Safety Data Sheet

Section 01 - Identification

Product Identifier	Sodium Nitrite
Other Means of Identification	Nitrous acid, sodium salt
Product Use and Restrictions on Use	Organic chemical syntheses, accelerator in rubber industry, food industry, corrosion inhibitor, heat transfer salts, oxidizing agent.
Initial Supplier Identifier	ClearTech Industries Inc. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7
Prepared By	ClearTech Industries Inc. Technical Writer Phone: 1 (800) 387-7503
24-Hour Emergency Phone	Phone: 1 (306) 664 – 2522

Section 02 - Hazard Identification

GHS-Classification

Acute Toxicity	Category 3
Serious Eye Damage/Irritation	Category 2

Physical Hazards

Oxidizing Solid	Category 3

Danger

Hazard Statements
H272 – May intensify fire; oxidiser.
H301 – Toxic if swallowed.
H319 – Causes serious eye irritation.

Pictograms

Precautionary Statements
P210 – Keep away from heat, sparks, open flames, and hot surfaces. — No smoking.
P220 – Keep/Store away from clothing, wooden floors and combustible materials.
P403 + P233 – Store in a well-ventilated place. Keep container tightly closed.
P405 – Store locked up.
P370 + P378 – In case of fire: Use extinguishing media appropriate for surrounding fire.
P280 – Wear eye protection and face protection.

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.
P264 – Wash hands thoroughly after handling.
P270 – Do not eat, drink or smoke when using this product.
P301 + P310 – IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P330 – Rinse mouth.
P501 – Dispose of contents/container in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 03 - Composition / Information on Ingredients

Chemical Name	CAS Number	Weight %	Unique Identifiers
Sodium Nitrite	7632-00-0	60-100%	

Section 04 - First Aid Measures

Inhalation

If symptoms are experienced, remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek medical attention.

Skin Contact / Absorption

Rinse with plenty of water for several minutes. Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists.

Eye Contact

Flush immediately with water for at least 30 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. If a contact lens is present, remove only if easy to do so. If irritation persists, seek medical attention.

Ingestion

Never give anything by mouth if victim is rapidly losing consciousness, is unconscious, or convulsing. Have victim rinse mouth and drink a glass of water. Do NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Seek immediate medical attention.

Additional Information

Not Available

Section 05 - Fire Fighting Measures

Suitable Extinguishing Media

Water only.

Unsuitable Extinguishing Media

Not Available

Specific Hazards Arising From the Chemical

Sodium nitrite is an oxidizer – will enhance the burning rate and may cause spontaneous ignition of combustible materials. During a fire, irritating/toxic nitrogen oxides may be generated.

Special Protective Equipment and Precautions for Fire-Fighters

Wear NIOSH-approved self-contained breathing apparatus and protective clothing.

Further Information

Sodium nitrite is an oxidizer - will enhance the burning rate and may cause spontaneous ignition of combustible materials. During a fire, irritating/toxic nitrogen oxides may be generated.

Section 06 - Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures

Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so. Flush with water to remove any residue.

Environmental Precautions

Prevent material from entering sewers.

Methods and Materials for Containment and Cleaning Up	Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

Section 07 - Handling and Storage

Precautions for Safe Handling	Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.
Conditions for Safe Storage	Store locked up in a tightly closed container in cool, well-ventilated area, dry area away from incompatible materials. Avoid wooden floors. Storage in an isolated non-combustible building is advised.
Incompatibilities	Acids, ammonium compounds, reducing agents, thiocyanates and thiosulfates. Also certain combustibles and organics.

Section 08 - Exposure Controls and Personal Protection

Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Sodium Nitrite			Not Available

Engineering Control(s)

Ventilation Requirements	Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.
Other	Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

Protective Equipment

Eyes/Face	Chemical goggles, full-face shield, or a full-face respirator should be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.
Hand Protection	No specific requirements, but it is good practice to prevent skin contact by wearing impervious gloves of chemical resistance.
Skin and Body Protection	No specific requirements, but it is good practice to prevent skin contact by wearing body suite, aprons, and/or coveralls. No special footwear is required other than what is mandated at place of work.
Respiratory Protection	A P3 filter respirator for toxic particles may be required if dust or mists is generated.
Thermal Hazards	Not Available

Section 09 - Physical and Chemical Properties

Appearance

Physical State	Solid hygroscopic crystals
Colour	White or slightly yellow
Odour	Odourless
Odour Threshold	Not Applicable

Property	
pH	9
Melting Point/Freezing Point	271°C
Initial Boiling Point and Boiling Range	320°C (decomposes below boiling point)
Flash Point	Explodes at 537°C
Evaporation Rate	Not Available
Flammability	Non-Flammable
Upper Flammable Limit	Not Applicable
Lower Flammable Limit	Not Applicable
Vapour Pressure (mm Hg, 20°C)	Not Available
Vapour Density (Air=1)	Not Applicable
Relative Density	Not Available
Solubility(ies)	Very soluble in water. Very soluble in ammonia; moderately soluble in ethanol, methanol; slightly soluble in diethyl ether.
Partition Coefficient: n-octanol/water	Not Available
Auto-ignition Temperature	Not Applicable
Decomposition Temperature	320°C
Viscosity	Not Available
Explosive Properties	Explodes at 537°C. As oxidizing agent, it will accelerate the combustion of organic or other combustible material.
Specific Gravity (Water=1)	2.17
% Volatiles by Volume	Not Available
Formula	$NaNO_2$
Molecular Weight	69.0

Section 10 - Stability and Reactivity

Reactivity	Not Available
Stability	Normally stable.
Possibility of Hazardous Reactions	Polymerization will not occur.
Conditions to Avoid	Temperatures near 537°C.

Incompatible Materials	Acids, amines, ammonium compounds, reducing agents, thiocyanates and thiosulfates. Also certain combustibles and organics.
Hazardous Decomposition Products	Oxides of nitrogen which are toxic as well as oxidizers. The residue is caustic.

Section 11 - Toxicological Information

Acute Toxicity

Component	Oral LD_{50}	Dermal LD_{50}	Inhalation LC_{50}
Sodium Nitrite	85mg/kg (rat)	Not Available	5.5mg/L (rat, inhalation, 4hr)

Chronic Toxicity – Carcinogenicity

Component	IARC
Sodium Nitrite	Not known to be carcinogenic.

Skin Corrosion/Irritation	Non-Irritant.
Ingestion	May irritate mouth, esophagus, and stomach. Used as food additive at low levels (<200 ppm). Ingestion of larger amounts can result in acute toxic effects with nausea, conversion of hemoglobin to methemaglobin, marked reduction in blood pressure, with collapse, coma and possible death.
Inhalation	Dust causes irritatation of the respiratory tract and lungs. Large amounts may cause systemic effects as nitrites are readily absorbed by lung tissue.
Serious Eye Damage/Irritation	Causes serious eye irritation.
Respiratory or Skin Sensitization	Not Available
Germ Cell Mutagenicity	Not Available
Reproductive Toxicity	Experiments have shown reproductive toxicity effects on laboratory animals.
STOT-Single Exposure	The secondary toxic effects of acute sodium nitrite in animals result in vasodilation, relaxation of smooth muscle, and lowering of blood pressure.
STOT-Repeated Exposure	Sodium nitrite causes smooth muscle relaxation, methaemoglobinaemia, and cyanosis.
Aspiration Hazard	May cause respiratory tract irritation, cyanosis, dyspena, pulmonary edema, asphyxia, chemical pneumonitis, upper airway obstruction caused by edema and possible death.
Synergistic Materials	Not Available

Section 12 – Ecological Information

Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Sodium Nitrite	Not Available	LC_{50}(Oncorhynchus mykiss, 96hr): 0.11mg/L	EC_{50}(Daphnia magna, 96hr): 8.3mg/L

Biodegradability	This substance dissociates immediately into sodium and nitrite ions in water.
Bioaccumulation	The estimated BCF is 3.162 and hence there is low potential for bioaccumulation.
Mobility	Not Available
Other Adverse Effects	Not Available

Section 13 – Disposal Considerations

Waste From Residues/Unused Products	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.
Contaminated Packaging	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 – Transport Information

UN Number	UN 1500
UN Proper Shipping Name	SODIUM NITRITE
Transport Hazard Class(es)	5.1 (6.1)
Packaging Group	III
Environmental Hazards	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
Special Precautions	Not Available
Transport in Bulk	Not Available

Additional Information

Packing Group	Limited Quantity Index
III	5 Kg

TDG

Other Secure containers (full and/or empty) with suitable hold down devises during shipment and ensure all caps, valves, or closures are secured in the closed position.

TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

Section 15 – Regulatory Information

NOTE: THE PRODUCT LISTED ON THIS SDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS SDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

Section 16 – Other Information

Preparation Date August 13, 2015

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

Attention: Receiver of the chemical goods / SDS coordinator

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution® initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service center.

References:

1) CHEMINFO
2) eChemPortal

3) TOXNET
4) Transportation of Dangerous Goods Canada
5) CHRIS
6) HSDB
7) ECHA

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