**PRODUCT DATA**

 **FORMULA 1950**

 **WATER SYSTEM CLEANER/CONDITIONER**

**DESCRIPTION AND USE**

FORMULA 1950 is a concentrated, mildly alkaline blend of polyphosphate, silicates, and surfactants designed specifically for the pre‑operational cleaning of newly constructed cooling water systems; particularly for small cooling tower systems constructed with a significant amount of galvanized metallurgy and where pH control is not provided. The product is formulated to remove mill scale and the light oils and greases found on new piping and equipment, and to pre-condition the exposed metal surfaces prior to application of additional pretreatment passivation and/or startup of the water treatment program subsequently applied. FORMULA 1950 does not contain an azole for yellow metal passivation; however, the silicate component should aid in both cleaning and protection of yellow metallurgies and any aluminum that may be present. The product is not effective for removal of calcium carbonate and/or old iron oxide scales which generally require an acid medium or more aggressive cleaner.

**CHEMICAL APPLICATION AND CONTROL**

FORMULA 1950 is normally shot fed to the system to establish the desired treatment dosage. For low to moderate cleaning jobs, 10-30 pounds of product per 1,000 gallons of water (1,200 – 3,600 ppm) is recommended. For systems with significant quantities of flash rust/mill scale and oil & grease, 30-60 pounds of product per 1000 gallons of water (3,600 – 7,200 ppm) is recommended. The cleaning solution should be recirculated for a period from eight (8) hours to several days, depending on the system condition. Heating the system to a temperature of 80‑100oF will speed the reaction and improve results. Where the system is heavily fouled with oils and other organics, repeating the treatment may be necessary to get down to the desired surfaces. The system should be flushed between applications. Repeating the treatment at lower treatment dosages is far more effective than trying to remove all deposits with one dosage of high concentration.

**TYPICAL PROPERTIES**

Appearance Clear, colorless liquid

Odor Mild, characteristic

Flash Point None

Specific gravity 1.106‑1.114

pH(5% solution) 10.9 ± 0.4

pH(0.5% solution) 9.8 ± 0.4

Freeze Point <0oC(32oF)

**SAFETY AND HANDLING**

FORMULA 1950 may be toxic by ingestion. Do not take internally. If ingested, drink at least two (2) glasses of water and GET IMMEDIATE MEDICAL ATTENTION. Do NOT induce vomiting. Contact with eyes causes severe irritation or burns. If eyes are contacted, immediately flush with clear water for 15 minutes and get medical attention. For skin contact, wash with soap and water. For additional information, see the Material Safety Data Sheet provided with this product.

**PACKAGING**

FORMULA 1950 is packaged in 55, 30, and 15 gallon, non returnable plastic drums and 5 or 6 gallon non-returnable plastic pails