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# 6661 POSCA 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 **6661** is an aqueous blend of phosphonate, synthetic organic dispersant, and sequestering and chelating additives. These agents prevent mineral crystal formation.

Product **6661** is specifically designed for use in steam boilers where very high feed water cycles of concentration can be achieved. With the application of reverse osmosis to boiler feed water, extremely high cycles of concentration can be maintained. In maintaining extremely high cycles of concentration the blow down levels can be reduced as low as 1%, or possibly less. This is very energy efficient, but can result in higher iron levels, which must be properly managed. Product **6661** is formulated with iron-stable dispersants, which not only manage calcium and magnesium, but iron as well.

### SAFETY & HANDLING PROCEDURES

Product **6661** is moderately alkaline. It is corrosive in its concentrated form and must be handled with care. Impervious gloves and safety glasses or goggles are required when handling. Consult the MSDS for this product for further safety and handling procedure.

### FEEDING TECHNIQUE

Feed product **6661** via automated chemical pump to boiler feed water line, boiler steam drum, or boiler deaerator. An injection quill should be used on all feed applications of this product. Application of product should be made below the system water line.

### CONTROL

Maintain a residual of 2 to 6 parts per million POSCA, as measured using CH<sub>2</sub>O's **P-2** test kit, in the system at all times. Contact your local 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

Initially charge the system at the rate of 51.2 fluid ounces of product **6661** per 1,000 gallons of water in the system. Reduce maintenance feed rate with respect to cycles of concentration being maintained.

### PHYSICAL PROPERTIES

pH of 1% Solution.....	11-13
Pounds per Gallon.....	9.2 - 9.7
Physical Appearance.....	Clear, Yellowish 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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