

## SECTION 1 – PRODUCT AND COMPANY INFORMATION

### Product Identifiers

**Product name:** 1248 WET LAY-UP CORROSION INHIBITOR

**Product Application:** Cooling Tower Treatment

**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**

Hazard statement(s)

H361 Suspected of damaging fertility or the unborn child.

### Precautionary Statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant. Very toxic to aquatic life

P264 - Wash hands, forearms, and exposed areas thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P273 - Avoid release to the environment.

P280 - Wear eye protection, protective clothing, protective gloves.

P301+P310 - IF SWALLOWED: Immediately call a poison center or doctor.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 - Specific treatment (see section 4 on this SDS). P330 - Rinse mouth.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P391 - Collect spillage. P405 - Store locked up.

P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

**Environmental Hazards:** Acute aquatic toxicity (Category 1)

**HNOC:** HMIS Rating: Health hazard:3 Chronic Health Hazard: Flammability: 0 Physical Hazard 0

NFPA Rating: Health hazard: 3 Fire Hazard: 0 Reactivity Hazard: 0

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



## SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredient	CAS	Wt%
Sodium Nitrite	7632-00-0	1-5%
Boric acid	005-007-00-2	<2%

Disodium tetraborate pentahydrate 12179-04-3 <2%

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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.

**If inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact:** Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

**If swallowed:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Most important symptoms and effects, both acute and delayed:** The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

**Indication of any immediate medical attention and special treatment needed:** None known.

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## SECTION 5 – FIREFIGHTING MEASURES

**Flammable Properties:** Non-Flammable

**Explosive Properties:** Risk of explosion if heated under confinement.

**Suitable Extinguishing media:** Water spray, fog.

**Unsuitable extinguishing media:** Do not use carbon dioxide. Do not use ABC dry chemical agents. Do not use a heavy water stream. Use of heavy stream of water may spread fire.

**Special hazards arising from the substance or mixture:** Overheating in fire conditions may produce POISONOUS GASES. Sodium Hydroxide in contact with water or moisture may generate enough heat to ignite combustibles.

**Advice for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary.

**Further information:** 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:** Wear respiratory protection. Avoid dust formation. Avoid breathing vapor, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see Section 8.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**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 absorbent material and landfilled in accordance with local, state, and federal regulations.

## SECTION 7 – HANDLING AND STORAGE

**Precautions for safe handling:** Avoid contact with skin and eyes. Avoid formation of aerosols. Provide appropriate exhaust ventilation. For precautions see Section 2.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed in a dry and well-ventilated place. Store as a non-combustible, corrosive hazardous materials

## SECTION 8 – EXPOSURE CONTROL AND PERSONAL PROTECTION

### Control parameters

<b>Sodium Nitrite</b>	7632-00-0	Contains no substances with occupational exposure limit values.		
<b>Boric acid</b>	10043-35-3	TWA	2.0 MG/M3	USA. ACGIH Threshold Limit Values
		Upper Respiratory Tract irritation Not classifiable as a human carcinogen varies		
		STEL	6 mg/m3	USA. ACGIH Threshold Limit Values
		Upper Respiratory Tract irritation Not classifiable as a human carcinogen varies		
<b>Disodium tetraborate pentahydrate</b>	12179-04-3	ACGIH	2 mg/m3	8-hr TWA OEL (mg/m3) inhalable fraction – Borate Compounds, inorganic
		ACGIH	6 mg/m3	15 min STEL (mg/m3) inhalable fraction – Borate Compounds, inorganic
		OSHA/PEL (total dust)	15 mg/m3	Particulate Not Otherwise Classified or Nuisance Dust
		OSHA/PEL (respirable dust)	5 mg/m3	Particulate Not Otherwise Classified or Nuisance Dust
		Cal OSHA/PEL	5 mg/m3	Particulate Not Otherwise Classified or Nuisance Dust

### Exposure controls

**Appropriate engineering controls:** Handle in accordance with good industrial hygiene and safety practice. 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 particle respirator type N100 (US) or type P3 (EN 143) 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. Discharge into the environment must be avoided.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Dark amber liquid with woody odor

**pH:** 8.0

**Specific Gravity:** 1.152

**Molecular Weight:** Mixture

**Water Solubility:** Complete

**Melt/Freeze Point:** Not Determined

**Boiling Point:** 110 C / 230 F

**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.

## SECTION 10 – STABILITY AND REACTIVITY

**Reactivity:** No data available

**Chemical stability:** Stable under normal conditions of use and storage

**Possibility of hazardous reactions:** No data available

**Conditions to avoid:** None known

**Incompatible materials:** Strong acids and oxidizers.

**Hazardous decomposition products:** Thermal decomposition generates nitrogen oxides.

## SECTION 11 – TOXICOLOGICAL INFORMATION

<b>Component: Sodium nitrite CAS 7632-00-0</b>	
Acute Oral Toxicity	LD50 Oral - rat - 157.9 mg/kg
Acute inhalation toxicity	No data available
Acute Dermal Toxicity	No data available
Eye irritation	Moderate eye irritation - 24 h

Target Organ Systemic Toxicant -Single exposure	No data available
Target Organ Systemic Toxicant - Repeated exposure	No data available
Skin corrosion/irritation:	No skin irritation - 48 h
Inhalation	No data available
Respiratory or skin sensitization:	No data available
Reproductive toxicity:	No data available
Carcinogenicity	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.
Aspiration hazard:	No data available
Germ cell mutagenicity:	No data available

**Additional Information**

RTECS: RA1225000

Headache, Nausea, Incoordination., Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

<b>Component: Boric Acid CAS 005-007-00-2</b>	
Acute Oral Toxicity	LD50 Oral - Rat - 2,660 mg/kg
Acute inhalation toxicity	No data available
Acute Dermal Toxicity	No data available
Eye irritation	No data available
Target Organ Systemic Toxicant -Single exposure	No data available
Target Organ Systemic Toxicant - Repeated exposure	No data available
Skin corrosion/irritation:	No data available
Inhalation	No data available
Respiratory or skin sensitization:	No data available
Reproductive toxicity:	In animal testing, risk of impaired fertility was shown only after administration of very high doses of this substance.
Carcinogenicity	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.,NTP or IARC
Aspiration hazard:	No data available
Germ cell mutagenicity:	No data available

**Additional Information**

RTECS: ED4550000

Toxicity reported for borates in humans: ingestion or absorption may cause nausea, vomiting, diarrhea, abdominal cramps, and erythematous lesions on the skin and mucous membranes. Other symptoms include: circulatory collapse, tachycardia, cyanosis, delirium, convulsions, and coma. Death has been reported to occur in infants from less than 5 grams and in adults from 5 to 20 grams.

Liver - Irregularities - Based on Human Evidence

Liver - Irregularities - Based on Human Evidence

<b>Component: Disodium tetraborate pentahydrate CAS 12179-04-3</b>	
Acute Oral Toxicity	Low acute oral toxicity. LD50 in rats is 3,305 mg/kg of body weight.
Acute inhalation toxicity	Low acute inhalation toxicity; LC50 in rats is > 2.0 mg/l (or g/m <sup>3</sup> ). Based on the available data, the classification
Acute Dermal Toxicity	Low acute dermal toxicity; LD50 in rabbits is > 2,000 mg/kg of body weight. Poorly absorbed through intact skin.
Eye irritation	Irritating, fully reversible in 14 days.
Target Organ Systemic Toxicant -Single exposure	The maximum exposure of 1704 mg/m <sup>3</sup> resulted in a reduced respiratory rate of 33%, graded as moderate irritation. The lowest exposure tested of 186 mg/m <sup>3</sup> sodium tetraborate pentahydrate resulted in a reduced respiration rate of 11%, graded as no irritation. Based on the available data, the classification criteria are not met.
Target Organ Systemic Toxicant - Repeated exposure	A NOAEL of 17.5 mg B/kg bw/day equivalent to 118 mg sodium tetraborate pentahydrate/kg bw/day was determined in a chronic feeding study (2 years) in rats and is based on testes effects. Other effects (kidney, haemopoietic system) are regarded only at even higher dose levels. Based on the available data, the classification criteria are not met
Skin corrosion/irritation:	Mean Primary Irritation Score: 0. Based on the available data, the classification criteria are not met.
Inhalation	No data available
Respiratory or skin sensitization:	Not a skin sensitizer. No respiratory sensitisation studies have been conducted. There are no data to suggest that disodium tetraborates are respiratory sensitizers.
Reproductive toxicity:	NOAEL in rats for effects on fertility in males is 100 mg boric acid/kg bw and 155 mg sodium tetraborate decahydrate/kg bw; equivalent to 17.5 mg B/kg bw.
Carcinogenicity	No evidence of carcinogenicity (based on boric acid).
Aspiration hazard:	No data available
Germ cell mutagenicity:	Not mutagenic (based on boric acid). Based on the available data, the classification criteria are not met.

**SECTION 12 – ECOLOGICAL INFORMATION**

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

Toxicity, Fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 0.94 - 1.92 mg/l - 96.0 h
Toxicity, invertebrates	EC50 - Daphnia magna (Water flea) - 12.5 mg/l - 48 h
Toxicity, Algae	No data available
Bioaccumulation	No data available
Mobility	No data available. Product is water soluble, so will likely move within the aquifer.
Biodegradability	The methods for determining biodegradability are not applicable to inorganic substances
Biochemical OxygenDemand (BOD)	No data available
Other adverse effects:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

**Component: Boric Acid CAS 005-007-00-2**

EcoToxicity	No data available
Toxicity, Fish	LC50 - Ptychocheilus lucius - 279 mg/l - 96 h LC0 - Lepomis macrochirus (Bluegill) - > 1,021 mg/l - 96 h
Toxicity, invertebrates	LC50 - Daphnia magna (Water flea) - 53.2 mg/l - 21 d
Toxicity, Algae	No data available
Bioaccumulation	No data available
Mobility	No data available
Biodegradability	No data available
Biochemical OxygenDemand (BOD)	No data available
Other adverse effects:	No data available

**Component: Disodium tetraborate pentahydrate CAS 12179-04-3**

Toxicity, Fish	EC10 2.9 mg B/L (Micropterus salmoides) to 17 mg B/L (Carassius auratus)
Toxicity, invertebrates	EC10 5.7 mg B/L (Daphnia magna) to 32 mg B/L (Chironomus riparius)
Toxicity, Algae	EC10 10 mg B/L (Chlorella pyrenoidosa) to 50 mg B/L (Anacystis nidulans)
Ecotoxicity	Based on the acute data for freshwater species, this substance is not classified as hazardous to the environment.
Bioaccumulation	This product will undergo hydrolysis in water to form undissociated boric acid. Boric acid will not biomagnify through the foodchain. Octanol/Water partition coefficient: Log Pow = -0.7570 @ 25°C (based on boric acid)
Mobility	The product is soluble in water and is leachable through normal soil. Adsorption to soils or sediments is insignificant.
Biodegradability	Biodegradation is not an applicable endpoint since the product is an inorganic substance

## 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.

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### 14. Transport information (USDOT):

<b>Proper shipping Name:</b>	Proprietary Cooling Water Treatment Blend
<b>Hazard Class:</b>	Non-Hazardous
<b>UN/ID No</b>	None
<b>Packing Group</b>	None
<b>Reportable Quantity (RQ)</b>	None
<b>Description:</b>	N/A

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## 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:** Listed on United States SARA Section 313

**SARA 311/312 Hazards:** Reactive hazard, Immediate (acute) health hazard \



**STATES:** Massachusetts Right to Know Components, Pennsylvania Right To Know Components, New Jersey Right To Know Components: **Sodium nitrite (7632-00-0)**  
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.

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## SECTION 16 – OTHER INFORMATION

### Fire Protection Association (NFPA) Ratings:

**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.