SAFETY DATA SHEET

Preparation Date: 9/3/2015 **Revision Date:** 9/3/2015 **Revision Number:** G1

1. IDENTIFICATION

Product identifier

Product code: SO185
Product Name: SODIUM NITRITE, GRANULAR, USP

Other means of identification

Synonyms: Nitrous acid, sodium salt
CAS #: 7632-00-0
RTECS # RA1225000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier:
Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000
Order Online At: https://www.spectrumchemical.com

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 3
Serious eye damage/eye irritation	Category 2
Carcinogenicity	Category 1B
Reproductive toxicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2
Oxidizing solids	Category 3

Label elements

Danger

Hazard statements
Toxic if swallowed
Causes serious eye irritation
May cause cancer
Suspected of damaging fertility or the unborn child
May cause damage to organs through prolonged or repeated exposure
May intensify fire; oxidizer

Hazards not otherwise classified (HNOC)
Not Applicable

Other hazards
Very toxic to aquatic life

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep/Store away from clothing/ .? /combustible materials
Take any precaution to avoid mixing with combustibles .?

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Specific treatment (see .? on this label)
IN CASE OF FIRE: Flood with water to extinguish.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
Sodium Nitrite 7632-00-0	7632-00-0	100	*

4. FIRST AID MEASURES

First aid measures

General Advice: Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact: Flush eye with water for 15 minutes. Get medical attention.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Toxic if swallowed.

Most important symptoms and effects, both acute and delayed

Symptoms Causes serious eye irritation. Causes conjunctivitis. May cause corneal opacity. Visual disturbances. May cause skin irritation. Causes digestive (gastrointestinal) tract irritation. Abdominal pain. Ingestion may cause nausea, vomiting, and diarrhea. May affect the cardiovascular system. Hypotension. Weak, rapid pulse or rapid heart rate (Tachycardia). Bradycardia. Central nervous system effects. Headache. Convulsions. Dizziness. Ataxia. Dyspnea (Shortness of breath and difficulty breathing). May cause chemical pneumonitis. May cause pulmonary edema. May cause methemoglobinemia and cyanosis. May affect the liver. It may affect the kidneys.

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Water. CO2 may be of no value in extinguishing fires involving oxidizers and may only provide limited control.

Unsuitable Extinguishing Media: Dry chemical. Foam. Halons.

Specific hazards arising from the chemical

Hazardous Combustion Products: No information available.

Specific hazards: Oxidizer. Keep away from combustible materials (wood, paper, oil, clothing, etc.)
The product is not flammable, but it may cause fire when in contact with other material
Contact with combustible or organic materials may cause fire
Will accelerate burning when involved in a fire
Explodes when heated over 1000°F (538°C).
Shock may explode nitrites
Container explosion may occur under fire conditions or when heated

Special Protective Actions for Firefighters

Specific Methods: No information available.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Remove all sources of ignition. Keep combustibles (wood, paper, oil, clothing, etc.) away from spilled material.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Do not use combustible materials such as paper towels, sawdust, clothing, etc. to clean up spill. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:
Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice
Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice. Keep away from combustible material.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:
Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Air sensitive. Oxygen sensitive.

Incompatible Materials:
Acids. Alkalis. Combustible materials. Organic materials. Reducing agents. Powdered metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Sodium Nitrite 7632-00-0	None	None	None	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
Sodium Nitrite 7632-00-0	None	None	None	None

Australia and Mexico

Components	Australia	Mexico
Sodium Nitrite 7632-00-0	None	None

Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation. 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.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles

Skin and body protection: Chemical resistant apron. Gloves. Long sleeved clothing.

Respiratory protection: Effective dust mask. Wear respirator with dust filter.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical state:
Solid.

Appearance:
Granular. Granular powder. Powder.

Color:
Yellowish. White.

Odor:
Odorless.

Taste
Slight. Saline.

Molecular/Formula weight:
69.00

Formula:
NaNO2

Flammability:
No information available

Flash point (°C):
No data available

Flashpoint (°C/°F):
No information available.

Flash Point Tested according to:
Not available

Autoignition Temperature (°C/°F):
No information available

Lower Explosion Limit (%):
No information available

Upper Explosion Limit (%):
No information available

pH:
9

Melting point/range(°C/°F):
271°C/519.8°F

Boiling point/range(°C/°F):
320°C/608°F

Bulk density:
No information available

Decomposition temperature(°C/°F):
No information available

Density (g/cm3):
No information available

Specific gravity:
2.2

Vapor pressure @ 20°C (kPa):
No information available

Evaporation rate:
No information available

Vapor density:
No information available

VOC content (g/L):
No information available

Odor threshold (ppm):
No information available

Partition coefficient (n-octanol/water):
No information available

Viscosity:
No information available

Miscibility:
No information available

Solubility:
Easily soluble in hot water
Partially soluble in methanol
Soluble in cold water
Very slightly soluble in diethyl ether

10. STABILITY AND REACTIVITY

Reactivity

Highly reactive with combustible materials, organic materials.
Reactive with reducing agents, metals, acids.
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 anydride, 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
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 must be carried out exactly as described to avoid risk of explosion.
Interaction of nitrites when heated with metal amidosulfates (sulfamates) may become explosively violent owning to liberation of nitrogen and steam mixed with ammonium sulfamate form.
Violent explosion occurs if an ammonium salt is is melted with nitrite salt.

Chemical stability

Stability: Stable under recommended storage conditions

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials. Exposure to air.

Incompatible Materials: Acids. Alkalis. Combustible materials. Organic materials. Reducing agents. Powdered metals.

Hazardous decomposition products: No information available

Other Information
Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation. Skin.

Acute Toxicity

Component Information

Sodium Nitrite - 7632-00-0

LD50/oral/rat = 157.9 mg/kg Oral LD50 Rat (RTECS)
85mg/kgOral LD50Rat (EU Commission Chemicals Bureau IUCLID dataset)
180 mg/kg (EU Commission Chemicals Bureau IUCLID dataset)

LD50/oral/mouse = 175 mg/kg Oral LD50 Mouse
LD50/dermal/rat = No information available
LD50/dermal/rabbit = No information available
LC50/inhalation/rat = 5.5 mg/L Inhalation LC50 Rat 4 h
LC50/inhalation/mouse = No infomation available
Other LD50 or LC50information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = 85mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = 175mg/kg

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = 5.5mg/l (4-hr.)

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Causes skin irritation.

Eye Contact: Causes serious eye irritation. May cause conjunctivitis. May cause permanent injury. May cause corneal opacity.

Inhalation May cause respiratory tract irritation, cyanosis, dyspena, 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).

Ingestion Toxic if swallowed. Causes gastrointestinal tract irritation with abdominal pain, nausea, vomiting, diarrhea. The primary toxic effects of nitrites include orthostatic hypotension (due to perpheral vasodilation) and methemoglobinemia (the formation of methemoglobin in the blood which causes deficient oxygenation of the blood due to decreased available hemoglobin). Other effects or symptoms may include flushed skin, sweating, muscular weakness, dizziness, lightheadness, fatigue, throbbing headache, mental impairment, incoordination, loss of reflexes, change in motor activity, seizures convulsions, coma, rapid pulse, bradycardia or tachydardia (slow or fast heart beat), dysrhythmias, visual disturbances, dyspnea. Furthermore, methemoglobinemia due to inadequate oxygenation of the blood can lead to progressive cyanosis, and coma. Cyanosis is first visible as a bluish discoloration of the mucous membranes and unpigmented areas of the body. May also affect the liver, urinary system, brain.

Aspiration hazard No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Ingestion: Prolonged or repeated ingestion may cause nausea, vomiting, dizziness, rapid or slow heart beat, irregular breathing, convulsions. Repeated or prolonged ingestion may also affect the liver and cause anorexia (weight loss).

Sensitization: No information available

Mutagenic Effects: Mutations in microorganisms
Experiments with bacteria and/or yeast have shown mutagenic effects
Mutagenic effects in mammalian somatic cells
Cytogenetic analysis (Hamster fibroblast)
Cytogenic analysis (hamster lung)
Cytogenic Analysis (Hamster embryo)

Carcinogenic effects: May cause cancer based on animal test data.

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Sodium Nitrite	Group 2A - (nitrites (ingested) under conditions that result in endogenous nitrosation))	Not listed	Not listed	Not listed	Not listed	Not listed

IARC (International Agency for Research on Cancer)

Reproductive toxicity May damage fertility or the unborn child

Reproductive Effects: May cause adverse reproductive effects based on animal data
Developmental Effects: May cause adverse developmental effects based on animal data
May cause harm to the unborn child
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available
STOT - repeated exposure No information available
Target Organs: Blood. Cardiovascular system. Smooth muscle.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Sodium Nitrite - 7632-00-0
Freshwater Fish Species Data: 0.4-0.6 mg/L LC50 Oncorhynchus mykiss 96 h semi-static 1
0.092-0.13 mg/L LC50 Oncorhynchus mykiss 96 h flow-through 1
2.3 mg/L LC50 Pimephales promelas 96 h flow-through 1
20 mg/L LC50 Pimephales promelas 96 h static 1
0.65-1 mg/L LC50 Oncorhynchus mykiss 96 h static 1
0.19 mg/L LC50 Oncorhynchus mykiss 96 h flow-through 1

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Sodium Nitrite	None	None	None	None

14. TRANSPORT INFORMATION

DOT
UN-No: UN1500
Proper Shipping Name: Sodium nitrite
Hazard Class: 5.1

14. TRANSPORT INFORMATION

Subsidiary Risk: 6.1
Packing Group: III
ERG No: 140
Marine Pollutant No data available
DOT RQ (lbs): No information available
Symbol(s): R3

TDG (Canada)

UN-No: UN1500
Proper Shipping Name: Sodium nitrite
Hazard Class: 5.1
Subsidiary Risk: (6.1)
Packing Group: III
Description: No information available

ADR

UN-No: UN1500
Proper Shipping Name: Sodium nitrite
Hazard Class: 5.1
Packing Group: III
Subsidiary Risk: 6.1
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG

UN-No: UN1500
Proper Shipping Name: Sodium nitrite
Hazard Class: 5.1
Subsidiary Risk: 6.1
Packing Group: III
Description: No information available
IMDG Page: No information available
Marine Pollutant No information available
EMS: F-A
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: UN1500
Proper Shipping Name: Sodium nitrite
Hazard Class: 5.1
Subsidiary Risk: 6.1
Packing Group: III
Classification Code: No information available
Description: No information available

ICAO

UN-No: UN1500
Proper Shipping Name: Sodium nitrite
Hazard Class: 5.1
Subsidiary Risk: 6.1
Packing Group: III
Description: No information available

IATA

14. TRANSPORT INFORMATION

UN-No: UN1500
Proper Shipping Name: Sodium nitrite
Hazard Class: 5.1
Subsidiary Risk: 6.1
Packing Group: III
ERG Code: 5P
Description: No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Sodium Nitrite	Present	Present KE-31546	Present	Present (1)-483	Present	Present	Present 231-555-9

U.S. Regulations

Sodium Nitrite

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: 2258
New Jersey (EHS) List: 2258 500 lb TPQ
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
Pennsylvania RTK: Environmental hazard
Pennsylvania RTK - Environmental Hazard List Present
Pennsylvania RTK - Special Hazardous Substances Present
New York Release Reporting - List of Hazardous Substances:
= 100 lb RQ
Louisana Reportable Quantity List for Pollutants: Listed
California Directors List of Hazardous Substances: Present

FDA - Direct Food Additives 21 CFR 172.175 21 CFR 172.177
FDA - 21 CFR - Total Food Additives 170.60 172.170 172.175 172.177 172.820 172.824 175.105 175.300 176.170 176.180 177.1210 177.2600 178.3570 178.3910 181.33 181.34 573.700

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:
WARNING: This product contains a chemical known to the State of California to cause cancer. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Sodium Nitrite	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting *de minimis*
Sodium Nitrite	= 100 lb final RQ = 45.4 kg final RQ	None	None	None	1.0 % de minimis concentration

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Sodium Nitrite	Not Applicable	Not Applicable

Canada

WHMIS hazard class:
C Oxidizing materials
D1B Toxic materials
D2B Toxic materials

Canada Controlled Products Regulation:
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Sodium Nitrite	1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
Sodium Nitrite	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Manditory Reporting
Sodium Nitrite	Not listed	Not listed

EU Classification

R-phrase(s)
R 8 - Contact with combustible material may cause fire.
R25 - Toxic if swallowed.
R50 - Very toxic to aquatic organisms.

S -phrase(s)
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

Components	Classification	Concentration Limits:	Safety Phrases
Sodium Nitrite	T; R25 N; R50 O; R8	25%<=C: T,N; R25-50 5%<=C<25%: T; R25 1%<=C<5%: Xn; R22	S1/2 S45 S61

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
O - Oxidising.
T - Toxic
N - Dangerous for the environment.

T

O

N

16. OTHER INFORMATION

Preparation Date: 9/3/2015
Revision Date: 9/3/2015
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet