

## SECTION 1 – PRODUCT AND COMPANY INFORMATION

### Product Identifiers

**Product name:** 0081 Closed System Treatment Blend  
**Product Number:** 0081  
**Product Application:** Hydronic Boiler (Closed Recirculating Water Loop) Corrosion Inhibitor  
**Emergency telephone number:** CHEMTREC (800) 424-9300 Poison Control: 1-800-222-1222

## SECTION 2 – HAZARD IDENTIFICATION

### Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

**Signal Word:** DANGER

**Pictograms:** Oxidizer, Toxic, Environmental,  
Irritant, Health Hazard



**Physical Hazards:** Oxidizer (Category 3)

**Health Hazards:** Acute Oral Toxicity (Category 4)  
Reproductive Toxicity (Category 2)  
Serious Eye Damage / Eye Irritation Category 2A

**Environmental Hazards:** Acute aquatic toxicity (Category 1) Very toxic to aquatic life with long lasting effects.

### Hazard Statements:

- H272 May intensify fire; oxidizer.
- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.
- H361 Suspected of damaging fertility or the unborn child.
- H410 Very toxic to aquatic life with long lasting effects.

### Precautionary Statements:

#### Prevention:

- P102 Keep out of reach of children.
- P103 Read label before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P220 Keep/Store away from clothing/.../combustible materials.
- P221 Take any precaution to avoid mixing with combustibles.
- P264 Wash hands thoroughly after handling
- P270 Do not eat or drink or smoke when using this product
- P273 Avoid release to the environment
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P308/313 If exposed or concerned: Get medical advice/attention
- P305/P351/P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing and seek medical attention.
- P501 Dispose of contents / container in accordance with local / state / federal regulations.

### Response:

- P301 + P312 + P330 + P331 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. Do NOT induce vomiting.

P370/P378 In case of fire: Use Extinguishing Media detailed in Section 5 to extinguish.

P391 Collect spillage.

**Storage:**

P405 Store locked up

**Disposal:**

P501 Dispose of contents / container in accordance with local / state / federal regulations

**HNOC:**

HMIS Rating: Health hazard: 2 Flammability: 0 Physical Hazard 1 Personal Protection: D

NFPA Rating: Health hazard: 2 Fire Hazard: 0 Reactivity Hazard: 2 Special Hazard: Oxidizer

\* Hazards not otherwise classified (HNOC) or not covered by GHS.

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**SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS**

| <b>Hazardous Ingredient</b>       | <b>CAS</b> | <b>Wt%</b> |
|-----------------------------------|------------|------------|
| Sodium nitrite                    | 7632-00-0  | 61-66%     |
| Disodium tetraborate pentahydrate | 12179-04-3 | 9-12%      |
| Sodium tolyltriazole              | 64665-57-2 | 1-5%       |
| Sodium benzotriazole              | 15217-42-2 | 1-5%       |

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**SECTION 4 – FIRST AID MEASURES**

**Description of first aid measures**

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

P304/ P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P302/P352 IF ON SKIN: Wash with plenty of water

P333/P313 If skin irritation or rash occurs: Get medical attention.

P361/P364 Take off immediately all contaminated clothing and wash it before reuse.

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.

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

**Most important symptoms and effects, both acute and delayed:** High levels of sodium nitrite can cause methemoglobinemia, which first shows as cyanosis, a bluish tint to the skin. Seek medical attention immediately. Headache, dizziness, weakness, difficulty breathing may accompany the cyanosis.

**Information for Emergency Physician:** Treat symptomatically. Administer high flow Oxygen by nonrebreathing mask. Cyanosis is clinically detectable at about 15% methemoglobin conversion, headache, dizziness, weakness, dyspnea at 30-40%, can be life-threatening at 60+%. Give Methylene Blue 1% by slow IV infusion, 1-2 mg/kg body weight. Repeat PRN hourly to maximum dose of 7 mg/kg until cyanosis abates. Continue Oxygen administration at least two hours after Methylene Blue treatment. Consider transfer to facility capable of hemoperfusion to remove nitrates from the blood. Observation may be required for 2-3 weeks to detect onset of bronchiolitis fibrosa obliterans inflammation in the lungs.

## SECTION 5 – FIREFIGHTING MEASURES

|  |   |
|--|---|
| <b>Flammable Properties:</b>           | Non-Flammable   |
| <b>Explosive Properties:</b>           | N/A   |
| <b>Suitable Extinguishing media:</b>   | N/A   |
| <b>Unsuitable extinguishing media:</b> | Carbon Dioxide is ineffective on fire involving oxidizing agents. DO NOT use any dry powder extinguishing media that contains ammonium salts.                               |
| <b>Special hazards arising:</b>        | Oxidizing substance. Not combustible, but will support combustion of other materials. Overheating in fire conditions may produce toxic vapors including oxides of Nitrogen. |
| <b>Advice for firefighters:</b>        | Wear self-contained breathing apparatus for firefighting if necessary.  |
| <b>Further information:</b>            | If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA Fire Brigades Standard (29 CFR 1910.156).                                 |

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## SECTION 6 – ACCIDENTIAL RELEASE MEASURES

### **Personal precautions, protective equipment and emergency procedures:**

Shut down all possible sources of ignition. Clear area of all unnecessary personnel. Avoid skin & eye contact. Avoid inhaling dust and vapors. Advise emergency services if Reportable Quantity spill is likely or exceeded.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Avoid allowing runoff to enter ditches / waterways.

**Methods and materials for containment and cleaning up:** Keep in suitable, closed containers for disposal. Reference to other sections: For disposal see Section 13.

Product is water soluble and may be diluted and flushed as below described.

**Other Information:** This product is intended to be used in pretreatment of boiler water, and discharged to sanitary sewer in boiler blowdown water. Concentrated product may be diluted to a similar working concentration and flushed to sewer, or soaked up with compatible absorbent material and landfilled in accordance with local, state, and federal regulations.

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## SECTION 7 – HANDLING AND STORAGE

**Precautions for safe handling:** Avoid skin & eye contact. Avoid inhaling dust / vapors. Provide appropriate exhaust ventilation.

### **Conditions for safe storage, including any incompatibilities:**

P403/P233/P235 Store in a well-ventilated place. Keep container tightly closed. Keep Cool.

Store away from combustible materials, sources of heat or ignition, foodstuffs, acids, ammonium salts.

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## SECTION 8 – EXPOSURE CONTROL AND PERSONAL PROTECTION

**NOTE: Concentrated Sodium Nitrite is listed in the SUSMP Poisons Standard as a ‘Class 7’ Poison. (On a scale of 1-9, Class 2 lists common over-the-counter medicines, Class 9 lists drugs like Heroin & LSD) While this product is 61-66% rather than 100%, appropriate precautions should be taken when handling and when remediating spills.**

### **Control parameters**

**Components with workplace control parameters:** None listed.

### Exposure controls

**Appropriate engineering controls:** Handle in accordance with good industrial hygiene and safety practice. Use in well ventilated area. Avoid inhaling dust / vapors. Use local exhaust ventilation or wear appropriate organic acid filtered respirator. Wash hands before breaks and at the end of workday.

Personal protective equipment

**Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection:** Handle with gloves. 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.

**Respiratory protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with appropriate respirator cartridges 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).

**Control of environmental exposure:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Avoid allowing runoff to enter ditches / waterways.

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### SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Off-white granular/powder with minimal odor

**pH:** 10.2 in 1% solution

**Specific Gravity:** N/A

**Molecular Weight:** Mixture

**Water Solubility:** Complete

**Melt/Freeze Point:** Not Determined

**Boiling Point:** N/A

**Flammability:** Not Flammable

**Flash Point:** N/A

**Vapor Density:** NA

**Note:** Physical Data is typical values based on material tested, but may vary based on composition. Values should not be accepted as guaranteed for every lot or as specifications for this product.

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### SECTION 10 – STABILITY AND REACTIVITY

**Reactivity:** Oxidizing agent, avoid contact with reducing agents

**Chemical stability:** Oxidizing agent. Avoid contact with flammable or combustible materials.

**Possibility of hazardous reactions:** Oxidizing agent, supports combustion of other materials and can increase intensity of fire. Reacts with reducing agents, other oxidizing agents, combustible materials, acids, amines, and amine-containing materials. Hazardous polymerization will not occur.

**Conditions to avoid:** Avoid food contact. Avoid contact with other chemicals. Avoid contact with combustible substances.

**Incompatible materials:** Reducing agents, other oxidizing agents, acids, ammonium compounds, amines, and amine-containing materials, cyanides.

**Hazardous decomposition products:** Oxides of Nitrogen, disodium oxide.

## SECTION 11 – TOXICOLOGICAL INFORMATION

**Component:** Sodium Nitrite CAS 7632-00-0

**Information on toxicological effects:** Acute toxicity LD50 Oral - Mouse - 175 mg/kg.

**Inhalation:** No data available

**Skin corrosion/irritation:** No data available. Expected to be mildly irritating.

**Serious eye damage/eye irritation:** No data available. Expected to be mildly irritating.

**Respiratory or skin sensitization:** No ingredients are known skin sensitizers.

**Germ cell mutagenicity:** No data available

**Carcinogenicity: IARC, ACGIH, NTP, and OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. However, some nitrosamines have been found to cause cancer in animal experiments.

**Reproductive toxicity:** No data available

**Specific target organ toxicity - single exposure:** No data available

**Specific target organ toxicity - repeated exposure:** No data available

**Aspiration hazard:** No data available

**Additional Information:** None.

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## SECTION 12 – ECOLOGICAL INFORMATION

**Component:** Sodium Nitrite CAS 7632-00-0

**Toxicity:** Very ecotoxic in the aquatic environment.

**Toxicity to fish LC50 – Channel catfish (Ictalurus punctatus)** 0.048 mg/L - 96 h.

**Persistence and degradability:** Not anticipated during introduction at normal dilution levels

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available. Product is water soluble, so will likely move within the aquifer.

**Other adverse effects:** Harmful to aquatic life.

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## SECTION 13 – DISPOSAL CONSIDERATION

### Waste treatment methods:

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging: Dispose of as unused product.

This product is intended to be used in pretreatment of boiler water, and discharged to sanitary sewer in boiler blowdown water. Concentrated product may be diluted to a similar working concentration and flushed to sewer, or the concentrate soaked up with compatible absorbent material and landfilled in accordance with local, state, and federal regulations.

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## SECTION 14 – TRANSPORT INFORMATION (USDOT)

**Proper shipping Name:** Nitrites, Inorganic, Aqueous Solution, N.O.S. (Contains Sodium Nitrite)

**Hazard Class:** Oxidizer (5.1)

**UN/ID No** UN3219



|                                  |                      |
|----------------------------------|----------------------|
| <b>Packing Group</b>             | III                  |
| <b>Reportable Quantity (RQ)</b>  | 250 lbs (calculated) |
| <b>Maine Pollutant:</b>          | No                   |
| <b>Poison Inhalation Hazard:</b> | No                   |

## SECTION 15 – REGULATORY INFORMATION

**TSCA** (Toxic Substance Control Act): Components of this product are listed on the TSCA Inventory.

**DSL:** This product, or its components, are listed on or are exempt from the Canadian Domestic Substances List (DSL).

**CERCLA:** (Comprehensive Emergency Response Compensation, and Liability Act): Product is not found in “List of Hazardous Substances and Reportable Quantities” (40 CFR 302.4): None

**RCRA:** (Resource Conservation/Recovery Act): No

**SARA 302 Components:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards:** Acute Health Hazard

**STATES:** Massachusetts Right to Know Components, Pennsylvania Right To Know Components, New Jersey Right To Know Components: Potassium hydroxide CAS-No.1310-58-3

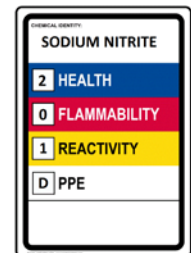
California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## SECTION 16 – OTHER INFORMATION

**Fire Protection Association (NFPA) Rating:**



**HMIS:**



**NSF Certification:** N/A

This Safety Data Sheet compiled from information provided by the raw chemical product manufacturers.

**Disclaimer:** The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use, from failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.