:** Saline. (Slight.)

**Molecular Weight:** 69 g/mole

**Color:** White to slightly yellowish.

**pH (1% soln/water):** 9 [Basic.]

**Boiling Point:** 320°C (608°F)

**Melting Point:** 271°C (519.8°F)

**Critical Temperature:** Not available.

**Specific Gravity:** 2.2 (Water = 1)

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water, methanol.

**Solubility:**

Easily soluble in hot water.

Soluble in cold water.

Partially soluble in methanol.

Very slightly soluble in diethyl ether.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:**

Excess heat, dust generation, ignition sources, exposure to air, combustible materials, incompatible materials, exposure to moist air or water.

**Incompatibility with various substances:**

Highly reactive with combustible materials, organic materials.

Reactive with reducing agents, metals, acids.

Slightly reactive to reactive with moisture.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:**

Hygroscopic.

Strong oxidizer.

Slowly oxidizes to nitrate in air.

Reacts vigorously with reducing materials.

Sodium nitrite is a strong oxidizer and is incompatible with the following: acetanilide, metals as powders, ammonium salts, aminoguanidine salts, anitpyrine, Butadiene, chlorates, hypophosphites, activated carbon, iodides, mercury salts, permanganate, phthalic acid, phthalic anhydride, sodium amide, sodium disulphite, cyanides (e.g. potassium cyanide, sodium cyanide), sodium thiocyanate, lithium, sulfites, tannic acid, urea, wood, vegetable astringent decoctions, infusions, or tinctures.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Absorbed through skin. Inhalation. Ingestion.

**Toxicity to Animals:**

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.

Acute oral toxicity (LD50): 175 mg/kg [Mouse].

Acute toxicity of the dust (LC50): 5.5 4 hours [Rat].

**Chronic Effects on Humans:**

MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.

TERATOGENIC EFFECTS: Classified POSSIBLE for human.

DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [POSSIBLE].

May cause damage to the following organs: blood, cardiovascular system, Smooth Muscle.

**Other Toxic Effects on Humans:**

Very hazardous in case of ingestion, of inhalation.

Hazardous in case of skin contact (irritant).

Slightly hazardous in case of skin contact (permeator).

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:**

May cause cancer (tumorigen), affect genetic material (mutagen), cause adverse reproductive effects (fertility, fetotoxicity) and birth defects based on animal data. Passes through the placental barrier in animal.

**Special Remarks on other Toxic Effects on Humans:**

Acute Potential Health Effects:

Skin: Causes skin irritation. May be absorbed through skin.

Eyes: Causes eye irritation. May cause conjunctivitis. May cause permanent corneal opacification.

Ingestion: Harmful if swallowed. Causes gastrointestinal tract irritation with nausea. May affect behavior, brain, nervous system (change in motor activity, muscular incoordination, loss of reflexes, convulsions, coma), blood (methemoglobinemia), liver, metabolism, cardiovascular system (decrease in blood pressure, rapid pulse) and urinary system. May also cause weakness.

Inhalation: May be fatal if inhaled. May cause respiratory tract irritation, cyanosis, dyspnea, pulmonary edema, asphyxia, chemical pneumonitis, upper airway obstruction caused by edema and possible death. May cause biochemical changes. May affect the blood (methemoglobinemia), and the cardiovascular system (tachycardia).

## Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13: Disposal Considerations

**Waste Disposal:**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## Section 14: Transport Information

### DOT Classification:

CLASS 5.1: Oxidizing material.  
CLASS 6.1: Poisonous material.

**Identification:** : Sodium nitrite UNNA: 1500 PG: III

**Special Provisions for Transport:** Marine Pollutant

## Section 15: Other Regulatory Information

### Federal and State Regulations:

New York release reporting list: Sodium nitrite  
Pennsylvania RTK: Sodium nitrite  
Massachusetts RTK: Sodium nitrite  
New Jersey: Sodium nitrite  
California Director's List of Hazardous Substances: Sodium nitrite  
TSCA 8(b) inventory: Sodium nitrite  
TSCA 12(b) one time export: Sodium nitrite  
SARA 313 toxic chemical notification and release reporting: Sodium nitrite  
CERCLA: Hazardous substances.: Sodium nitrite: 100 lbs. (45.36 kg)

### Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).  
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

### Other Classifications:

#### WHMIS (Canada):

CLASS C: Oxidizing material.  
CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).  
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

#### DSCL (EEC):

#### HMIS (U.S.A.):

**Health Hazard:** 3

**Fire Hazard:** 0

**Reactivity:** 0

**Personal Protection:** C

#### National Fire Protection Association (U.S.A.):

**Health:** 3

**Flammability:** 0

**Reactivity:** 1

**Specific hazard:**

**Protective Equipment:**

Gloves (impervious).  
Synthetic apron.  
Wear appropriate respirator when  
ventilation is inadequate.  
Safety glasses.

## Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

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