

ENVIRONMENTAL HAZARDS

This product is toxic to fish and aquatic organisms. Do not contaminate water by cleaning equipment or disposal of waste. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and a permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

CHEMICAL AND PHYSICAL HAZARDS

Reaction with strong reducing agents may be explosive. Avoid misting.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

STORAGE

Store in a dark, cool, dry, well-ventilated area, not above 104°F (40°C), in well-closed original containers, away from energy sources, combustible organic materials, oxidizers and moisture.

DISPOSAL

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by the user according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

PILLS

When handling or dealing with spills, use impact-resistant goggles with side shields, or face shield; wear body-covering clothes, including impervious rubber gloves and boots; use a respirator if misting occurs. Cover wet spills with 10% sodium bicarbonate solution, water and then an inert absorbent before sweeping up and disposing as described for pesticide disposal. If drum contents are contaminated or decomposing, isolate unsealed drum in the open or in a well-ventilated area; flood with 10% sodium bicarbonate solution and large volumes of water if necessary.

KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE
TO MAINTAIN PRODUCT QUALITY, STORE IN THE DARK AT
TEMPERATURES BELOW 104°F (40°C).
DO NOT SHIP WITH FOOD, FEEDS, DRUGS, OR CLOTHING
DO NOT SMOKE, DRINK, OR EAT WHEN HANDLING

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read entire label and use strictly in accordance with precautionary statements and directions.

DIRECTIONS FOR TREATING INDUSTRIAL RECIRCULATING COOLING WATER IN INDUSTRIAL COOLING SYSTEMS

NOTE: Add BIOBROM C-103L separately to the system. Do not mix it with other additives, so as to avoid decomposition of BIOBROM C-103L due to the high pH of many additive formulations.

Add BIOBROM C-103L to the basin (or any other point of uniform mixing). Addition should be made via a metering pump; it may be continuous or intermittent, depending on the severity of the contamination when treatment is begun, and the in-system retention time. Optimum performance with this product is achieved by continuous or intermittent treatment. If "shock" treatment is used, the blowdown should be discontinued for 24-48 hours.

FOR CONTROL OF BACTERIA

Add 0.00095-0.0095 gallons of BIOBROM C-103L / 1000 gal. of water in the system depending on the severity of contamination.

INTERMITTENT OR SLUG METHOD

Initial Dose: When the system is noticeably fouled, add 0.0048-0.0095 gal. of BIOBROM C-103L / 1000 gal. of water in the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 0.0024-0.0095 gal. of BIOBROM C-103L / 1000 gal. of water in the system every 4 days, or as needed to maintain control. Badly fouled systems must be cleaned before treatment is begun.

CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably fouled, add 0.0048-0.0095 gal. of BIOBROM C-103L / 1000 gal. of water in the system.

Subsequent Dose: Maintain this level by pumping a continuous feed of 0.00095-0.0048 gal. of BIOBROM C-103L / 1000 gal. of water in the system lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.

FOR CONTROL OF FUNGI AND ALGAE

Add 0.029-0.095 gallons of BIOBROM C-103L / 1000 gal. of water in the system, depending on the severity of contamination.

INTERMITTENT OR SLUG METHOD

Initial Dose: When the system is noticeably fouled, add 0.048-0.095 gal. of BIOBROM C-103L / 1000 gal. of water in the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 0.029-0.095 gal. of BIOBROM C-103L / 1000 gal. of water in the system daily, or as needed to maintain control. Badly fouled systems must be cleaned before treatment is begun.

CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably fouled, add 0.048-0.095 gal. of BIOBROM C-103L / 1000 gal. of water in the system.

Subsequent Dose: Maintain this treatment level by pumping a continuous feed of 0.029-0.095 gal. of BIOBROM C-103L / 1000 gal. of water in the system per day. Badly fouled systems must be cleaned before treatment is begun.

DIRECTIONS FOR TREATING PULP AND PAPER MILL SYSTEMS

NOTE: Add BIOBROM C-103L separately to the system. Do not mix it with other additives, so as to avoid decomposition of BIOBROM C-103L due to the high pH of many additive formulations. For the control of slime-forming bacterial, fungal, and yeast growth in pulp, paper and paperboard mills add BIOBROM C-103L at levels of 0.15-0.50 lb./ton (dry) of pulp or paper produced. Addition can be continuous or intermittent, depending upon the type of system and the severity of contamination. Addition is via a metering pump at a point in the system that will ensure uniform distribution of BIOBROM C-103L in the mass of fiber and water, such as the beaters, Jordan inlet or discharge, broke chests, furnish chests, save-alls and white-water tanks. Heavily fouled systems must first be boiled out, then treated with 0.15-0.35 lb. of BIOBROM C-103L / ton (dry) of paper or pulp as necessary for control. Moderately fouled systems should be treated continuously with 0.35-0.50 lb. of BIOBROM C-103L / ton (dry) of paper or pulp until the slime accumulation is controlled. Subsequent rates can then be reduced to 0.15-0.35 lb. of BIOBROM C-103L / ton (dry) of paper on a continuous or 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. Slightly fouled systems should be treated continuously with 0.15-0.35 lb. of BIOBROM C-103L / ton (dry) of paper or pulp, until the slime is controlled, then added on an intermittent basis to maintain control.

DIRECTIONS FOR TREATING NON-POTABLE REVERSE OSMOSIS SYSTEMS

For controlling bacteria, fungi and algae slimes in non-potable Reverse Osmosis systems and peripheral equipment, add BIOBROM C-103L to the system inlet water or before any other contamination area ahead of the Reverse Osmosis unit. BIOBROM C-103L should be added with a metering pump on an intermittent basis depending on the severity of contamination and the guidelines specified by the membrane manufacturer for BIOBROM C-103L.

Add BIOBROM C-103L at the rate of 0.01 to 1.0 lbs (1 to 120 ppm) per 1000 gals of feedwater. During use of BIOBROM C-103L both permeate and reject waters should be directed to the drain. Once treatment is completed, rinsing with feedwater should continue until conductivity values in the permeate are at or below values before treatment with BIOBROM C-103L. Badly fouled systems must be cleaned before treatment is begun.

FOR CONTROL OF BACTERIA

Initial Dose: When the system is noticeably fouled, add BIOBROM C-103L at the rate of 0.05 to 0.1 lb (6 to 12 ppm) per 1000 gals of feedwater. Minimum treatment intervals should be 15 minutes. Repeat until control is achieved or as specified by guidelines recommended by the membrane manufacturer.

Subsequent Dose: When microbial control is achieved, add BIOBROM C-103L at the rate of 0.025 to 0.1 lb (3 to 12 ppm) per 1000 gals of feedwater as needed to maintain control or as specified by guidelines recommended by the membrane manufacturer.

FOR CONTROL OF FUNGI AND ALGAE

Initial Dose: When the system is noticeably fouled, add BIOBROM C-103L

at the rate of 0.5 to 1.0 lb (60 to 120 ppm) per 1000 gals of feedwater. Minimum treatment intervals should be 15 minutes. Repeat until control is achieved or as specified by guidelines recommended by the membrane manufacturer.

Subsequent Dose: When microbial control is achieved, add BIOBROM C-103L at the rate of 0.3 to 1.0 lb (35 to 120 ppm) per 1000 gals of feedwater as needed to maintain control or as specified by guidelines recommended by the membrane manufacturer.

DIRECTIONS FOR TREATING METALWORKING FLUIDS CONTAINING WATER

BIOBROM C-103L is effective in metalworking fluid concentrates which have been diluted in water at ratios of 1:100 to 1:4. For controlling (or inhibiting) the growth of bacteria, fungi and yeasts that may deteriorate metalworking fluids containing water, add this product to the fluid in the collection tank. Additions should be made with a metering pump.

Initial or Slug Dose: When the system is noticeably fouled, add BIOBROM C-103L at the rate of 0.25 gal (2.65 lbs) per 1000 gals of metalworking fluid in the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add BIOBROM C-103L at the rate of 0.1 to 0.2 gal (1.08 to 2.12 lbs) per 1000 gals of metalworking fluid per day, or as needed to maintain control. Additions of BIOBROM C-103L product can be made continuously or intermittently. Slug the system as required.

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DIRECTIONS FOR TREATING BREWERY PASTEURIZER WATER

For controlling (or inhibiting) the growth of bacteria, fungi and yeasts in brewery pasteurizing water systems, add BIOBROM C-103L at a point in the system to insure uniform mixing.

Initial or Slug Dose: When the system is noticeably fouled, add BIOBROM C-103L at the rate of 0.25 gal (2.65 lbs) per 1000 gals of water in the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add BIOBROM C-103L at

the rate of 0.1 to 0.2 gal (1.06 to 2.12 lbs) per 1000 gals of water per day, or as

needed to maintain control. Additions of BIOBROM C-103L product can be made continuously or intermittently. Slug the system as required. Badly fouled systems must be cleaned before treatment is begun.

DIRECTIONS FOR TREATING ENHANCED OIL RECOVERY SYSTEMS

NOTE: Add BIOBROM C-103L separately to the system. Do not mix it with other additives, so as to avoid decomposition of BIOBROM C-103L due to the high pH of many additive formulations. Addition of BIOBROM C-103L may be made at the free water knockouts, before or after the injection pumps and injection well headers. For controlling slime-forming bacteria, sulfide-producing bacteria, yeasts, and fungi in oil field water, polymer or micellar floods, water-disposal systems, or other oil field water systems, add 1-80 ppm BIOBROM C-103L (0.1-6.4 gallons of BIOBROM C-103L per 2400 barrels of water) depending on the severity of contamination. Additions should be made with a metering pump either continuously or intermittently.

CONTINUOUS FEED METHOD

When the system is noticeably fouled, add 10-80 ppm BIOBROM C-103L (0.8-6.4 gal. of BIOBROM C-103L per 2400 barrels of water) continuously until the desired degree of control is achieved. Subsequently, treat with 1-15 ppm BIOBROM C-103L (0.1-1.2 gal. of BIOBROM C-103L per 2400 barrels of water) continuously or as needed to maintain control.

INTERMITTENT OR SLUG METHOD

When the system is noticeably fouled or to maintain control of the system, add 10-80 ppm BIOBROM C-103L (0.8-6.4 gal. of BIOBROM C-103L per 2400 barrels of water) intermittently for 4-8 hours per day and from 1-4 times per week,

or as needed depending on the severity of contamination.

NOTE: For control of bacteria, yeast, and fungi in aqueous solutions of biopolymer used in flooding operations, add 15-80 ppm BIOBROM C-103L (1.2-6.4 gal. of BIOBROM C-103L per 2400 barrels of water). Additions of BIOBROM C-103L should be made with a metering pump immediately after preparation of the aqueous biopolymer solution to reduce loss of viscosity.

DIRECTIONS FOR TREATING AIR-WASHER SYSTEMS

Add 0.0015-0.095 gallons BIOBROM C-103L / 1000 gal of water in the system, depending on the severity of contamination, to control slime-forming bacteria and fungi in industrial air washing systems.

Intermittent or Slug Method

Initial Dose: When the system is noticeably fouled, add 0.003-0.095 gal BIOBROM C-103L / 1000 gal of water in the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 0.0015-0.047 gal BIOBROM C-103L / 1000 gal of water in the system every 2 days, or as needed to maintain control. Badly fouled systems must be cleaned before treatment is begun.

CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably fouled, add 0.003-0.095 gal BIOBROM C-103L / 1000 gal of water in the system.

Subsequent Dose: Maintain this level by pumping a continuous feed of 0.0015-0.047 gal BIOBROM C-103L / 1000 gal of water in the system per day. Badly fouled systems must be cleaned before treatment is begun.

NOTE: For use only in industrial air-washer systems that maintain effective mist eliminating components.

DIRECTIONS FOR INDUSTRIAL PRESERVATION APPLICATIONS

BIOBROM C-103L may be used to reduce microbiological contamination in raw materials and/or products such as: aqueous paints and coatings, polymers, slurries, adhesives, latex and resin emulsions, sizing, caulk, process water, along with specialty industrial products including: inks, polishes, waxes, detergents, and cleansers.

TO REDUCE MICROBIOLOGICAL CONTAMINATION

Add BIOBROM C-103L to the material or product at a concentration of 25 to 2,000 ppm by weight. This concentration is equivalent to 2.8 to 224.0 fluid ounces BIOBROM C-103L per 1,000 gallons or 21.4 to 1,712.0 milliliters BIOBROM C-103L per 1,000 liters. The required concentration will depend on the material being treated and the level of contamination present.

DIRECTIONS FOR TREATING PUBLICLY-OWNED TREATMENT WORKS TO CONTROL COLIFORM AND OTHER BACTERIA

Add BIOBROM C-103L at a concentration of 1.0 to 10.0 ppm by weight of water being treated, depending on the severity and contamination in the system. Addition should be CONTINUOUS and should be made with a metering pump at a point in the system where mixing will be rapid and thorough. Add BIOBROM C-103L to the system in a location where contact time will be 30 minutes or greater before reaching the outfall.

TO USE AS A CO-TREATMENT WITH CHLORINE

Add 0.4 - 1.5 ppm BIOBROM C-103L by weight of water treated. Chlorination should result in a minimum detectable residual (i.e., greater than zero but less than the NPDES permit level) Addition should be CONTINUOUS and made at a point just after initial chlorine mixing. Rapid mixing is necessary for maximum effectiveness. BIOBROM C-103L should be added at a location where a contact time of 10 minutes or longer will be provided before reaching the outfall.

DIRECTIONS FOR TREATING OILFIELD AND PETROCHEMICAL SYSTEMS

BIOBROM C-103L may be used either in slug treatment or in continuous application. Dosages may vary from as much as 200 ppm of BIOBROM C-103L in slug application to 10 to 50 ppm of BIOBROM C-103L in continuous treatment (1/4 pint BIOBROM C-103L per 1,000 gallons of water equals approximately 30 ppm).

A typical slug treatment is to add 1 pint of BIOBROM C-103L per 1,000 gallons at intervals as needed to prevent growth of microbial slime. Badly fouled systems may be slug treated to establish control, followed by continuous treatment to maintain control.

MANUFACTURED IN ISRAEL FOR:

AMERIBROM, INC.
2115 LINWOOD AVENUE
FORT LEE, NJ 07024
(201) 242-6560

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NET CONTENTS: _____ GALS (LBS.)

ACCEPTED

APR 22 2003

Under the Federal Insecticide, Fungicide, and
Rodenticide Act as amended, for the
pesticide, registered under
EPA Reg. No. 8622-20