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**Product  
Bulletin**

# Aqua-Clear 15

## CHLORINE DIOXIDE PRECURSOR FOR MICROBIAL CONTROL IN WATER SYSTEMS

### APPLICATION

**AQUA-CLEAR 15** is the oxidizer portion of a highly-effective disinfectant that is intended to be generated on-site with one or two other chemicals (activators). Solutions produced from **AQUA-CLEAR 15** are far more effective disinfectants in the presence of organic matter than are chlorine and hypochlorite solutions. While chlorine solutions add a permanent chlorine atom to organic molecules, yielding chlorinated by-products that are hazardous to health, **AQUA-CLEAR 15** disinfecting solutions work by removing an electron, thus eliminating the generation of toxic chlorinated by-products. This lack of generating toxic chlorinated by-products makes **AQUA-CLEAR 15** disinfectant solutions an environmentally friendly choice for your disinfection needs.

The efficacy of disinfecting solutions generated from **AQUA-CLEAR 15** and an activator are not appreciably changed by varying pH, whereas the efficacy of chlorine and hypochlorite solutions diminish greatly with higher pH values.

### WATERBORNE PATHOGENS

Legionella bacteria and other pathogens may be present in water systems. Application of a microbicide does not guarantee the absence of such pathogens, nor is it possible or reasonable to eliminate all risk of infection. Users should develop a comprehensive water management plan in accordance with ANSI/ASHRAE Standard 188, OSHA guidelines (OSHA Technical Manual Section III: Chapter 7), and other guidelines applicable to the specific facility/system. CH<sub>2</sub>O, Inc. recommends that testing for legionella bacteria be incorporated in the facility's water management plan.

### DIRECTIONS FOR USE

The disinfectant that is produced from **AQUA-CLEAR 15** can be used for potable water and wastewater disinfection. Residual disinfectant and disinfection by products must be monitored for potable water applications as required by the National Primary Drinking Water Regulations (40 CFR Part 141) and state drinking water standards.

The disinfectant produced from **AQUA-CLEAR 15** can also be used for microbial control in typical food processing water systems such as flume transport, chill water systems, hydro-coolers, beverage and brewery pasteurizers and bottle rinsing systems.

When the disinfectant produced from **AQUA-CLEAR 15** will be used in general industrial process water such as recirculating cooling tower for the control of microbial slime, a residual of 0.25 to 5.0 ppm chlorine dioxide will be required. The dosage of **AQUA-CLEAR 15** needed to achieve these levels will vary widely depending on the exact application.

### SAFETY & HANDLING PROCEDURE

**AQUA-CLEAR 15** contains a strong oxidizing agent. Mixing this product with acids, alcohol, or other chemicals may cause the evolution of a hazardous gas mixture, which is toxic and may be explosive. Use only thoroughly cleaned, dry utensils (transfer pump, storage container, etc.) when handling, as contamination may start a chemical reaction with generation of heat, liberation of hazardous gases and possible fire/explosion.

This product contains a chemical that is degraded by heat and exposure to UV light (sunlight). Product should be stored inside, out of sunlight exposure, unless the container is open, and the product is on-line and in use.

### FEEDING TECHNIQUE

Combine this product with one of the CH<sub>2</sub>O acid/activator products at a 1:1 ratio using CH<sub>2</sub>O automated metering equipment. Inject the reacted solution directly into the water system. Never mix this product without the use of properly tested metering equipment.

Do not get product in eyes, skin, or on clothing. Safety glasses and impervious gloves must be worn when handling the concentrated product. Exposure to concentrated product can cause severe irritation with potential burns upon prolonged or repeated contact.

### CONTROL

The chemical residual that should be maintained must be based upon the specific label application instructions. 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. Additional testing may be performed upon request.

Use only with CH<sub>2</sub>O operating equipment. A control test is necessary for individual applications to determine tolerance. Customers shall set treatment levels based on their control test results.

### REGULATORY APPROVAL

**AQUA-CLEAR 15** is federally listed under the registration number 43553-34. **AQUA-CLEAR 15** is registered with the WSDA Organic Program (product #1363). All organic use should be in compliance with the listing as indicated on the Brand Name Material List.

### PHYSICAL PROPERTIES

Appearance ..... Colorless to Lt. Greenish Liquid  
Odor ..... Mild  
Foam ..... None  
Pounds per Gallon ..... 9.1-9.6  
pH of Use Solution ..... Variable

### 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).



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