

BIOSPERSE™ XD3899 MICROBIOCIDES

The new standard for microbiological control
in recirculating cooling water systems



- Improved system cleanliness
- Reduced corrosion potential
- Improved worker/workplace safety
- Reduced environmental impact
- Reduced operating costs

Technology Overview

Biosperse™ XD3899 microbiocide is a unique, patented product that effectively controls biofilm formation in recirculating cooling water and chill water systems without the adverse side effects associated with strong oxidizing biocides. The microbiocide, which can be described as a mild oxidizer, drastically reduces microbiological activity in wet processes, providing a truly clean system. From cooling towers to

heat exchangers and throughout process equipment, the microbiocide controls a broad spectrum of microorganisms that cause fouling, promote corrosion and adversely affect system performance.

Notably, more than 700 paper machines use the XD3899 microbiocide, making it the most widely used biocide in the paper industry.

Automated Dosing and Control

Biosperse XD3899 microbiocide is produced onsite using patented dosing equipment and a proprietary monitoring and control system. The dosing equipment blends an ammonium bromide solution with sodium hypochlorite and fresh water under required reaction conditions to ensure 100 percent conversion of the microbiocide components. The dosing equipment also automatically adjusts microbiocide production to correct for any variances in product quality.

Key features of the dosing equipment and the monitoring and control system include closed-loop control, remote monitoring and control, proportional dosing, automatic water flush of lines, multiple feed point interlocks, and notification of feed problems.

Application Technology

To obtain optimal results, Biosperse XD3899 microbiocide should be applied in an intermittent fashion. While a traditional microbiological survey is used to determine actual feed points, the microbiocide is typically added to the cold well. A second feed point can be added into the hot return if the cooling tower has open decks and algae is a problem.

The dosage required depends on several factors, including the nature and extent of microbiological contamination, the cleanliness of the makeup water, the quality of the recycled water, the presence of process leaks and the amount of reducing agents in the system.

| FEATURES | BENEFITS |
|---|--|
| Reduces microbiological activity by up to 99.9% | <ul style="list-style-type: none"> Improved system cleanliness Improved system performance Reduced downtime |
| Controls all types of microorganisms, including bacteria, fungi and algae | <ul style="list-style-type: none"> Reduces total biocide usage |
| Contributes very little to chloride levels and exhibits a low oxidation/reduction potential | <ul style="list-style-type: none"> Reduced corrosion potential Extended equipment life Reduced water use Reduced operating costs |
| Exhibits a low vapor pressure and therefore does not readily vaporize | <ul style="list-style-type: none"> Improved worker/workplace safety Reduced complaints from workers |
| Does not contribute to the formation of chlorinated organic compounds | <ul style="list-style-type: none"> Reduced environmental impact |
| Registered with the U.S. Environmental Protection Agency | <ul style="list-style-type: none"> Offers extra level of safety and peace of mind |

Mode of Action

Biosperse XD3899 microbiocide specifically reacts with reductive compounds within microorganisms, rendering them unable to produce energy. Without their ability to produce energy, the microorganisms die before they have an opportunity to attach to process and cooling water surfaces. By hindering bacterial attachment, the subsequent formation of biofilm is prevented.

More Information

For more information about Biosperse XD3899 microbiocide, please contact your local Solenis sales representative or visit us online.

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