

Revision Date: 20-August-2012
Replaces: 7-Dec-2010

Section 1 - Chemical Product and Company Identification

Emergency Response No. (800) 255-3924 (ChemTel)

Product/Chemical Name: 447-LM
Product Description/Use: Closed Loop Water Treatment Additive
Corrosion and Scale Inhibitor
Company: U.S. Water Services
330 South Cleveland St
Cambridge, MN 55008

Section 2 - Composition/Information on Ingredients

Ingredient Name	CAS Number	Wt %	NIOSH REL	OSHA PEL
Sodium Nitrite	7632-00-0	38 – 39	NE	NE
Sodium Tetraborate Decahydrate	1303-96-4	2	5 mg/m ³	15 mg/m ³ (total dust) 5 mg/m ³ (resp dust)
Sodium Metaborate Dihydrate	16800-11-6	2	5 mg/m ³	15 mg/m ³ (total dust) 5 mg/m ³ (resp dust)
Potassium Hydroxide	1310-58-3	< 2	2 mg/m ³ (C)	NE
Sodium Tolyltriazole	64665-57-2	< 2	NE	NE

*NE = "Not Established"

Section 3 - Hazards Identification

Potential Health Effects

Primary Entry Routes: Eye and Skin Contact, Ingestion

Acute Effects: DANGER: Toxic. May be harmful or fatal if swallowed. May cause irritation to eyes and skin.

Eye: Causes irritation and burning sensation to eyes. May result in tissue damage and permanent eye injury if not removed promptly.

Skin: May cause irritation to skin, especially with prolonged contact.

Inhalation: Inhalation of mist may cause irritation of nose, throat and upper respiratory tract and may result in toxic effects similar to ingestion.

Ingestion: TOXIC. Ingestion may result in serious toxic effects including nausea, weakness, cyanosis, and possible death.

Carcinogenicity: No component of this product is listed as a known or suspected carcinogen by NTP, IARC, or OSHA.

Medical Conditions Aggravated by Long-term Exposure: None known

Chronic Effects: No expected long term health effects.

HMIS

Health	3	Serious hazard
Flammability	0	Will not burn
Physical Hazard	0	Stable
PPE	C	Goggles, gloves, apron

Section 4 - First Aid Measures

- Eye Contact:** Immediately flush eyes with plenty of running water for at least 15 minutes, holding eyelids open. Seek immediate medical attention.
- Skin Contact:** Wash affected area thoroughly with soap and water. Remove contaminated garments and wash or destroy. Seek medical attention if irritation develops.
- Inhalation:** Remove from contamination. If person has stopped breathing administer artificial respiration. Seek immediate medical attention.
- Ingestion:** If conscious, give plenty of water. Do not induce vomiting unless directed to do so by a physician. Seek immediate medical attention.

Section 5 - Fire-Fighting Measures

- Flash Point:** None
- Flash Point Method:** Pensky-Martens closed cup.
- Burning Rate:** Not applicable
- Auto-ignition Temperature:** Not applicable
- LEL:** Not applicable
- UEL:** Not applicable
- Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.
- Unusual Fire or Explosion Hazards:** None known.
- Hazardous Combustion Products:** Thermal decomposition under fire conditions may produce toxic nitrogen oxide fumes.
- Fire-Fighting Instructions:** Cool containers/exposed structures with water spray.
- Fire-Fighting Equipment:** For fires involving this material, do not enter any enclosed or confined fire spaces without proper protective equipment, such as self-contained breathing apparatus.

Section 6 - Accidental Release Measures

- Spill/Leak Procedures:** Wear appropriate protective gear.
- Small Quantities (1 gallon or less):** Absorb with inert material and place into closed container for proper disposal. Clean up spill area by flushing with water.
- Large Quantities (More than 1 gallon):** Contain spill or leak. Dike area if necessary to prevent spill from spreading or entering sewers and waterways. Recover as much as possible then absorb remainder with inert material. Place into closed container for proper disposal. After collection/absorption of spill, flush away remaining traces with large quantity of water.
- Regulatory Requirements:** Dispose of recovered materials in accordance with all applicable state and federal regulations.

Section 7 - Handling and Storage

- Handling Precautions:** Wear appropriate personal protective equipment. Do not get in eyes, on skin or on clothing. Do not taste or swallow. Avoid breathing mist. Use with adequate ventilation. **Do not mix with acids as toxic fumes may be produced.** Observe good personal hygiene and housekeeping practices to avoid accidental exposure.
- Storage Requirements:** Keep away from children. Store in closed container away from temperature extremes and incompatible materials, especially acids (see Section 10). Protect from freezing.
- Regulatory Requirements:** Store in properly labeled container in accordance with all local, state and federal guidelines.

Section 8 - Exposure Controls/Personal Protection

Engineering Controls: Provide local exhaust ventilation as needed to control misting.

Administrative Controls: No recommendations.

Respiratory Protection: Not required under normal use conditions. If needed, use MSHA/NIOSH approved respirator for dusts and mists. Seek professional advice prior to respirator selection and use. Follow all requirements of OSHA respirator regulations (29 CFR 1910.134).

Eye Protection: Wear chemical safety goggles or protective glasses with splash shields, per OSHA eye-and face-protection regulations (29 CFR 1910.133). Contact lenses should not be worn when handling any chemical product as they may trap chemicals that get in the eye, thus increasing the risk of eye damage.

Skin Protection: Wear chemically protective gloves and apron to prevent skin contact.

Safety Stations: Make emergency eyewash stations and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and personal protective equipment.

General Hygiene: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section – 9 Physical and Chemical Properties

Physical State: Liquid

Appearance: Clear, colorless to light yellow

Odor: Slightly pungent

Boiling Point: Not determined

Freezing/Melting Point: Not determined

Specific Gravity (H₂O=1 at 4°C): 1.36

PH: 11 – 12

Water Solubility: Complete

Vapor Pressure: Not determined

Vapor Density (Air=1): Similar to water

% Volatile: Not determined

Volatile Organic Content: 0% (w/w)

Evaporation Rate: Not determined

Section 10 - Stability and Reactivity

Stability: Product stable under normal storage and use conditions.

Polymerization: Hazardous polymerization will not occur.

Chemical Incompatibilities: Acids, ammonium compounds, cyanides, thiocyanates, thiosulfates. Contact with acids causes release of toxic oxides of nitrogen.

Conditions to Avoid: Excessive temperatures; contact with acids. Protect from freezing.

Hazardous Decomposition Products: None under normal storage and use conditions. See Chemical Incompatibilities above. May release toxic products under fire conditions. See Section 5.

Section 11 - Toxicological Information

Toxicity: No testing has been conducted with this product. However, the following data is available for sodium nitrite, which comprises 38-39% of this product.

Sodium Nitrite

Oral LD₅₀ (rat): 88 mg/kg (Moderately Toxic)

Carcinogenicity: No carcinogenic effects are known for the components of this product.

Mutagenicity: No mutagenic effects are known for the components of this product.

Teratogenicity: No teratogenic effects are known for the components of this product.

Section 12 - Ecological Information

Aquatic Toxicity:

SPECIES	ACUTE LC ₅₀ 48 Hr	ACUTE LC ₅₀ 96 Hr	ACUTE Survival NOEC	ACUTE Survival LOEC
Fathead Minnow (Pimephales promelas)	-	58.0 mg/L	60 mg/L	120 mg/L
Daphnia magna	14.0 mg/L	-	7.5 mg/L	15 mg/L

Bioaccumulation: Not determined

Environmental Degradation: Not determined

Soil Absorption/Mobility: No studies have been conducted for this product.

Section 13 - Disposal Considerations

Disposal: Review federal, state and local government requirements prior to disposal.

Disposal Regulatory Requirements: Discarded product, as sold, would not be considered a RCRA Hazardous Waste.

Container Cleaning and Disposal: Review federal, state and local government requirements prior to disposal.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Toxic Liquid, Inorganic, N.O.S.
Contains: Sodium Nitrite
Hazard Class: 6.1
ID No.: UN3287
Packing Group: III
Label Code: 6.1
HMIS Label: 3 0 0 C
Shipping Notations: Keep from freezing

Section 15 - Regulatory Information

EPA Regulations:

All components of this product are listed (or are not required to be listed) in the TSCA inventory.

RCRA Hazardous Waste Classification (40 CFR 261.): **Not Applicable**

RCRA Hazardous Waste Number (40 CFR 261.20-24): **Not Applicable**

SARA TITLE III –CERCLA LIST: This product contains the following CERCLA Listed hazardous substances.

	CAS #	Percent	RQ
Sodium Nitrite	7632-00-0	38 – 39	100 lbs
Potassium Hydroxide	1310-58-3	< 2	1,000 lbs

SARA TITLE III-TOXIC CHEMICAL LIST (Sec. 313): This product contains the following chemicals subject to routine annual toxic chemical release reporting.

	CAS #	Percent	RQ
Sodium Nitrite	7632-00-0	38 – 39	100 lbs

Material Safety Data Sheet

Product: **447-LM**

SARA TITLE III-EXTREMELY HAZARDOUS SUBSTANCE (Sec. 302/304): This product does not contain any extremely hazardous substances subject to the emergency planning requirements.

Section 16 - Other Information

Prepared By: U.S. Water Services

Revision Notes: Rewrite/reformat; all sections affected

Disclaimer:

USER'S RESPONSIBILITY

The information and recommendations contained herein cannot cover all possible situations which the user may experience during storage, handling and use of the product. Each aspect of your operation should be examined to determine if additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation.

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