

# Material Safety Data Sheet



## Sodium Nitrite

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Sodium Nitrite

**OTHER/GENERIC NAMES:** Nitrous Acid, Sodium Salt Sodium Nitrite (various grades)

**PRODUCT USE:** Food preservative, dye manufacturing, corrosion inhibition

**MANUFACTURER:** General Chemical Corporation  
90 East Halsey Road  
Parsippany, NJ 07054

**FOR MORE INFORMATION CALL:** 973-515-1840  
(Monday-Friday, 9:00am-4:30pm)

**IN CASE OF EMERGENCY CALL:** 800-631-8050 or  
(24 Hours/Day, 7 Days/Week) 973-515-0900  
(Outside of USA)

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>INGREDIENT NAME</u> | <u>CAS NUMBER</u> | <u>WEIGHT %</u> |
|------------------------|-------------------|-----------------|
| Sodium nitrite         | 7632-00-0         | >95             |

Trace impurities and additional material names not listed above may appear in Section 15 of this MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

**OSHA Hazard Communication Standard:** *This product is considered hazardous under the OSHA Hazard Communication Standard.*

### 3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** White to slightly yellow crystalline solid. Toxic if swallowed or dust is inhaled. Oxidizer: May ignite organic materials and react with other materials. Can decompose if mixed with acids or exposed to fire conditions, releasing toxic nitrogen oxides.

#### POTENTIAL HEALTH HAZARDS

**SKIN:** Prolonged contact with dust may cause irritation.

**EYES:** May cause temporary irritation.

**INHALATION:** Dust may irritate nose and throat. Dusts are soluble and inhalation may result in toxic effects similar to ingestion.

**INGESTION:** May irritate mouth, esophagus and stomach. Although small quantities are used in food preparation, swallowing moderate amounts of sodium nitrite can result in serious toxic effects including death. Effects include nausea, weakness, cyanosis (blue skin), collapse and coma, possibly leading to death. Sodium nitrite interferes with the blood's ability to transport oxygen.

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**DELAYED EFFECTS:** Sodium nitrite has no known delayed effects. (If sodium nitrite is used with amines found in certain cutting fluids, potentially carcinogenic nitrosamine compounds may be formed.)

**Ingredients found on one of the three OSHA designated carcinogen lists are listed below.**

| <u>INGREDIENT NAME</u>                 | <u>NTP STATUS</u> | <u>IARC STATUS</u> | <u>OSHA LIST</u> |
|--|-------------------|--------------------|------------------|
| No ingredients listed in this section. |                   |                    |                  |

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#### **4. FIRST AID MEASURES**

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**SKIN:** Wash with plenty of soap and water to remove all product residues. Remove contaminated clothing and wash before reuse.

**EYES:** Immediately flush with running water continuing for 15 minutes. If irritation persists, consult a physician.

**INHALATION:** Remove to fresh air. If breathing has stopped, give artificial respiration, preferably mouth to mouth. If breathing is difficult, oxygen should be administered, provided a qualified operator is present. Get immediate medical assistance for any symptom.

**INGESTION:** If conscious, give victim 2 to 4 glasses of water and induce vomiting by touching finger to back of throat. Continue until vomited fluid is clear. Get immediate medical assistance.

**ADVICE TO PHYSICIAN:** Sodium nitrite forms methemoglobin in the blood stream. Treat accordingly.

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#### **5. FIRE FIGHTING MEASURES**

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##### **FLAMMABLE PROPERTIES**

|   |                |
|---|----------------|
| <b>FLASH POINT:</b>                         | Not flammable  |
| <b>FLASH POINT METHOD:</b>                  | Not applicable |
| <b>AUTOIGNITION TEMPERATURE:</b>            | Not applicable |
| <b>UPPER FLAME LIMIT (volume % in air):</b> | Not applicable |
| <b>LOWER FLAME LIMIT (volume % in air):</b> | Not applicable |
| <b>FLAME PROPAGATION RATE (solids):</b>     | Not applicable |
| <b>OSHA FLAMMABILITY CLASS:</b>             | Not applicable |

##### **EXTINGUISHING MEDIA:**

Use flooding amounts of water or other agents. DO NOT use dry chemicals containing ammonium phosphate.

##### **UNUSUAL FIRE AND EXPLOSION HAZARDS:**

Material does not burn but is an oxidizing agent and will support combustion of other materials. Product decomposes above 608°F releasing toxic nitrogen oxides.

##### **SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:**

Wear self-contained breathing apparatus.

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**6. ACCIDENTAL RELEASE MEASURES**

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**IN CASE OF SPILL OR OTHER RELEASE:** (See section 8 for recommended personal protective equipment.)  
Sweep or shovel spilled material into containers. Close container and label them. Do not allow product or residues to enter waterways and/or any source of drinking water.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

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**7. HANDLING AND STORAGE**

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**NORMAL HANDLING:** (See section 8 for recommended personal protective equipment.)  
Avoid contact with skin and eyes. Do not breathe product dusts. Avoid contact with combustible materials and acids.

**STORAGE RECOMMENDATIONS:**  
Store in a cool, dry place. Keep container closed. Do not store on wooden floors. Isolate from combustible materials.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**ENGINEERING CONTROLS:**  
Use local exhaust ventilation in any areas where product dusts may be generated. (Note incompatibilities in section 10.)

**PERSONAL PROTECTIVE EQUIPMENT**

**SKIN PROTECTION:** Use impervious gloves (e.g. rubber) for routine handling. Wear long sleeved shirt and pants. Impervious work aprons may be required for transfer of material from packages to process equipment.

**EYE PROTECTION:** Wear safety goggles in any area where dusty conditions may occur.

**RESPIRATORY PROTECTION:** Not required for properly ventilated areas.

**ADDITIONAL RECOMMENDATIONS:** Provide eyewash and washing facilities.

**EXPOSURE GUIDELINES**

| <b><u>INGREDIENT NAME</u></b>          | <b><u>ACGIH TLV</u></b> | <b><u>OSHA PEL</u></b> | <b><u>OTHER LIMIT</u></b> |
|--|-------------------------|------------------------|---------------------------|
| No ingredients listed in this section. |                         |                        |                           |

<sup>1</sup> = Limit established by General Chemical Corporation.  
<sup>2</sup> = Workplace Environmental Exposure Level (AIHA).  
<sup>3</sup> = Biological Exposure Index (ACGIH).

**OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:**  
None.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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| <b>APPEARANCE:</b>                     | White to slightly yellow crystals      |
| <b>PHYSICAL STATE:</b>                 | Solid                                  |
| <b>MOLECULAR WEIGHT:</b>               | 69.0                                   |
| <b>CHEMICAL FORMULA:</b>               | NaNO <sub>2</sub>                      |
| <b>ODOR:</b>                           | None                                   |
| <b>SPECIFIC GRAVITY (water = 1.0):</b> | 2.17                                   |
| <b>SOLUBILITY IN WATER (weight %):</b> | 46% at 68°F                            |
| <b>pH:</b>                             | Approximately 9 (for aqueous solution) |
| <b>BOILING POINT:</b>                  | Decomposes above 608°F                 |
| <b>MELTING POINT:</b>                  | 520°F                                  |
| <b>VAPOR PRESSURE:</b>                 | Not applicable                         |
| <b>VAPOR DENSITY (air = 1.0):</b>      | Not applicable                         |
| <b>EVAPORATION RATE:</b>               | Not applicable                         |
| <b>% VOLATILES:</b>                    | Not applicable                         |
| <b>FLASH POINT:</b>                    | Not flammable                          |

(Flash point method and additional flammability data are found in Section 5.)

**COMPARED TO:** Not applicable

**10. STABILITY AND REACTIVITY**

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**NORMALLY STABLE? (CONDITIONS TO AVOID):**

Normally stable.

**INCOMPATIBILITIES:**

Hazardous reactions can occur with acids, ammonium compounds, reducing agents (particularly cyanides, thiocyanates and thiosulfates). May ignite organic compounds and other combustible materials.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

Oxides of nitrogen (toxic and irritating).

**HAZARDOUS POLYMERIZATION:**

Will not occur.

**11. TOXICOLOGICAL INFORMATION**

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**IMMEDIATE (ACUTE) EFFECTS:**

LD<sub>50</sub> (oral, rat) 180 mg/kg  
LD<sub>50</sub> (oral, rabbit) 186 mg/kg  
Eye irritation, rabbit, 500 mg/24 hr; mild

**DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:**

Multiple reproductive tests indicate that sodium nitrite is not teratogenic. Fetal toxicity has been demonstrated in pregnant animals fed toxic doses of sodium nitrite. This is due to the formation of methemoglobin.

**OTHER DATA:**

None

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**12. ECOLOGICAL INFORMATION**

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17.1 ppm/24hr./minnow/no effect/fresh water.  
7.5 ppm/48 hr./mosquito fish/TLm/fresh water.

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**13. DISPOSAL CONSIDERATIONS**

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**RCRA**

Is the unused product a RCRA hazardous waste if discarded? Yes

If yes, the RCRA ID number is: D001 (ignitable)

**OTHER DISPOSAL CONSIDERATIONS:**

See below.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

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**14. TRANSPORT INFORMATION**

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**US DOT HAZARD CLASS:** 5.1 Oxidizer (6.1 Toxic subsidiary risk)  
**US DOT ID NUMBER:** UN1500  
**PROPER SHIPPING NAME:** Sodium nitrite

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

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**15. REGULATORY INFORMATION**

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**TOXIC SUBSTANCES CONTROL ACT (TSCA)**

**TSCA INVENTORY STATUS:** Listed on TSCA Inventory of Chemical Substances

**OTHER TSCA ISSUES:** Requires export notification (Section 12b) Subject to SNUR if used in metalworking fluids (40CFR721.4740).

**SARA TITLE III/CERCLA**

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

| <u>INGREDIENT NAME</u> | <u>SARA/CERCLA RQ (lb)</u> | <u>SARA EHS TPQ (lb)</u> |
|------------------------|----------------------------|--------------------------|
| Sodium nitrite         | 100                        | none                     |

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

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**SECTION 311 HAZARD CLASS:** Immediate

**SARA 313 TOXIC CHEMICALS:**

The following ingredients are SARA 313 "Toxic Chemicals" and may be subject to annual reporting requirements. CAS numbers and weight percents are found in Section 2.

| <u>INGREDIENT NAME</u> | <u>COMMENT</u> |
|------------------------|----------------|
| Sodium nitrite         | none           |

**STATE RIGHT-TO-KNOW**

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

| <u>INGREDIENT NAME</u>                 | <u>WEIGHT %</u> | <u>COMMENT</u> |
|--|-----------------|----------------|
| No ingredients listed in this section. |                 |                |

**ADDITIONAL REGULATORY INFORMATION:**

None

**WHMIS CLASSIFICATION (CANADA):**

C, D1B, D2B

**FOREIGN CHEMICAL CONTROL INVENTORY STATUS:**

Listed on Canadian DSL and EU's EINECS (EINECS #: 231-555-9)

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**16. OTHER INFORMATION**

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**CURRENT ISSUE DATE:** May, 1999  
**PREVIOUS ISSUE DATE:** January, 1997

**CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:**

1. Adoption of 16 section ANSI format.
2. Modifications & clarifications made to health hazards, first aid, fire fighting instructions, personal protective equipment, and DOT shipping information.

**OTHER INFORMATION:** None