

SAFETY DATA SHEET

SDS 0264

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 Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

		HMIS CODES	
PRODUCT NAME	Steammaster Tablets	Health	2
		Flammability	0
		Reactivity	1
PRODUCT CODES	68732	PPI	B
CHEMICAL FAMILY	Organic/Inorganic		
USE	Boiler Water Treatment		
MANUFACTURER'S NAME	The RectorSeal Corporation	EMERGENCY TELEPHONE NO.	
	2601 Spenwick Drive	Chemtrec 24 Hours	
	Houston, Texas 77055 USA	(800)424-9300 USA	
		(703)527-3887 International	
DATE OF VALIDATION	January 23, 2015	TECHNICAL SERVICE TELEPHONE NO.	
DATE OF PREPARATION	October 8, 2012	(800)231-3345 or (713)263-8001	

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 Section 2 -- HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Oxidizer, Carcinogen, Target Organ Effect, Toxic by ingestion, Irritant

Target Organs

Blood, Cardiovascular system., Smooth muscle.

GHS CLASSIFICATION

Oxidizing solids (Category 3)

Acute toxicity, Oral (Category 3)

Eye irritation (Category 2A)

Acute aquatic toxicity (Category 1)

PHYSICAL HAZARDS: Oxidizer

Potential Health Effects

Inhalation - May be harmful if inhaled. Causes respiratory tract irritation.

Skin - May be harmful if absorbed through skin. Causes skin irritation.

Eyes - Causes eye irritation.

Ingestion - Toxic if swallowed.

GHS Label elements, including precautionary statements

Pictogram: Oxidizer, Toxic, Environmental Hazard

Signal Word: Danger

Hazard statement(s)

H272 - May intensify fire; oxidiser.

H301 - Toxic if swallowed.

H319 - Causes serious eye irritation.

H400 - Very toxic to aquatic life.

Precautionary statement(s)

P220 - Keep/Store away from clothing/ combustible materials.

P273 - Avoid release to the environment.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

SUMMARY OF ACUTE HAZARDS

Harmful if swallowed, inhaled or absorbed through skin. Causes irritation to skin, eyes and respiratory tract.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

Toxic. Causes irritation to the respiratory tract and systemic poisoning with symptoms paralleling ingestion.

EYE CONTACT

May cause irritation, redness and pain.

SKIN CONTACT

Causes irritation, redness and pain. May be absorbed through the skin causing systemic poisoning; symptoms may parallel ingestion.

INGESTION

Toxic. Can irritate the mouth, esophagus, stomach, etc. Excessive amounts affect the blood and blood vessels. Signs and symptoms of nitrite poisoning include intense cyanosis, nausea, dizziness, vomiting, collapse, spasms of abdominal pain, rapid heart beat, irregular breathing, coma, convulsions, and death due to circulatory collapse. Estimated lethal dose 1 to 2 grams.

SUMMARY OF CHRONIC HAZARDS

Repeated exposure through any route may cause symptoms similar to acute toxicity.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin and respiratory system may have increased susceptibility to excessive exposure.

Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: Sodium Nitrite
PERCENTAGE BY WEIGHT: 44.04
CAS#: 7632-00-0
EC#: 231-555-9

INGREDIENT: Sodium Triphosphate
PERCENTAGE BY WEIGHT: 23.52
CAS#: 7758-29-4
EC#: 231-838-7

INGREDIENT: Sodium Metasilicate
PERCENTAGE BY WEIGHT: 1.34
CAS#: 6834-92-0
EC#: 229-912-9

INGREDIENT: Citric Acid
PERCENTAGE BY WEIGHT: 3.36
CAS#: 77-92-9
EC#: 201-069-1

Section 4 -- FIRST AID MEASURES

- If INHALED: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.
- If on SKIN: Immediately wash with soap and water. Remove and wash any contaminated clothing.
- If in EYES: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.
- If SWALLOWED: If swallowed, call a physician or poison control immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 -- FIRE FIGHTING MEASURES

Note: Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Increases the flammability of any combustible material.

EXTINGUISHING MEDIA

Non-combustible. Use agents appropriate for surrounding fires.
 SPECIAL FIRE FIGHTING PROCEDURES: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Decomposition of sodium nitrite may leave a caustic residue.
 UNUSUAL FIRE AND EXPLOSION HAZARDS: Contact with oxidizable substances may cause extremely violent combustion. May explode when heated to 537 C (1000 F) or on severe impact or on contact with cyanides, ammonium salts, cellulose, lithium, potassium plus ammonia, and sodium thiosulfate.

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 Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Sweep up excess material to prevent footing hazard. Discard in trash.
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Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage and moisture. Isolate from any source of heat or ignition. Avoid storage on wood floors. Separate from incompatibles, combustibles, organic or other readily oxidizable materials. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.
 OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing.
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Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT UNITS

Sodium Nitrite
 ACGIH TLV N/D
 OSHA PEL N/D

Sodium Triphosphate
 ACGIH TLV N/D
 OSHA PEL N/D

Sodium Metasilicate
 ACGIH TLV N/D
 OSHA PEL N/D

Citric Acid
 ACGIH TLV N/D
 OSHA PEL N/D

RESPIRATORY PROTECTION (SPECIFY TYPE): Normally none required. Use NIOSH/MSHA approved particulate respirator for nuisance dust.

VENTILATION - LOCAL EXHAUST: Acceptable

SPECIAL: N/A

MECHANICAL (GENERAL): Acceptable

OTHER: N/A

PROTECTIVE GLOVES: Wear rubber gloves.

EYE PROTECTION: Safety glasses (ANSI Z-87.1 or equivalent)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.

WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area.
 Launder contaminated clothing before reuse.
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Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/A
 SPECIFIC GRAVITY (H2O = 1): Solid
 VAPOR PRESSURE (mm Hg): N/A
 MELTING POINT: N/D
 VAPOR DENSITY (AIR = 1): N/A

EVAPORATION RATE (ETHYL ACETATE = 1): N/A
 APPEARANCE/ODOR: Tablets / No distinct odor
 SOLUBILITY IN WATER: Soluble
 FLASH POINT: None
 LOWER EXPLOSION LIMIT: N/D
 UPPER EXPLOSION LIMIT: N/D
 VOLATILE ORGANIC COMPOUNDS(VOC)Content
 (Theoretical Percentage By Weight): 0% or (0 g/L)

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 Section 10 -- STABILITY AND REACTIVITY
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STABILITY: This material is stable in closed containers at room temperature. Material slowly oxidizes to sodium nitrate when exposed to air. Very hygroscopic.

CONDITIONS TO AVOID: Heat, flame, ignition sources, shock, friction, incompatibles.

INCOMPATIBILITY (MATERIALS TO AVOID): Reacts vigorously with reducing materials and is incompatible with many substances including ammonium salts, cellulose, cyanides, lithium, potassium plus ammonia, sodium thiosulfate, aminoguanide salts, butadiene, phthalic acid, phthalic anhydride, reductants, sodium amide, sodium disulphite, sodium thiocyanate, urea, wood and organic matter.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of nitrogen.

HAZARDOUS POLYMERIZATION: Will not occur.

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 Section 11 -- TOXICOLOGY INFORMATION
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CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA

Ingredient Name

Sodium Nitrite

Oral-Rat LD50:85 mg/kg
 Inhalation-Rat LC50:5500 mg/m3

Sodium Triphosphate

Oral-Rat LD50:6500 mg/kg
 Inhalation-Rat LCLo:N/D

Sodium Metasilicate

Oral-Rat LD50:2000-3000 mg/kg
 Inhalation-Rat LCLo:N/D

Citric Acid

Oral-Rat LD50:3 g/kg
 Inhalation-Rat LCLo:N/D

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 Section 12 -- Ecological Information
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ECOLOGICAL DATA

Ingredient Name

Sodium Nitrite

Food Chain Concentration Potential	None
WATERFOWL TOXICITY	N/A
BOD	None
AQUATIC TOXICITY	17.1 ppm/24 hr/minnow

Sodium Triphosphate

Food Chain Concentration Potential	N/D
WATERFOWL TOXICITY	N/D
BOD	N/D
AQUATIC TOXICITY	N/D

Sodium Metasilicate

Food Chain Concentration Potential	None
WATERFOWL TOXICITY	N/A
BOD	None

Citric Acid AQUATIC TOXICITY 2320 ppm/96 hr/mosquito fish/TLM

 Food Chain Concentration Potential None

 WATERFOWL TOXICITY N/A

 BOD 40%

 AQUATIC TOXICITY 894 ppm/4 hr/goldfish

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Section 13 -- DISPOSAL CONSIDERATIONS
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Waste Classification: Non-regulated solid waste
Disposal Method: Whatever cannot be saved for recovery or recycling
should be handled as hazardous waste and sent to a RCRA approved waste
facility. Processing, use or contamination of this product may change the
waste management options. State and local disposal regulations may differ
from federal disposal regulations. Dispose of container and unused contents
in accordance with federal, state and local requirements.

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Section 14 -- TRANSPORTATION INFORMATION
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DOT: UN1479, Oxidizing substances, solid, n.o.s., (Sodium Nitrite), Class 5.1,
PGIII, LTD QTY, ERG#140
OCEAN (IMDG): UN1479, Oxidizing substances, solid, n.o.s., (Sodium Nitrite), Class 5.1,
PGIII, LTD QTY, EMS-No: F-A, S-Q
AIR (IATA): UN1479, Oxidizing substances, solid, n.o.s., (Sodium Nitrite), Class 5.1,
PGIII, LTD QTY, ERG#140

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Section 15 -- REGULATORY INFORMATION
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REGULATORY DATA
Ingredient Name

Sodium Nitrite		
SARA 313	Yes	
TSCA Inventory	Yes	
CERCLA RQ	100 lb.	
RCRA Code	N/A	
Sodium Triphosphate		
SARA 313	No	
TSCA Inventory	Yes	
CERCLA RQ	N/A	
RCRA Code	N/A	
Sodium Metasilicate		
SARA 313	No	
TSCA Inventory	Yes	
CERCLA RQ	N/A	
RCRA Code	N/A	
Citric Acid		
SARA 313	No	
TSCA Inventory	Yes	
CERCLA RQ	N/A	
RCRA Code	N/A	

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Section 16 -- OTHER INFORMATION
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This document is prepared pursuant to the OSHA Hazard Communication
Standard (29 CFR 1910.1200). The information herein is given in good faith,
but no warranty, expressed or implied is made. Consult RectorSeal for further
information: (713) 263-8001

MATERIAL SAFETY DATA SHEET

MSDS 0264

 =====
 Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	Steamaster Tablets	HMIS CODES	Health 2 Flammability 0 Reactivity 1
PRODUCT CODES	68732	PPI	B
CHEMICAL FAMILY	Organic/Inorganic		
USE	Boiler Water Treatment		
MANUFACTURER'S NAME	The RectorSeal Corporation 2601 Spenwick Drive Houston, Texas 77055 USA	EMERGENCY TELEPHONE NO.	Chemtrec 24 Hours (800) 424-9300
DATE OF PREPARATION	October 3, 2002	TECHNICAL SERVICE TELEPHONE NO.	(800) 231-3345

 =====
 Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS
44.04	7632-00-0	Sodium Nitrite	
		ACGIH TLV	N/D
		OSHA PEL	N/D
23.52	7758-29-4	Sodium Triphosphate	
		ACGIH TLV	N/D
		OSHA PEL	N/D
1.34	6834-92-0	Sodium Metasilicate	
		ACGIH TLV	N/D
		OSHA PEL	N/D
3.36	77-92-9	Citric Acid	
		ACGIH TLV	N/D
		OSHA PEL	N/D

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 Section 3 -- HAZARDS IDENTIFICATION

SUMMARY OF ACUTE HAZARDS

Harmful if swallowed, inhaled or absorbed through skin. Causes irritation to skin, eyes and respiratory tract.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

Toxic. Causes irritation to the respiratory tract and systemic poisoning with symptoms paralleling ingestion.

EYE CONTACT

May cause irritation, redness and pain.

SKIN CONTACT

Causes irritation, redness and pain. May be absorbed through the skin causing systemic poisoning; symptoms may parallel ingestion.

INGESTION

Toxic. Can irritate the mouth, esophagus, stomach, etc. Excessive amounts affect the blood and blood vessels. Signs and symptoms of nitrite poisoning include intense cyanosis, nausea, dizziness, vomiting, collapse, spasms of abdominal pain, rapid heart beat, irregular breathing, coma, convulsions, and death due to circulatory collapse. Estimated lethal dose 1 to 2 grams.

SUMMARY OF CHRONIC HAZARDS

Repeated exposure through any route may cause symptoms similar to acute toxicity.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin and respiratory system may have increased susceptibility to excessive exposure.

Section 4 -- FIRST AID MEASURES

- If INHALED: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.
- If on SKIN: Immediately wash with soap and water. Remove and wash any contaminated clothing.
- If in EYES: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.
- If SWALLOWED: If swallowed, call a physician or poison control immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
None	N/D	N/D

Note: Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Increases the flammability of any combustible material.

EXTINGUISHING MEDIA

Non-combustible. Use agents appropriate for surrounding fires.

SPECIAL FIRE FIGHTING PROCEDURES: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Decomposition of sodium nitrite may leave a caustic residue.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Contact with oxidizable substances may cause extremely violent combustion. May explode when heated to 537 C (1000 F) or on severe impact or on contact with cyanides, ammonium salts, cellulose, lithium, potassium plus ammonia, and sodium thiosulfate.

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Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Sweep up excess material to prevent footing hazard. Discard in trash.

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Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage and moisture. Isolate from any source of heat or ignition. Avoid storage on wood floors. Separate from incompatibles, combustibles, organic or other readily oxidizable materials. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing.

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Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): Normally none required. Use NIOSH/MSHA approved particulate respirator for nuisance dust.

VENTILATION - LOCAL EXHAUST: Acceptable

SPECIAL: N/A

MECHANICAL (GENERAL): Acceptable

OTHER: N/A

PROTECTIVE GLOVES: Wear rubber gloves.

EYE PROTECTION: Safety glasses (ANSI Z-87.1 or equivalent)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.

WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

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Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	N/A
SPECIFIC GRAVITY (H ₂ O = 1):	Soild
VAPOR PRESSURE (mm Hg):	N/A
MELTING POINT:	N/D
VAPOR DENSITY (AIR = 1):	N/A
EVAPORATION RATE (ETHYL ACETATE = 1):	N/A
APPEARANCE/ODOR:	Tablets / No distinct odor
SOLUBILITY IN WATER:	Soluble

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Section 10 -- STABILITY AND REACTIVITY

STABILITY: This material is stable in closed containers at room temperature. Material slowly oxidizes to sodium nitrate when exposed to air. Very hygroscopic.

CONDITIONS TO AVOID: Heat, flame, ignition sources, shock, friction, incompatibles.

INCOMPATIBILITY (MATERIALS TO AVOID): Reacts vigorously with reducing materials and is incompatible with many substances including ammonium salts, cellulose, cyanides, lithium, potassium plus ammonia, sodium thiosulfate, aminoguanide salts, butadiene, phthalic acid, phthalic anhydride, reductants, sodium amide, sodium disulphite, sodium thiocyanate, urea, wood and organic matter.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of nitrogen.

HAZARDOUS POLYMERIZATION: Will not occur.

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 Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

 TOXICOLOGY DATA

Ingredient Name

Sodium Nitrite

Oral-Rat LD50:85 mg/kg
 Inhalation-Rat LC50:5500 mg/m3

Sodium Triphosphate

Oral-Rat LD50:6500 mg/kg
 Inhalation-Rat LCLo:N/D

Sodium Metasilicate

Oral-Rat LD50:2000-3000 mg/kg
 Inhalation-Rat LCLo:N/D

Citric Acid

Oral-Rat LD50:3 g/kg
 Inhalation-Rat LCLo:N/D
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Section 12 -- Ecological Information

ECOLOGICAL DATA

Ingredient Name

Sodium Nitrite

Food Chain Concentration Potential	None
WATERFOWL TOXICITY	N/A
BOD	None
AQUATIC TOXICITY	17.1 ppm/24 hr/minnow

Sodium Triphosphate

Food Chain Concentration Potential	N/D
WATERFOWL TOXICITY	N/D
BOD	N/D
AQUATIC TOXICITY	N/D

Sodium Metasilicate

Food Chain Concentration Potential	None
WATERFOWL TOXICITY	N/A
BOD	None
AQUATIC TOXICITY	2320 ppm/96 hr/mosquito fish/TM

Citric Acid

Food Chain Concentration Potential	None
WATERFOWL TOXICITY	N/A
BOD	40%
AQUATIC TOXICITY	894 ppm/4 hr/goldfish

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 Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated solid waste
 Disposal Method: Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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 Section 14 -- TRANSPORTATION INFORMATION

DOT: Oxidizing substances, solid, n.o.s., (Sodium Nitrite), Class 5.1, UN1479, PGIII, LTD QTY, ERG#140
 OCEAN (IMDG): Oxidizing substances, solid, n.o.s., (Sodium Nitrite), Class 5.1, UN1479, PGIII, LTD QTY, IMDG#5163, EmS#5.1-11, MFAG#7560
 AIR (IATA): Oxidizing substances, solid, n.o.s., (Sodium Nitrite), Class 5.1, UN1479, PGIII, LTD QTY, ERG#140
 WHMIS (CANADA): Class C

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 Section 15 -- REGULATORY INFORMATION

REGULATORY DATA

Ingredient Name

Sodium Nitrite

SARA 313	Yes
TSCA Inventory	Yes
CERCLA RQ	100 lb.
RCRA Code	N/A

Sodium Triphosphate

SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	N/A
RCRA Code	N/A

Sodium Metasilicate

SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	N/A
RCRA Code	N/A

Citric Acid

SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	N/A

RCRA Code

N/A

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Section 16 -- OTHER INFORMATION

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