

## CT-200 COOLING WATER TREATMENT

### APPLICATION

CH<sub>2</sub>O Cooling Water Treatment products are designed to reduce generalized corrosion and mineral deposition in evaporative cooling systems. Excessive corrosion can result in loss of system integrity and mineral deposits reducing system efficiency.

Product performance is dependent upon maintaining proper chemical residuals, system operation, design, cleanliness, metallurgy, and water quality. For optimal results the following actions should be taken by qualified operational personnel:

- initial system cleaning and passivation;
- periodic inspections of all system components;
- maintaining systems free from particulate matter and sludge accumulations;
- insuring proper chemical feed rates & system bleed-off;
- control of biological organisms accompanied by periodic biological testing; and,
- daily testing and recording of chemical residuals.

If problems are encountered maintaining product residuals, additional analytical testing may be required. At your request a CH<sub>2</sub>O Water Treatment Specialist may assist in performing these services.

Product **CT-200** is a corrosion inhibitor based on film-forming amines and phosphono-carboxylates to be used in semi-open cooling systems, where metal surfaces have to be protected from corrosion and deposits caused by hard water. **CT-200** is suitable for use in cooling systems that use hard or soft water.

**CT-200** should always be applied as a concentrate, dilution is not recommended.

All parts of the dosing equipment coming into contact with the product must be made of PE, PVC, EPDM, or Teflon. The concentrated product is not compatible with Viton.

### SAFETY & HANDLING PROCEDURE

This product is an alkaline liquid. When handling the product concentrate, minimum required safety gear is safety glasses and impervious gloves. Read and thoroughly understand the SDS before handling this product.

### Seller Warranty

CH<sub>2</sub>O brand test reagent refills are available through your sales representative at no charge. Customers are required to confirm product compatibility via a control test for their specific application. CH<sub>2</sub>O recommends that you perform regular/daily testing to control chemical levels and cycles of concentration within established limits. Additional tests may be performed at your request. Test reports reflect conditions at the point when the analysis was performed. Results will change over time and with varying operating conditions.

Seller warrants that this product conforms to its chemical description and is reasonably fit for the purpose referred to in the directions for use when used in accordance with the directions under normal conditions. Buyer assumes the risk of any use contrary to such directions. Seller makes no other warranty or representation of any kind, express or implied, concerning the product, including NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OF THE GOODS FOR ANY OTHER PARTICULAR PURPOSE. No such warranties shall be implied by law and no agent of seller is authorized to alter this warranty in any way except in writing with a specific reference to this warranty. The exclusive remedy against seller shall be a claim for damages not to exceed the purchase price of the product, without regard to whether such a claim is based upon breach of warranty or tort. Jurisdiction for any issues arising from or relating to this product shall be in the courts of the State of Washington and the venue shall be Thurston County. Any controversy or claim arising out of or relating to this contract, or breach thereof, shall be settled by arbitration in accordance with the rules and procedures as stated in RCW 7.06 and shall be binding upon both parties without right to appeal, and judgment upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.

Applies to all products sold by CH<sub>2</sub>O, Inc., and is hereby communicated to all of its customers as a condition of sale. Use of CH<sub>2</sub>O products is subject to the Standard Terms and Conditions as listed on CH<sub>2</sub>O, Inc.'s website at: [www.ch2o.com](http://www.ch2o.com).

### FEEDING TECHNIQUE

**CT-200** should be added by an automatic dosing system where the dosage is proportional to the make-up water and depends on the cycles of concentration.

### CONTROL

Add between 20 - 50 ppm of makeup water. The product residual can be determined from the phosphonate concentration or the filming amine concentration. When dosed at 50 ppm, there should be around 1.0 ppm of phosphate (via UV conversion method).

Contact your CH<sub>2</sub>O representative for further information on analytical testing. Daily testing is recommended to maintain proper control. Failure to monitor and maintain treatment levels can cause damage. It is the customer's responsibility to monitor and maintain treatment levels.

### DOSAGE

The dosage depends on many factors, such as concentration ratio, holding time index, thermal load, total alkalinity, carbonate hardness, and chloride content. Without pH regulation, the concentration cycles must maintain a maximum m-alkalinity value of 400 ppm and total hardness of 1220 ppm. Regulation of pH may be necessary when the m-alkalinity of the makeup water is higher than 300 ppm. With pH regulation below 8, the concentration cycles must maintain a maximum m-alkalinity value of 200 ppm and total hardness of 1200 ppm. Daily testing is recommended to maintain proper control. Failure to monitor and maintain treatment levels can cause damage. It is the customer's responsibility to monitor and maintain treatment levels with support from a CH<sub>2</sub>O sales representative.

**Note:** Foaming may occur if **CT-200** is used in conjunction with other scale inhibitors. **CT-200** is not recommended for use in conjunction with **Bio-Max 15**, or **Bio-Dispersants**.

### PHYSICAL PROPERTIES

pH of 1% Solution..... 10 - 11  
Pounds per Gallon..... 8.6 – 9.1  
Physical Appearance..... Colorless to Yellow Liquid