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Product Bulletin

AV 2019 Advanced Oxidizer and Odor Control for Water Systems

APPLICATION

Agricultural water systems, process water systems, and odor scrubbers may require the use of an oxidizer to aid in the precipitation and removal of metals, such as iron or manganese, or to reduce malodors. **AV 2019** provides a concentrated oxidizing agent in a convenient liquid formulation for such applications.

Various impurities and odors may be present in water systems, or in air streams that are passed through water "scrubbing" devices. Addition of an oxidizing agent can improve the effectiveness of odor removal, or the precipitation of impurities.

High iron or manganese levels in agricultural or process water may cause problems, such as staining or plugging of small orifices, due to uncontrolled precipitation. One method of control is the addition of an oxidizing agent, such as **AV 2019**, which will aid in converting the metals to an insoluble form, so they can be removed in a clarifier or filter before the water is introduced to the process. Where the water supply is acidic, performance may be enhanced by raising the pH.

SAFETY & HANDLING PROCEDURE

AV 2019 is corrosive, causing irreversible eye damage and skin burns. It is harmful if swallowed or absorbed through the skin. It is important to avoid contact with the liquid and inhalation of the vapors. Do not get in eyes or on skin or on clothing. Wear protective eyewear (chemical goggles or face shield), protective clothing and rubber gloves resistant to chemical permeation. Wear long-sleeved shirt and pants or coveralls, goggles or face shield and chemical resistant gloves when handling. Review label and SDS for further details on safety and handling guidance.

FEEDING TECHNIQUE

AV 2019 should be added to the water system at a point of uniform mixing such as the basin area, or into a pipe with a static mixer. For best results use a metering pump, and automated control system, such as a water meter or ORP to maintain the desired chemical residual.

DOSE & CONTROL

Odor Control: Initially dose the system to achieve a total bromine level of 1-2 ppm, and adjust the feed rate to achieve the desired control. Applying 1 fluid ounce **AV 2019** to 1000 gallons of water yields approximately 1.5 ppm of total bromine.

Iron and Manganese Precipitation: Dosage rate will vary based on the amount of metal present in the water, and with other water conditions such as pH or organic loading. Initially dose the system to achieve a total bromine level of 1-2 ppm, and adjust the feed rate to achieve the desired control. Applying 1 fluid ounce **AV 2019** to 1000 gallons of water yields approximately 1.5 ppm of total bromine.

Contact your CH₂O water treatment specialist or an independent laboratory for further information on analytical testing. Daily testing is recommended to maintain proper control. Failure to monitor and maintain treatment levels can cause damage. In addition to monitoring and maintaining treatment levels, it is the customer's responsibility to ensure the product is fit for its intended application.

PHYSICAL PROPERTIES

pH of 1% Solution	12-13
Pounds per Gallon	11.0-11.5
Physical Appearance	Slightly hazy amber liquid
Odor	
Flash Point	>212°F

Seller Warranty

CH₂O 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. CH₂O 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 product data sheet. Buyer is responsible to ensure that products and product dosages are appropriate for Buyer's particular application. 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 CH₂O, Inc., and is hereby communicated to all of its customers as a condition of sale. Use of CH₂O products is subject to the Standard Terms and Conditions as listed on CH₂O, Inc.'s website at: www.ch2o.com.



