



Safety Data Sheet

Issue Date: 04-02-2014

Revision Date: 07-18-2017

Version 3

1: IDENTIFICATION

Product Identifier:

Product Name: **Ty-Ion B-20**

Other Means of Identification:

Part Number: 7537-05

Recommended Use of the Chemical and Restrictions on Use:

Closed system treatment

Details of the Author of the Safety Data Sheet:

Supplier Address: NU-CALGON WHOLESALER, INC.
2611 Schuetz Road
St. Louis, MO 63043

Emergency Telephone Number:

Company Phone Number: (314) 469-7000
(800) 554-5499

Emergency Telephone
Number (24 hr):

CHEMTREC 800-424-9300

2: HAZARDS IDENTIFICATION

Hazard Classification: Acute toxicity (oral), category 4
Acute toxicity (dermal), category 4
Skin corrosion, category 1B
Serious eye damage, category 1
Reproductive toxicity, category 2
Specific target organ toxicity - single exposure
category 3

Signal Word: Danger

Hazard Statements: H302: Harmful if swallowed.
H312: Harmful in contact with skin.
H314: Causes severe skin burns and eye damage.
H335: May cause respiratory irritation.
H361: Suspected of damaging fertility in the unborn child.

Pictograms of Related Hazards:**Precautionary Statements:**

P202 - Do not handle until all safety precautions have been read and understood.
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
 P270 - Do not eat, drink or smoke when using this product.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P330 - Rinse mouth.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 - Immediately call a POISON CENTER or doctor/physician.
 P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 P311: Call a POISON CENTER or doctor/physician
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
 P332 + P313 - If skin irritation occurs, get medical advice/attention
 P405 - Store locked up.

Description of Other Hazards: None

3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %
Sodium nitrite	7632-00-0	10-20
Sodium silicate	15859-24-2	1-10
Sodium tetraborate	1330-43-4	1-10
Sodium metaborate	7775-19-1	1-10

4: FIRST-AID MEASURES

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eye lids occasionally. Get medical attention immediately.

Skin Contact: Remove any contaminated clothing. Wash skin with plenty of soap and water for at least 15 minutes. Get medical attention if irritation occurs.

Inhalation: Remove victim to fresh air. If the breathing stops, give artificial respiration. If breathing is difficult, have a trained medical person administer oxygen. Get medical attention.

Ingestion: If swallowed, do NOT induce vomiting. If victim is conscious and alert, rinse out mouth with water and give large quantities of water to drink. If vomiting occurs spontaneously, have victim lean forward to reduce risk of aspiration. Get medical attention immediately. Never give anything by mouth to an unconscious person.

Notes to Physician: Symptoms may be delayed.

5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use extinguishing media appropriate for the surrounding fire.

Unsuitable Extinguishing Media: Not available

Protective Equipment and Precautions for Firefighters: Firefighters should wear full protective clothing including a self-contained breathing apparatus.

Specific Hazards Arising from this Chemical: Contact with some metals can generate flammable hydrogen gas. If evaporated to dryness, residue can stimulate or accelerate combustion of organic or other combustible materials. Toxic gases may be emitted under fire conditions.

Hazardous Decomposition Products: Thermal decomposition or combustion may produce oxides of nitrogen, oxides of sodium, oxides of carbon, and oxides of sulfur.

6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Ventilate the spill area. Keep unnecessary and unprotected people away from the spill site. Stop or reduce any leaks if is safe to do so. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Notify appropriate government, occupational health and safety, and environmental authorities.

Methods for Clean-up:

Small spills: Soak up spill with an inert, non-combustible absorbent material (e.g. vermiculite, sand, or earth). Place residues in a suitable, covered, properly labeled container. Wash the affected area.

Large spills: Contain liquid using an inert, non-combustible absorbent material (e.g. vermiculite, sand, or earth), by digging trenches, or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Contact an approved waste hauler for disposal of contaminated recovered material.

Disposal: Dispose of material in compliance with federal, state, and local regulations.

Environmental Precautions: Prevent entry into lakes, ponds, streams, waterways, or public water supplies.

7: HANDLING AND STORAGE

Advice on Safe Handling:

Avoid contact with skin, eyes, and clothing.

Avoid breathing vapors or mist.

Use with adequate ventilation.

Wash thoroughly after handling.

Do not take internally.

Keep containers closed when not in use.

Ensure that containers are properly labeled.

Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid).

Observe all warnings and precautions listed for this product.

Prevent contact with clothing and other combustible materials.

Have emergency equipment (for fires, spills, leaks, etc.) readily available.

Storage Conditions:

Store in a cool, dry, well-ventilated area away from incompatible materials.

Protect against the physical damage of containers.

Do not store near combustible materials.

8: EXPOSURE CONTROL / PERSONAL PROTECTION

Chemical Name	NIOSH	OSHA PEL	ACGIH TLV
Sodium nitrite	None established	None established	None established
Sodium silicate	None established	None established	None established
Sodium tetraborate pentahydrate	None established	None established	TWA: 2 mg/m ³ STEL: 6 mg/m ³
Sodium metaborate	None established	None established	None established

Eye/Face Protection: Chemical splash goggles and face shield.

Skin and Body Protection: Chemical resistant gloves and impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory Protection: If airborne concentrations exceed published exposure limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements (29 CFR 1910.134).



Engineering Controls: Use local and/or general exhaust ventilation to maintain airborne concentrations below irritating levels or airborne exposure limits, whichever is lower. Local exhaust is generally preferred because it can control the emission of the contaminant at its source, thus preventing dispersion of it into the general work area. Please refer to the

ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices, the most recent edition", for details.

General Hygiene Considerations: Use good industrial hygiene practices in handling this material. When using, do not eat or drink. Wash hands before breaks and immediately after handling the product. An eye wash station and safety shower should be accessible in the immediate area of use. Protective equipment should be cleaned thoroughly after each use.

9: PHYSICAL AND CHEMICAL PROPERTIES

pH: 11.8-12.4

Specific Gravity: 1.185-1.265 g/mL

Flash Point: Not available

Solubility In Water: Not available

Boiling Point: Not available

Freezing Point: -14.5 °F (5.9 °C)

Vapor Pressure: Not available

Vapor Density: Not available

Appearance and Odor: Clear, red liquid with a mild odor

10: STABILITY AND REACTIVITY

Chemical Stability: Stable

Hazardous Polymerization: Will not occur.

Incompatibilities: Acids. Oxidizing agents. Amines. Ammonium salts. Cyanides. Reducing agents.

Reactive Conditions to Avoid: This product may react with oxidizing agents. Do not mix with other chemicals.

Hazardous Decomposition Products: Thermal decomposition or combustion may produce oxides of nitrogen, oxides of sodium, oxides of carbon, and oxides of sulfur.

11: TOXICOLOGICAL INFORMATION

Likely Routes Of Exposure: Eye contact, skin contact, ingestion, and inhalation of product vapors or mists

Acute Toxicity:

Test Material	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Sodium nitrite	180 mg/Kg	Not available	5.5 mg/m ³ /4H
Sodium silicate	1,153 mg/Kg	Not available	Not available
Sodium tetraborate pentahydrate	>3,200 mg/Kg	>2,000 mg/Kg	>2 mg/L
Sodium metaborate	2,330 mg/Kg	Not available	Not available

Acute Symptoms and Effects:

Eye: May cause chemical burns. May cause blindness.

Skin: May cause severe irritation or chemical burns. May be absorbed through the skin.

Sodium nitrite can be absorbed through damaged skin in amounts that may produce systemic toxicity similar to that produced by ingestion, if the area of exposure and amount absorbed is large.

Ingestion: Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.

Inhalation: Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).

Chronic: No applicable information was found concerning any potential health effects resulting from subchronic or chronic exposure to the product. Information on the product components follows.

This product contains sodium nitrite. Repeated doses of nitrites cause a fall in blood pressure, rapid pulse, headache, and visual disturbances. Nitrites have been implicated in an increased incidence of cancer. They may react with organic amines in the body to form carcinogenic nitrosamines. Repeated or prolonged exposure to nitrites may cause methemoglobinemia (decreased oxygen-carrying capacity of the blood). Pregnant women should minimize exposure to nitrites since the developing fetus may be adversely affected by the nitrite-induced methemoglobinemia.

Chronic exposures to borates can produce eye irritation, coughing, and skin rash (the latter following ingestion).

Reproductive effects: Borates may cause adverse reproductive effects based on animal data.

Teratogenicity: Not established

Mutagenicity: Not established

Embryotoxicity: Not established

Sensitization to Product: Not established

Synergistic Products: Not established

Carcinogenicity: Sodium tetraborate pentahydrate: ACGIH A4 - Not Classifiable as a Human Carcinogen (listed under Borate compounds, inorganic)
All other components: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

The toxicological properties of this material have not been fully investigated.

12: ECOLOGICAL INFORMATION

Aquatic Toxicity:

Components of this product have been identified as having potential environmental concerns.

Freshwater Fish - Acute Toxicity Data:

Test Material	Aquatic Toxicity Data
Sodium nitrite	24 hr NOEC (Minnow): 17.1 mg/L 48 hr LC50 (Mosquito fish): 7.5 mg/L 96 hr LC50 (Rainbow trout): <1 mg/L (flow through)
Sodium metasilicate	96 hr LC50 (Daphnia magna): 496 mg/L 96 hr LC50 (Mosquito fish): 530 mg/L
Sodium tetraborate pentahydrate	24 hr EC50 (Daphnia magna): 1,631 mg/L 3 day LC50 (Goldfish): 478 mg/L 24 day LC50 (Rainbow trout): 593 mg/L 96 hr EC10 (Algae): 162 mg/L

Persistence and Degradability:

No data available

Bioaccumulative Potential:

No data available

Mobility in Soil:

No data available

Other Adverse Effects:

No data available

13: DISPOSAL INFORMATION

Disposal: Dispose of in accordance with local, state, and federal regulations.

14: TRANSPORT INFORMATION

Please see current shipping paper for most up-to-date shipping information, including exemptions and special circumstances.

US Department of Transportation (DOT):

UN Number: UN 3266
 Proper Shipping Name: Corrosive Liquid, Basic, Inorganic, n.o.s.
 (Sodium silicate)
 Primary Hazard Class/Division: 8
 Packing Group: III
 Label: Corrosive



Canada (TDG):

UN Number: UN 3266
 Proper Shipping Name: Corrosive Liquid, Basic, Inorganic, n.o.s.
 (Sodium silicate)
 Primary Hazard Class/Division: 8
 Packing Group: III
 Label: Corrosive



International Maritime Dangerous Goods Code (IMDG):

UN Number: UN 3266
 Proper Shipping Name: Corrosive Liquid, Basic, Inorganic, n.o.s.
 (Sodium silicate)
 Primary Hazard Class/Division: 8
 Packing Group: III
 Label: Corrosive



15: REGULATORY INFORMATION

US Federal Regulations:

OSHA Hazard Communication Status: Hazardous

TSCA: The ingredients of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CERCLA: EPA Hazardous Substances (40 CFR 302):

<u>Chemical Name</u>	<u>CERCLA Reportable Quantity (RQ)</u>
Sodium nitrite	100 lb
Product	667 lb

(Notify the EPA of spills exceeding this amount.)

SARA TITLE III (Sections 302, 311, 312, and 313):

Section 302 Extremely Hazardous Substances (40 CFR 355):

<u>Chemical Name</u>	<u>CAS#</u>	<u>RQ</u>	<u>TPQ</u>
None			

Section 311 and 312 Health and Physical Hazards:

<u>Immediate</u>	<u>Delayed</u>	<u>Fire</u>	<u>Pressure</u>	<u>Reactivity</u>
yes	yes	no	no	No

Section 313 Toxic Chemicals (40 CFR 372):

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Percent by Weight</u>
Sodium nitrite	7632-00-0	10-20

International Inventories: No data

16: OTHER INFORMATION

Other Classifications:

HMIS Ratings: Health = 2 Flammability = 0 Reactivity = 0

NFPA Ratings: Health = 2 Flammability = 0 Reactivity = 0

Hazard Rating Scale: 0=Minimal; 1=Slight; 2=Moderate; 3=Serious; 4=Severe

WHMIS (Canada):

Class D2A (very toxic): Materials Causing Other Toxic Effects



Class E: Corrosive Material



While the information and recommendations set forth herein are believed to be accurate as of the date thereof, NU-CALGON WHOLESALER, INC MAKES NO WARRANTY WITH RESPECT HERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.