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# 6682 BOILER WATER TREATMENT

### APPLICATION

All natural water contains dissolved mineral salts such as calcium, magnesium, and iron bicarbonate. Thermal decomposition of these bicarbonates occurs in boilers and steam generating equipment. The resulting carbonate salts are much less soluble than the bicarbonate. The result is a precipitation of the carbonates, which become hard, rigid deposits. Mineral deposition occurs on heat-transfer surfaces in a boiler. This deposition acts as insulation, lowering the heat-transfer ability of the boiler. Heat-transfer losses significantly increase fuel consumption. When extreme heat-transfer losses occur, high metal temperatures are created which cause heat-stress cracking and other boiler metal damage.

Product **6682** is an aqueous blend of phosphonate, synthetic organic, sequestering, and chelating additives. These agents prevent mineral crystal formation. When the chelating and sequestering components have reached their limitations, highly distorted crystals are formed. Simultaneously, the distorted crystals are separated from one another by polymeric dispersants.

Product **6682** is formulated to meet boiler operation needs for high mineral control. Its exceptional ability to hold high concentrations of minerals (such as calcium and magnesium) in solution can prevent damage due to new mineral deposit formation. A boiler may intermittently be above or below the recommended residual range. Product **6682** is specifically designed to effectively control deposition when parameters are outside normal operating limits.

### SAFETY & HANDLING PROCEDURE

This product is a moderately alkaline liquid. It can be safely handled using the standard precautionary procedures associated with industrial chemicals of this type. Read and thoroughly understand the MSDS before handling this product.

### FEEDING TECHNIQUE

Pump directly into the makeup water line of the boiler or add via a one-shot or bypass feeder. Product **6682** can also be added to a chemical feed tank.

### DOSAGE

Initially charge the system at a rate of 2.5 to 3 quarts per 1,000 gallons of water in the system. Reduce maintenance feed rate with respect to the cycles of concentration being maintained in the system.

### CONTROL

Maintain a residual of 150 to 200 parts per million of OH-alkalinity in the system at all times. Consult your CH<sub>2</sub>O water treatment specialist for further testing information. 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.

### PHYSICAL PROPERTIES

pH of 1% Solution.....	12-13
Pounds per Gallon.....	10.0-10.5
Physical Appearance.....	Clear Liquid
Odor.....	Mild
Flash Point.....	NA

### 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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