

# CorTrol\* IS1050

## oxygen scavenger

- Control preboiler and boiler oxygen corrosion
- React rapidly with dissolved oxygen
- Improve boiler system reliability

### description and use

CorTrol IS1050 is a dry, white powder of sodium sulfite, specially catalyzed to provide instantaneous oxygen removal in boiler feedwater systems. CorTrol IS1050 controls oxygen corrosion in boiler systems as well as in hot and cold water systems. It is suitable where the FDA regulates the treatment of boiler feedwater.

### typical applications

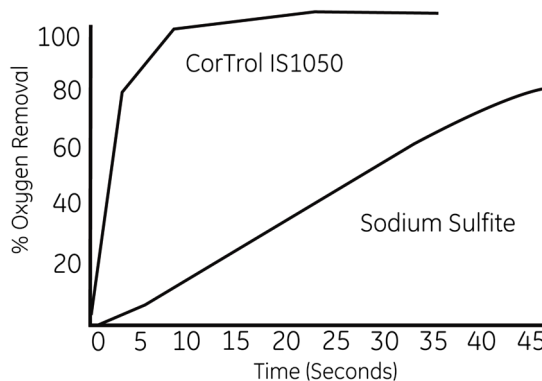
Efficient mechanical deaeration reduces dissolved oxygen to very low levels; however, even small quantities of oxygen can cause severe, localized pitting in a boiler system. This is particularly true in the case of economizers and feedwater preheaters.

CorTrol IS1050 contains a catalyst to accelerate its reaction with oxygen (as shown in Figure 1). The rapid reaction rate provided by the catalyst is obtained over boiler feedwater pH levels, as illustrated by Figure 2. Catalyzed sodium sulfite is the chemical treatment most commonly used to control oxygen corrosion in boiler systems operating below 1000 psig (70.3 kg/cm<sup>2</sup>).

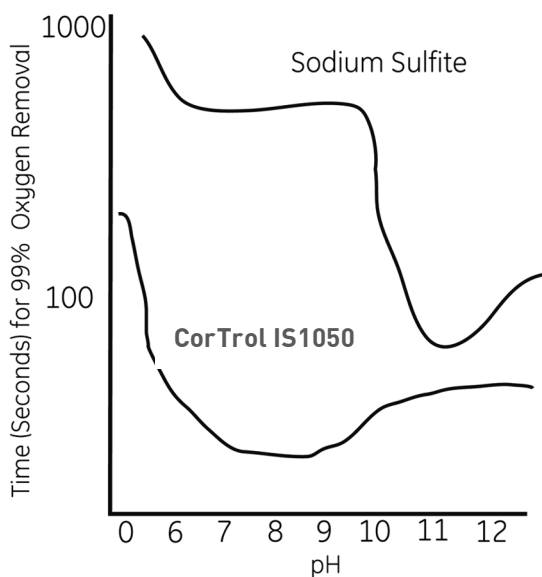
CorTrol IS1050 is used because it:

1. reacts rapidly with dissolved oxygen
2. is easy to apply and control
3. provides good system protection

When applied to the preboiler or boiler system, CorTrol IS1050 protects metal surfaces from oxygen attack. The product is applicable to all industrial boiler feedwater systems.



**Figure 1: Comparison of CorTrol IS1050 and sodium sulfite reactions with dissolved oxygen.**



**Figure 2: Comparison of CorTrol IS1050 and sodium sulfite/oxygen reaction rates as a function of pH.**

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It can be used as dechlorination agent to reduce the oxidant level ahead of a resin bed. If the chlorine level is not decreased, destruction of the resin beads may occur. The feedrate of CorTrol IS1050 is 2 ppm (mg/L) for each part per million (mg/L) of chlorine.

### **treatment and feeding requirements**

**Feed Point** - CorTrol IS1050 should be fed continuously to the deaerator storage section or the feedwater line.

**Feedrate** - Feed CorTrol IS1050 based on a boiler water residual test.

**Dilution** - Use condensate or demineralized water to make a 5% solution of the product in a covered day tank. Mild agitation should be provided during mixing only. CorTrol IS1050 should be fed separately from other chemicals.

**Equipment** - Feed equipment should be made of stainless steel.

### **general properties**

Physical properties of CorTrol IS1050 are shown on the Material Safety Data Sheet, copies of which are available on request.

### **packaging information**

CorTrol IS1050 is a powdered product, available in 44-gal (167-L), nonreturnable fiber drums.

### **safety precautions**

A Material Safety Data Sheet containing detailed information about this product is available upon request.