2500

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Product Name: **2500**

Other means of identification: N/A

Synonyms: None known

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended Use: Industrial Water Treatment

Recommended restrictions: All other uses other than that prescribed by Watercare Industrial Services, Inc. are strictly prohibited.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Importer/Supplier/Distributor information

Company Name: Watercare Industrial Services, Inc.

Company Address: PO Box 464
Washougal, WA 98671, USA

Company Telephone Number: 360-835-7284

Emergency Phone Number: INFOTRAC: 1-800-535-5053

2. Hazard(s) identification

Classification of the chemical in accordance with the OSHA 29 CFR 1910.1200, Hazard Communication Standard (HAZCOM) 2012.

2.1 Classification of the Substance or Mixture

Physical hazards:
Oxidizing Liquids Category 3

Health hazards:
Acute Toxicity – Oral Category 4
Skin Corrosion/Irritation – Category 1
Eye Damage – Category 1

Hazard(s) not otherwise classified (HNOC): None Known.

2.2 Label Elements:

Pictograms:

Signal Word: DANGER

Hazard Phrases:
H272 – May intensify fire; oxidizer
H302 – Harmful if swallowed
H314 – Causes severe skin burns and eye damage
H318 – Causes serious eye damage

Precautionary Phrases:
Prevention:
P210: Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P220: Keep away from clothing and other combustible materials.
P221: Take any precaution to avoid mixing with combustibles.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P264: Wash thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.

Response:

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].

P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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.

P321 – Specific treatment (See sections 4-8 of this safety data sheet or any additional information on the product label).

P363 – Wash contaminated clothing before reuse.

P370 & P378: In case of fire: Use flooding amounts of water to extinguish.

Storage: P405 – Store locked up.

Disposal: P501 – Dispose of contents/container to a suitable disposal site, in accordance with applicable local/regional/national and international regulations.

2.3 Unknown Acute Toxicity: This product contains 23% ingredients with unknown acute toxicity dermal.
This product contains 1% ingredients with unknown acute toxicity inhalation.

3. Composition/information on ingredients

Mixture:

Ingredient	CAS Number	Concentration Wt. %
Sodium Nitrite	7632-00-0	<25
Sodium Borate	1303-96-4	<5

* The exact concentration of this ingredient is being withheld as a trade secret and will be disclosed to authorized interested parties in accordance with 29CFR §1910.1200(i).

The balance of ingredients are not classified as hazardous or are below the concentration limit to be classified as hazardous, under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

4. First-aid measures

4.1 Description of necessary measures

General advice:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: seek a doctor/hospital. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: This is a corrosive substance and it may be hazardous to the person providing aid to give mouth-to-mouth resuscitation. Maintain an open airway. Seek immediate medical advice/attention.

Skin contact: Immediately remove contaminated clothing and thoroughly wash [shower] affected area with water for at least 20 minutes. It is very important to remove the substance from the skin immediately. Seek immediate medical attention. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse. Contaminated clothing may be a fire risk when dry.

Eye contact: Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention (preferably from an ophthalmologist).

Ingestion: Seek immediate medical attention. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed

Inhalation: Vapors, liquid and mists are extremely corrosive to the nose, throat and mucus membranes. Bronchitis, pulmonary edema, and chemical pneumonitis may occur. Irritation, coughing, chest pain and difficulty in breathing may occur with brief exposure, while prolonged exposure may result in more severe irritation and tissue damage.

Skin Contact: Vapors, liquid and mists are corrosive to the skin. Vapors will severely irritate the skin, and liquid and mists will severely burn the skin. May cause permanent skin damage. A latent period may exist between exposure and sense of irritation.

Eye Contact: Vapors, liquid and mists are extremely corrosive to the eyes. Brief contact of the liquid or mists will severely damage the eyes and prolonged exposure may cause permanent eye injury which may be followed by blindness.

Ingestion: Harmful if swallowed. Vapors, liquid and mists are extremely corrosive to the mouth and throat. Swallowing the liquid burns the tissues, causes severe abdominal pain, nausea, vomiting, and collapse. Ingestion of sodium nitrite may cause methemoglobinemia. Initial manifestation of methemoglobinemia is cyanosis, characterized by navy lips, tongue and mucous membranes, with skin color being slate grey. Further manifestation is characterized by headache, weakness, dyspnea, dizziness, stupor, respiratory distress and death due to anoxia. If ingested, nitrates may be reduced to nitrites by bacteria in the digestive tract. Signs and symptoms of nitrite poisoning include methemoglobinemia, nausea, dizziness, increased heart rate, hypotension, fainting and, possibly shock.

Indication of any immediate medical attention and special treatment needed:

Corrosive by all exposure routes. Ingestion, skin and eye contact require immediate medical attention. Chemical eye burns may require extended irrigation. Aspiration of vomitus may cause lung injury. Use of gastric lavage or emesis may be contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissues along the digestive tract and danger or perforation. Pulmonary edema (fluid accumulation in the lungs) is a medical emergency. The symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Therefore, close medical observation is required following extreme exposure. Provide general supportive measures and treat symptomatically. Eye burns and Chemical Burns: Immediately flush with water. While flushing, remove clothes which do not adhere to affected areas. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm and under observation. Symptoms may be delayed.

Aggravated Medical Conditions: Pre-existing eye, skin or respiratory conditions.

Supplemental Health Information: The effects of long-term, low-level exposure to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the avoidance of all effects from repetitive acute exposures.

5. Fire-fighting measures

5.1 Extinguishing media:

Suitable and unsuitable extinguishing media: This product contains an oxidizer. Flooding amounts of water are most appropriate. Use water. Do not use dry chemical or foams. Do NOT get water inside containers.

5.2 Specific fire hazards due to the substance or mixture:

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors may spread along the ground and collect in low or confined areas. This substance may accelerate burning when involved in a fire. May ignite combustibles. Contact with some metals may evolve flammable hydrogen gas.

Hazardous Combustion Products:

During a fire: irritating, corrosive and toxic fumes, mist and gases may be generated including Carbon Oxides, Sodium Oxides, Sulfur Oxides, Potassium Oxides, Nitrogen Oxides, and Phosphorus Oxides.

5.3 Fire Fighting Instructions:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Containers close to fire should be removed immediately or cooled with water. Use water spray to keep fire-exposed containers cool. Use water with caution and in flooding amounts. Do NOT get water inside containers. Contact with some metals may evolve flammable hydrogen gas. During a fire: irritating, corrosive and toxic fumes, mist and gases may be generated including Carbon Oxides, Sodium Oxides, Sulfur Oxides, Potassium Oxides, Nitrogen Oxides, and Phosphorus Oxides. Continue to cool containers until well after fire is out. Extinguishing water from fire fighting may be strongly caustic. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Do not allow extinguishing water to enter drains, reach sewage or effluent systems.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Keep unnecessary personnel away. Wear recommended personal protective equipment (see Section 8). ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep combustibles away from spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate area. Do not breathe vapors/mist/aerosol/spray. Stop leak if you can do it without risk. DO NOT GET WATER INSIDE CONTAINERS. (ERG, 2016).

6.2 Environmental precautions:
Prevent entry into drains, sewer, water system or soil.

6.3 Methods and material for containment for cleaning up:
Stop the flow of material, if this can be done without risk. Dike the material if possible. Absorb using a non-combustible material like vermiculite or sand and place into containers for future disposal. DO NOT GET WATER INSIDE CONTAINERS. Following product recovery, flush area with water.

7. Handling and storage

7.1 Precautions for safe handling:
Use only with adequate ventilation. Wear recommended personal protective equipment (see Section 8). Never pour water into an acid or base. Minimize generation of mist/aerosol/vapor/spray. Do not breathe mist/aerosol/vapor/spray. Never add water to an acid or base. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Do not get this material on clothing. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Avoid release to the environment. Do not empty into drains.

7.2 Conditions for safe storage, including any incompatibilities:
Protect from freezing. Follow all SDS/label precautions even after container is emptied because it may retain product residues. For industrial use only. Store locked up. Store in original, tightly sealed container. Store in a cool, well-ventilated room, protected from direct sunlight. Store in a dry place. Store away from incompatible materials (See section 10 for incompatibles).

8. Exposure controls / personal protection equipment

8.1 Control parameters
Ingredients with established limits for occupational exposure are given below:

Ingredient	
Sodium Borate CAS-No. 1303-96-4	ACGIH TLV: 2mg/m³ ACGIH STEL: 6mg/m³ OSHA PEL 15mg/m³ total dust 5mg/m³ CA PEL: 5mg/m³

8.2 Engineering Controls:
Ensure adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Ensure that eye wash stations and chemical showers are accessible and in good working order.

8.3 Individual protection measure, such as personal protective equipment:

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridge as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Skin Protection:

Hand Protection: Suitable glove types are Polyvinyl chloride (PVC), Neoprene, Nitrile, Rubber (natural or latex) and Butyl rubber. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace**.**

Eye Protection: Tightly fitting safety goggles and Face shield. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

General hygiene considerations: Handle in accordance with good industrial hygiene and safety practice. Wash contaminated clothing before reuse.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	Clear, Colorless Liquid.
Color:	Clear, Colorless.
Odor:	No appreciable odor.
Odor threshold:	Not available.
pH:	11.4 +/- 0.5
Melting point:	Not available.
Freezing point:	Not available.
Initial boiling point:	224 ˚F
Flash point:	Not available.
Evaporation rate:	Not available.
Flammability (solid, gas):	Not applicable.
Upper flammability limits:	Not available.
Lower flammability limits:	Not available.
Upper explosive limits:	Not available.
Lower explosive limits:	Not available.
Relative density:	1.17
Vapor pressure:	Not available.
Vapor density:	Not available.
Solubility(ies):	Soluble in water complete.
Partition coefficient:	Not available.
Viscosity dynamic:	Not available.
Ignition temperature:	Not available.
Decomposition temperature:	Not available.

9.2 Other information: No additional information.

10. Stability and reactivity

Chemical Stability: This product is stable under recommended storage and handling conditions.

Reactivity: May ignite combustibles. The mixture contains an oxidizer which reacts with combustibles and reducing agents. May react with some metals to release dangerous hydrogen gas. Possibility of reaction in contact with incompatible materials.

Possibility of Hazardous Reactions: May ignite combustibles. The mixture contains an oxidizer which reacts with combustibles and reducing agents. May react with some metals to release dangerous hydrogen gas. Possibility of reaction in contact with incompatible materials.

Conditions to Avoid: Avoid direct sunlight. Avoid extremely high or low temperatures. Avoid sources of ignition, heat, open flame and sparks. Avoid contact with incompatible materials. Never add water directly to an Acid or Base.

Incompatibility: Do not add hot water to concentrated product. Incompatible with strong acids, strong bases, acidic materials, reactive metals, strong oxidizers, reducing agents, ammonium salts, ammonia compounds, amines, and cyanides. May ignite combustibles.

Hazardous decomposition products: During a fire: irritating, corrosive and toxic fumes, mist and gases may be generated including Carbon Oxides, Sodium Oxides, Sulfur Oxides, Potassium Oxides, Nitrogen Oxides, Nitrogen Compounds, and Phosphorus Oxides.

11. Toxicological information

11.1 Information on likely routes of exposure

Routes of Exposure: Inhalation, Ingestion, Skin and Eyes.

Target Organs: Skin, eyes, respiratory system, lungs, digestive tract

11.2 Symptoms related to the physical, chemical, and toxicological characteristics

Inhalation: Vapors, liquid and mists are extremely corrosive to the nose, throat and mucus membranes. Bronchitis, pulmonary edema, and chemical pneumonitis may occur. Irritation, coughing, chest pain and difficulty in breathing may occur with brief exposure, while prolonged exposure may result in more severe irritation and tissue damage.

Skin Contact: Vapors, liquid and mists are corrosive to the skin. Vapors will severely irritate the skin, and liquid and mists will severely burn the skin. May cause permanent skin damage. A latent period may exist between exposure and sense of irritation.

Eye Contact: Vapors, liquid and mists are extremely corrosive to the eyes. Brief contact of the liquid or mists will severely damage the eyes and prolonged exposure may cause permanent eye injury which may be followed by blindness.

Ingestion: Harmful if swallowed. Vapors, liquid and mists are extremely corrosive to the mouth and throat. Swallowing the liquid burns the tissues, causes severe abdominal pain, nausea, vomiting, and collapse. Ingestion of sodium nitrite may cause methemoglobinemia. Initial manifestation of methemoglobinemia is cyanosis, characterized by navy lips, tongue and mucous membranes, with skin color being slate grey. Further manifestation is characterized by headache, weakness, dyspnea, dizziness, stupor, respiratory distress and death due to anoxia. If ingested, nitrates may be reduced to nitrites by bacteria in the digestive tract. Signs and symptoms of nitrite poisoning include methemoglobinemia, nausea, dizziness, increased heart rate, hypotension, fainting and, possibly shock.

Delayed and immediate effects and chronic effects from short or long-term exposure:

Aggravated Medical Conditions: Pre-existing eye, skin or respiratory conditions.

Supplemental Health Information: The effects of long-term, low-level exposure to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the avoidance of all effects from repetitive acute exposures.

Acute Toxicity: Harmful if swallowed.

Skin Irritation and Corrosion: Causes severe skin burns.

Serious Eye Damage/ Eye Irritation: Causes serious eye damage.

Respiratory Sensitization: Does not meet the criteria for classification based on information on the product and its ingredients.

Skin Sensitization: Does not meet the criteria for classification based on information on the product and its ingredients.

Germ Cell Mutagenicity: Does not meet the criteria for classification based on information on the product and its ingredients.

Carcinogenicity: Sodium Nitrite is not considered a carcinogen. However, when sodium nitrite material comes in contact with secondary and tertiary amines, nitrosamines are produced. Nitrosamines are potentially carcinogenic.

Under ACGIH, IARC, NTP and OSHA, no ingredient in this product is present equal to or above 0.1 concentration that would be a confirmed, probable carcinogenic.

Reproductive Toxicity: Does not meet the criteria for classification based on information on the product and its ingredients.
Sodium Borate (CAS-No. 1303-96-4) Reproductive toxicity:
Classification = Reproductive toxin Category 1B based on EU CLP classification. Dietary levels of Boric Acid of 6,700 ppm in chronic feeding studies in rats and dogs produced testicular changes {Weir, Fisher, 1972}. In chronic feeding studies of mice on diets containing 5,000 ppm Boric Acid, testicular atrophy was present, while mice fed 2,500 ppm Sodium Tetraborate Pentahydrate showed no significant increase in testicular atrophy. In another chronic Boric Acid study, degeneration of seminiferous tubules was present together with a reduction of germ cells in mice fed 4,500 ppm Sodium Tetraborate Pentahydrate.
- Boric Acid at dietary levels of 1,000 ppm administered to pregnant female rats throughout gestation caused a slight reduction in fetal weight, but was considered close to the no observable affect level. Doses of 2,000 ppm and above caused fetal malformations and maternal toxicity. In mice, the no effect level for fetal weight reduction and maternal toxicity was 1,000 ppm Boric Acid. Fetal weight loss was noted at dietary levels of 2,000 ppm and above. Malformations (agenesis or shortening of the thirteenth rib) were seen at 4,000 ppm [Heindal et al., 1992]. The doses administered were many times in excess of those to which humans would normally be exposed.

Specific Target-Organ Toxicity – Single Exposure: Does not meet the criteria for classification based on information on the product and its ingredients.

Specific Target-Organ Toxicity – Repeated Exposure: Does not meet the criteria for classification based on information on the product and its ingredients.

Aspiration Hazard: Does not meet the criteria for classification based on information on the product and its ingredients.

Toxicity Data (Numerical Values such as Acute Toxicity Data) where available:

Sodium Nitrite (CAS-No. 7632-00-0)	
LD50 Oral - Rat	180 mg/kg.
LD50 Dermal	No data available
LC50 Inhalation- Rat	5.5 mg/l

Sodium Borate (CAS-No. 1303-96-4)	
LD50 Oral - Rat	2,600 mg/kg.
LD50 Dermal - Rabbit	No Data Available
LC50 Inhalation	No data available

12. Ecological information

No information available.

13. Disposal considerations

Consult appropriate Federal, State, or Local regulatory agencies to ascertain proper disposal procedures.

14. Transportation information

US 49CFR/DOT:

UN Number	UN 3098
Proper Shipping Name:	Oxidizing Liquid, Corrosive, n.o.s. (Sodium Nitrite, Sodium Hydroxide)
Hazard Class:	5.1 (8)
Packing Group:	III
Guide Number:	140

15. Regulatory information

Not meant to be all inclusive

Contact Watercare Industrial for regulatory information pertaining to a specific application.

Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):
None present or none present in regulated quantities.

SARA Section 313 (Specific toxic chemical listings):
Sodium Nitrite (CAS-No. 7632-00-0): Contains <25%

CERCLA RQ's:
Sodium Nitrite (CAS-No. 7632-00-0) RQ: 100 lbs. (Contains <25%)

16. Other information

Date Prepared: 1/7/98
Last Revision: 6/16/20

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