

## Spectrus™ BD1500 Biocide Enhancer

- Improves the ability of biocides to control microbiological fouling
- Can be used with both oxidizing and non-oxidizing biocides
- Compatible with all GE Betz water treatment programs

### DESCRIPTION AND USE

Spectrus™ BD1500 is a blend of non-ionic ingredients specifically formulated to assist in the control of microbiological fouling in industrial water systems. Control of microbiological populations in industrial water systems is essential to prevent biofouling. In cooling systems, biofouling of heat exchange equipment and tower fill reduces heat transfer efficiency and can force unscheduled shutdowns and extended turnarounds leading to lost production. Equipment can also be damaged as a result of microbiologically influenced corrosion (MIC) associated with biofouling. Consequently, biofouling must be prevented in order for operating units to avoid such events and achieve profit goals.

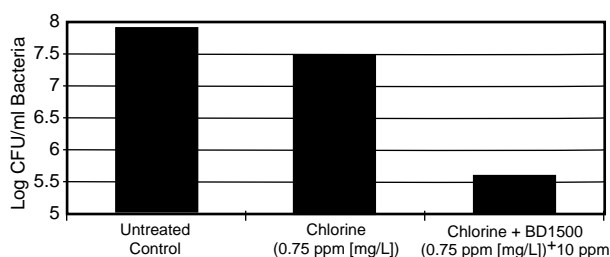
Although Spectrus BD1500 has no biocidal activity of its own, it can significantly enhance the effectiveness of biocides applied to industrial water systems (see chart). Spectrus BD1500 can be used with oxidizing biocides (such as chlorine, bromine, or chlorine dioxide) as well as nonoxidizing biocides.

Spectrus BD1500 is especially useful when acceptable control of biological activity cannot be achieved with biocides alone. For example the use of this product may be indicated where biocide usage or biocide discharge is limited by environmental regulations.

### TREATMENT AND FEEDING REQUIREMENTS

The typical feed range for Spectrus BD1500 ranges from 10 to 50 ppm (mg/L) in the cooling water. Actual dosage and frequency of Spectrus BD1500 addition will depend on many factors. These include, but are not limited to, system cleanliness, types of microbes, nutrient concentrations, temperature, pH, retention

**Spectrus BD1500 Improves Performance of Halogen**



time, and other system operating characteristics. Microbiological monitoring is recommended to evaluate product requirements. Consult your GE Betz representative for technical advice on your specific application.

Spectrus BD1500 should be fed in conjunction with biocides that are EPA approved for use in industrial water systems. If the biocide is fed continuously (e.g., continuous chlorination), feed Spectrus BD1500 continuously as well. In such systems, feed Spectrus BD1500 at a rate sufficient to generate the desired treatment residual (typically 5 to 15 ppm [mg/L]) in the blowdown of recirculating cooling systems or in the total water flow of once-through cooling systems. In once-through cooling systems and other systems that are halogenated intermittently, begin feeding 5 to 15 ppm (mg/L) of Spectrus BD1500 30 minutes to 1 hour prior to the start of halogenation and continue for the duration of the halogen feed period. If the biocide is slug-fed, apply Spectrus BD1500 in a similar fashion. Base the quantity fed on the total system volume.

Spectrus BD1500 has the potential to cause foaming, especially at higher dosages. If foam is a concern, have an antifoam available when using this product.

**Feed point** - Apply Spectrus BD1500 to a point in the system where turbulence and flow patterns assure good mixing with the water being treated.

**Dilution** - This blended product is best fed neat (undiluted) from the storage container. If necessary (e.g., for feeding from a day tank), the product can be diluted with water.

**Compatible Materials** - Spectrus BD1500 is compatible with the following materials of construction: Low Carbon Steel, Stainless Steel, Copper, Brass, PVC, High Density Cross-linked Polyethylene, Polypropylene, Kynar, Teflon, Nylon, Viton A, Buna N, Urethane, Neoprene, Natural Rubber, Viton Litharge.

**Avoid** - Aluminum, High and Low Density Un-Crosslinked Polyethylene, Polysulfide, Hypalon, Buna

S, Tygon.

## **GENERAL PROPERTIES**

Physical properties of Spectrus BD1500 are shown on the Material Safety Data Sheet, a copy of which is available on request.

## **PACKAGING INFORMATION**

Spectrus BD1500 is a liquid and is available in a wide variety of containers and delivery methods, including GE Betz's ChemSure™ Drumless Delivery Services.

## **STORAGE**

Store Spectrus BD1500 at moderate temperatures. Protect from freezing. If frozen, thaw completely and mix thoroughly prior to use.

## **SAFETY PRECAUTIONS**

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