**BIOTROL 509**

**KEEP OUT OF REACH OF CHILDREN**

**DANGER**

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans and Domestic Animals**

**ENGINEERING CONTROLS**

- **First Aid**
  - **In Eyes:** Hold eye open and rinse slowly and gently with water for 15 minutes.
  - **Inhalation:** Remove and wash contaminated clothing separately before reuse.
  - **Ingestion:** Have product container or label with you when calling a Poison Control Center or doctor.

**FIRST AID**

- **In Eyes:** Hold eye open and rinse slowly and gently with water for 15 minutes.
- **Inhalation:** Remove and wash contaminated clothing separately before reuse.
- **Ingestion:** Have product container or label with you when calling a Poison Control Center or doctor.
- **Skin:** Wash skin immediately with plenty of water for 15-20 minutes.
- **Clothing:** Remove and wash contaminated clothing separately before reuse.

**Hazards to Humans and Domestic Animals**

**DANGER • CORROSIVE: Causes irreversible eye damage • May be fatal if swallowed. • Causes skin irritation • Harmful if inhaled or on skin.**

**PRECAUTIONARY STATEMENTS**

- **Use PPE:** Coveralls, over-long-sleeved shirt and long pants • Gloves and long pants • Socks and chemical resistant gloves • Goggles or face shields • Chemical-resistant gloves (such as barrier, laminate, butyl/nitrile/neoprene rubber, PVC or viton)

**ENGINEERING CONTROLS**

- **Personal Protective Equipment**
  - **Applicators and other handlers must wear:** Coveralls, over-long-sleeved shirt and long pants • Gloves and long pants • Socks and chemical resistant gloves • Goggles or face shields • Chemical-resistant gloves (such as barrier, laminate, butyl/nitrile/neoprene rubber, PVC or viton)

**APPLICATION RESTRICTIONS**

- **Do not apply this product directly in a way that will contact workers or other persons, either directly or through drift.** Only protected handlers may be in the area during application.

**ENVIRONMENTAL HAZARDS**

- **This product and its container** are nonhazardous and biodegradable. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or contaminate. Repeat treatment every four days or as needed to maintain control.

**STORAGE AND DISPOSAL**

- **Storage:** To maintain product quality, store at temperatures below 35°C.
- **Disposal:** To maintain product quality, store at temperatures below 35°C.

**DIRECTIONS FOR USE**

**For the control of bacterial, fungal, and yeast growths in pulp, paper and paperboard mills, add BIOTROL 509 at the rate of 0.06-0.15 gal per ton of paper (dry basis).** Addition may be continuous or intermittent, depending upon the type of system and the severity of contamination. It must be made with a metering pump at a location that will ensure uniform distribution of BIOTROL 509 in the mass of fiber and water, such as the beater, spinline inlet or discharge, break chests, furnish chests, save-alls, and white-water tanks. However, it must be properly metered. Must be boiled out, then treated with 0.06-0.15 gal BIOTROL 509/ton of paper (dry basis) or as needed to maintain control.

**MONOFERMENTED Flexible Organics**

- **Moderately Fouled Systems:** Must be treated continuously with 0.15-0.2 gal BIOTROL 509/ton of paper (dry basis) until the slime accumulation is controlled. Additive concentration can then be reduced to 0.06-0.15 gal BIOTROL 509/ton of paper or in an intermittent basis, as needed for control. Dislodged slime may cause breaks in the paper and a clean-up of the paper machine may be advisable.

**Slighty Fouled Systems**

- **Must be treated continuously with 0.06-0.15 gal BIOTROL 509/ton of paper (dry basis) until the slime is controlled, then added on an intermittent basis to maintain control.

**INDUSTRIAL OR COMMERCIAL COOLING WATER SYSTEMS**

- **For control of microbial growth in industrial or commercial cooling water systems use either continuous or slug dosing.**
- **Do NOT MIX the product with other additives in order to avoid decomposition of the additive due to the high pH of many additive formulations.**

**Continuous Feed**

- **Add product to metering device for continuous feed.** Add 20-480 ppm per day of product to the water in the system depending upon water quality and severity of contamination.

**Slug Dosing**

- **Add product to a basin of cooling system or at any other point of uniform mixing.** Add 100-480 ppm product to water in the system depending upon severity of contamination. Repeat treatment every four days or as needed to maintain control. Do not exceed more than 480 ppm product in system water per day.

**AIR-WASHER SYSTEMS**

- **Note:** For use only in industrial air washer systems that maintain effective mist eliminators. For control of microbial growth in air washer systems use either continuous or slug dosing. **Continuous Feed**

**Note:** A solution of product may be made on site for dosing the system. **Continuous Feed**

**Slug Dosing**

- **Add product to a basin of system or at any other point of uniform mixing.** Add 20-480 ppm product to the water in the system depending upon severity of contamination. Repeat treatment every four days or as needed to maintain control. Do not exceed more than 480 ppm product in system water per day.

**WATER FLOOD**

- **Add product using metering device for continuous feed.** Add 80-480 ppm per day of product to the water in the system depending upon water quality and severity of contamination. The product must be added to the water storage tanks before getting and circulated to ensure mixing. The product can be added at the well head for “on-the-fly” treatment.

**FRACTURING FLUIDS**

- **The product reduces bacterial contamination and degradation of fracturing fluids.**

**HYDROTREATING**

- **The product is used to control slime and corrosion causing bacteria in water used for secondary oil and gas recovery.**

**DISTRIBUTED BY:**

- **U.S. WATER SERVICES**
  - 12207 43rd STREET NE
  - SAINT ANTONY, MN 55376
  - (763) 497-1298

**FOR CONTROL OF BACTERIAL, FUNGAL, AND YEAST GROWTHS IN PAPER AND PAPERBOARD MILLS, add BIOTROL 509 at the rate of 0.06-0.15 gal per ton of paper (dry basis).** Addition may be continuous or intermittent, depending upon the type of system and the severity of contamination. It must be made with a metering pump at a location that will ensure uniform distribution of BIOTROL 509 in the mass of fiber and water, such as the beater, spinline inlet or discharge, break chests, furnish chests, save-alls, and white-water tanks. However, it must be properly metered. Must be boiled out, then treated with 0.06-0.15 gal BIOTROL 509/ton of paper (dry basis) or as needed to maintain control.

**PUBLICLY-OWNED TREATMENT WORKS**

- **Add BIOTROL 509 at a concentration of 4.0 to 40.0 ppm by weight of water entering the system depending on the severity of contamination in the system.** Addition should be CONTINUOUS and must be made with a metering pump at a location where mixing will be rapid and uniform. Add BIOTROL 509 to the system in a location where contact time will be 30 minutes or greater before reaching the outlet.

**FOR USE AS A Co-TREATMENT WITH CHLORINATION**

- **Add 1.6 – 6.0 ppm BIOTROL 509 by weight of water treated. Chlorination must result in a residual chlorine concentration of greater than zero but less than the NPDES permit level.** Addition must be CONTINUOUS and made at one of the initial chlorine residuals. Rapid mixing is necessary for maximum effectiveness. BIOTROL 509 must be added at a location where a contact time of 10 minutes or longer will be provided before reaching the outlet.

**OIL FIELD APPLICATIONS**

- **For reduction of bacterial contamination and degradation in oil recovery operations, add product to the system at a rate of 120 to 1,080 ppm depending on the severity of contamination.**

**ENHANCED OIL RECOVERY (EOR), FLUIDS**

- **The product reduces bacterial contamination and degradation of EOR polymers and gels.** The product must be added to injection water before polymer addition.

**HYDROTREATING**

- **The product is used to control slime and corrosion causing bacteria in water used for secondary oil and gas recovery.** The system is heavily fouled, slug treat at the higher rate to reduce biofilm. For maintenance, back treat two to three times per week.

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- **The product reduces bacterial contamination and degradation of fracturing fluids.**

**HYDROTREATING**

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