



MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product Name: Quadrasperse®CL-4882
Manufacturer's Name: ChemTreat, Inc.
Emergency Telephone Number: (800) 424-9300
Address (Corporate Headquarters): 4461 Cox Road, Glen Allen, VA 23060
Telephone Number for Information: (800) 648-4579
Date of MSDS: September 24, 2003

Section 2. Composition/Hazardous Ingredients

| Component | CAS Registry # | Wt. % |
|---|----------------|--------|
| Potassium hydroxide | 1310-58-3 | 1 - 10 |
| Tetrapotassium pyrophosphate | 7320-34-5 | 1 - 10 |
| Tolyltriazole, sodium salt | 64665-57-2 | 1 - 10 |
| 2-Phosphono-1,2,4-butanecarboxylic acid | 37971-36-1 | 1 - 10 |

Section 3. Hazards Identification

Emergency Overview: Clear amber liquid; mild odor. Not flammable.

Potential Health Effects:

Eyes - Will cause corrosive effects (burns or irreversible damage) to the eyes.

Skin - Will cause corrosive effects (burns or irreversible damage) to the skin.

Inhalation - Exposure to vapor, mist, or liquid can produce burns of the respiratory tract. Severe exposures could result in chemical pneumonia.

Ingestion - Will cause corrosive effects (burns or irreversible damage) to the mouth, throat or digestive tract.

Chronic Effects/Carcinogenicity: No information found on significant long-term effects.

Section 4. First Aid Measures

Inhalation: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get immediate medical attention.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of entire eye surface. Get immediate medical attention.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly wash or discard clothing and shoes before reuse. Get medical attention immediately.

Ingestion: Do not induce vomiting. Give victim water or milk to drink. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Section 5. Fire Fighting Measures

Flammable Properties: Not flammable.

Suitable Extinguishing Media: Use extinguishing media appropriate to the surrounding fire.

Fire & Explosion Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Protective Equipment: Wear full protective clothing including a positive-pressure, NIOSH-approved, self-contained breathing apparatus.

Section 6. Accidental Release Measures

Small Spill: Construct temporary dikes of dirt, sand, or any readily available inert material to prevent spreading of the material. Wearing appropriate personal protective equipment, move the leaking container to a containment area or plug the leak. Absorb on inert material, then shovel up and dispose of according to local, state, federal regulations.

Large Spill: Construct temporary dikes of dirt, sand, or any readily available inert material to prevent spreading of the product. Wearing appropriate personal protective equipment, close or cap valves and/or block or plug hold in leaking container and transfer to another container for proper disposal.

Section 7. Handling and Storage

Do not get in eyes, or on skin and clothing. Wash thoroughly after handling. Use only in a well-ventilated area. Keep from freezing. Keep container securely closed when not in use. Label precautions also apply to empty container. Recondition or dispose of empty containers in accordance with government regulations. For industrial use only.

Section 8. Exposure Controls/Personal Protection

Use protective equipment in accordance with 29 CFR 1910 Subpart I. Good general ventilation should be sufficient to control airborne levels. Wear chemical splash goggles or safety glasses with full-face shield. Wear rubber gloves. Wash them after each use and replace as necessary. If conditions warrant, wear impervious protective clothing such as boots, aprons, and coveralls to prevent skin contact. Maintain eyewash fountain and quick-drench facilities in work area.

Section 9. Physical and Chemical Properties

Appearance: Clear amber

Boiling Point: ~ 212°F

Evaporation Rate: As water

Freezing Point: 23°F

Melting Point: N/A

Molecular Weight: Mixture

Physical state: Liquid

Solubility in Water: Complete

Specific Gravity: ~1.216

Vapor Density: N/D

Vapor Pressure: As water

Viscosity: N/D

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Odor: Mild
pH: ~ 13.0

% VOCs: None

Section 10. Stability and Reactivity

Chemical Stability: Stable at normal temperatures and pressures.

Incompatibility: Acids and strong oxidizers.

Hazardous Decomposition Products: Oxides of carbon; oxides of nitrogen

Hazardous Polymerization: Will not occur.

Section 11. Toxicological Information

Potassium hydroxide Oral LD50 = 365 mg/kg; Dermal LD50 = >2 g/kg (rabbits); TLV = 2 mg/m³
ACGIH.

Tetrapotassium pyrophosphate Oral LD50 = 2,980 mg/kg (rats); Dermal LD50 = >7,940 mg/kg

Tolyltriazole, sodium salt Oral LD50 = 2,810 mg/kg (rats)

Section 12. Ecological Information

Not tested.

Section 13. Disposal Considerations

Observe all federal, state and local regulations when disposing of this product as unlisted hazardous waste, characteristic of corrosivity D002.

Section 14. Transport Information (not meant to be all inclusive)

D.O.T. Shipping Name: Potassium hydroxide solution

Hazard Class: 8 (Corrosive); UN1814; PG II

Section 15. Regulatory Information (Not meant to be all inclusive - selected regulation represented)

TSCA Status: All ingredients listed

CERCLA Reportable Quantity: Potassium hydroxide - 1,000 lbs.

SARA Title III:

Section 302 Extremely Hazardous Substances: None

Section 313 Toxic Chemicals: None

CALIFORNIA PROPOSITION 65: None

Section 16. Other Information

Hazard (NFPA) Rating:

Health 3

Flammability 0

Reactivity 1

SARA Hazard Categories - Section 311/312

Acute - Yes

Chronic - No

Fire - No

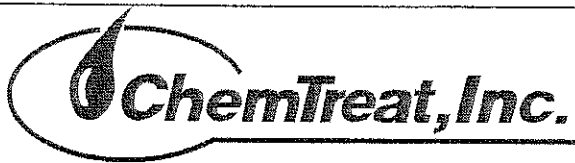
Reactive - No

Sudden release - No

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Product Data

COOLING WATER
TREATMENT

CHEMTREAT CL-4882

GENERAL DESCRIPTION

ChemTreat CL-4882 is a synergistic blend of polymeric antiscalents, phosphonate, phosphate, and organo nitrogen corrosion inhibitors, specifically designed to reduce corrosion and fouling of heat transfer surfaces. ChemTreat CL-4882 effectively inhibits formation of calcium phosphate, calcium carbonate, and iron oxide deposits by a combination of crystal modification, dispersion, and molar sequestration. The organic corrosion inhibitor effectively minimizes copper alloy corrosion and galvanic corrosion induced by bi-metallic coupling. ChemTreat CL-4882 is formulated with the highly effective Quadrasperse® quadpolymer and is well suited for systems containing high temperature/high stress heat transfer conditions.

TYPICAL PHYSICAL PROPERTIES

| | |
|--------------------|---------------------|
| Form | Clear, amber liquid |
| Odor..... | Mild |
| pH..... | ~13.0 |
| Density | 10.14 pounds/gallon |
| Freeze Point | ~23°F |

DOSAGE & FEEDING

The dosage of ChemTreat CL-4882 will vary depending upon the system being treated and water composition. CHEMTREAT CL-4882 can be measured using the PolyTrak® test kit, Part Number PTK-3. Your ChemTreat technical representative will evaluate system requirements and determine the proper product feed rate for optimum results.

SAFETY PRECAUTIONS

For specific information on handling, safety and first aid, please review the product's Material Safety Data Sheet.

SHIPPING

ChemTreat CL-4882 is available in 55-gallon drums, 300-gallon returnable totes, and in bulk.