

PM 32

5185-467

5/7/97

Page 1 of 6

NABR43-E

ACTIVE INGREDIENT:		
Sodium bromide		43.0%
INERT INGREDIENTS:		57.0%
Total		100.0%

KEEP OUT OF REACH OF CHILDREN

WARNING

STATEMENTS OF PRACTICAL TREATMENT: IF SWALLOWED: Drink promptly large quantities of water. DO NOT induce vomiting. Avoid alcohol. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. IF IN EYES: Hold eyelids open and flush with a steady, gently stream of water for 15 minutes. Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Get medical attention. IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration, preferably, mouth-to-mouth. Get medical attention. IN CASE OF MEDICAL EMERGENCY, CALL 1-303-623-5716.

SEE OTHER PRECAUTIONS ON SIDE PANEL

Net Weight \_\_\_\_\_ EPA Reg. No. 5185-  
 Lot No. \_\_\_\_\_ EPA Est. No. 5785-AR-01

BIOLAB, INC.  
 P.O. Box 1489  
 Decatur, GA 30031

ACCEPTED  
 MAY 7 1997  
 Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 5185-467.

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REC'D EPA/GRP/DPDI

2 of 6

### RECIRCULATING COOLING WATER SYSTEMS

When used as directed, this product effectively controls algal, bacterial, fungal slime and controls the settlement and growth of mollusks in commercial and industrial cooling towers, evaporative condensers, industrial water scrubbing systems, cooling ponds, influent water systems including flow through filters and lagoons, heat exchangers, industrial water scrubbing systems.

**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.

Add this product to the system at a 0.125 to 2.0 sodium bromide/oxidant mole ratio. For example:

- 1) 1.8 to 29.0 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution;
- 2) 1.4 to 23.2 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

Add sufficient amount of this product and oxidize with either gas chlorine or sodium hypochlorite solution to achieve a residual bromine level of 5 ppm or as needed to maintain control of the system. This product can be added whenever chlorination is applied. Feed this product either before or after the oxidant injection point into the water to be treated. Be sure rapid mixing of the treated water, this product and oxidant is achieved.

### ONCE-THROUGH COOLING WATER

When used as directed, this product effectively controls algal, bacterial and fungal slimes and controls the settlement and growth of mollusks in once-through fresh and sea water cooling systems.

**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.

Add this product to the system at a 0.125 to 2.0 sodium bromide/oxidant mole ratio. For example:

- 1) 1.8 to 29.0 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution;
- 2) 1.4 to 23.2 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

Add sufficient amount of this product and oxidize with either gas chlorine or sodium hypochlorite solution to achieve a residual bromine level of 5 ppm or as needed to maintain control of the system. This product can be added whenever chlorination is applied. Feed this product either before or after the oxidant injection point into the water to be treated. Be sure rapid mixing of the treated water, this product and oxidant is achieved.

### WASTEWATER TREATMENT SYSTEMS

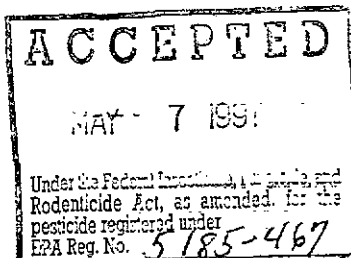
When used as directed, this product effectively disinfects, controls algal, bacterial and fungal slimes and controls the settlement and growth of mollusks in secondary and tertiary wastewater treatment systems.

**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.

Add this product to the system at a 0.125 to 2.0 sodium bromide/oxidant mole ratio. For example:

- 1) 1.8 to 29.0 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution;
- 2) 1.4 to 23.2 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

Add sufficient amount of this product and oxidize with either gas chlorine or sodium hypochlorite solution to achieve a residual bromine level of 5 ppm or as needed to maintain control of the system. This product can be added whenever chlorination is applied. Feed this product either before or after the oxidant injection point into the water to be treated. Be sure rapid mixing of the treated water, this product and oxidant is achieved.



**PASTEURIZERS/WARMER/CANNERY COOLING WATER SYSTEMS**

When used as directed, this product effectively controls algal, bacterial, and fungal slime in brewery pasteurizer water, brewery processing water, brewery warmer water, cannery cooling canal water, cannery package warmers, cannery pasteurizer water and retort cooling water.

**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.

Add this product to the system at a 0.125 to 2.0 sodium bromide/oxidant mole ratio. For example:

- 1) 1.8 to 29.0 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution;
- 2) 1.4 to 23.2 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

Add sufficient amount of this product and oxidize with either gas chlorine or sodium hypochlorite solution to achieve a residual bromine level of 5 ppm or as needed to maintain control of the system. This product can be added whenever chlorination is applied. Feed this product either before or after the oxidant injection point into the water to be treated. Be sure rapid mixing of the treated water, this product and oxidant is achieved.

**AIR WASHERS**

When used as directed, this product effectively controls algal, bacterial, and fungal slime in commercial and industrial air washer systems.

**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.

Add this product to the system at a 0.125 to 2.0 sodium bromide/oxidant mole ratio. For example:

- 1) 1.8 to 29.0 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution;
- 2) 1.4 to 23.2 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

Add sufficient amount of this product and oxidize with either gas chlorine or sodium hypochlorite solution to achieve a residual bromine level of 5 ppm or as needed to maintain control of the system. This product can be added whenever chlorination is applied. Feed this product either before or after the oxidant injection point into the water to be treated. Be sure rapid mixing of the treated water, this product and oxidant is achieved.

**PULP AND PAPER MILLS**

When used as directed this product effectively controls algal, bacterial, and fungal slime in pulp and paper mill fresh and sea water influent water systems; cooling water systems, wastewater treatment systems, service water systems, white water systems, and other process water.

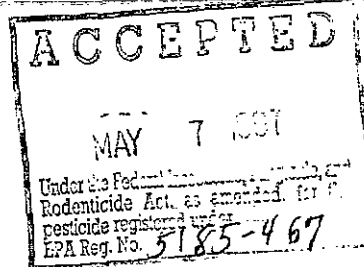
**DIRECTIONS FOR USE:** It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read entire label and use strictly in accordance with precautionary statements and directions.

Add this product to the system at a 0.125 to 2.0 sodium bromide/oxidant mole ratio. For example:

- 1) 1.8 to 29.0 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution;
- 2) 1.4 to 23.2 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

Add sufficient amount of this product and oxidize with either gas chlorine or sodium hypochlorite solution to achieve a residual bromine level of 0.5 to 5 ppm or as needed to maintain control of the system. This product can be added whenever chlorination is applied.

Feed this product either before or after the oxidant injection point into the water to be treated. Be sure rapid mixing of the treated water, this product and oxidant is achieved.



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**FRUIT AND VEGETABLE WASH**

When used in combination with an oxidant this product can be used for the wash and transport of fruits and vegetables.

**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.

Add this product to the system at a 1.0 to 1.0 sodium bromide/oxidant mole ratio. For example:

- 1) 3.7 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution;
- 2) 3.0 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

This product and oxidant should be added at a rate to not to exceed a dosage of 55 ppm of this product (33 gallons of this product per one million gallons of water treated). This product may be continuously metered to Chlorinator eductor water or mixed with a NaOCI solution for activation. The use of this product under this application must be followed by a potable water rinse to remove, to the extent possible, residue of the chemical.

**SEWAGE SYSTEMS:**

When used as directed, this product effectively controls algal, bacterial, and fungal slime in sewage systems including leach fields, tank lines, lagoons, and sewage effluent water, sewers, sewage effluent water, cesspools, septic tanks, sewage settling ponds, sludge beds, storm drains, and street culverts.

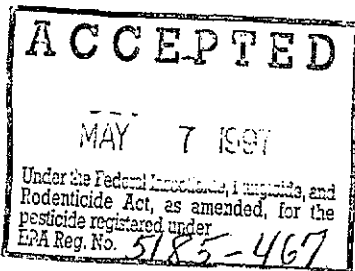
**DIRECTIONS FOR USE:**

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

Add this product to the system at a 0.125 to 2.0 sodium bromide/oxidant mole ratio. For example:

- 1) 1.8 to 29.0 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution;
- 2) 1.4 to 23.2 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

The amount of this product necessary to disinfect depends on the concentration and conditions of the final effluent. Raw sewage should be treated before it has reached the septic state. Approximately 30% of the bromine demand of sewage is due to settled solids, 30% to dissolved solids and 40% to suspended and colloidal solids. Disinfection should be based on laboratory checks, including bacteriological checks, as a safeguard. Generally, disinfection can be achieved when the bromine residual (after 15 to 30 minutes contact time) is between 1.4-2.3 ppm. Residual bromine and time of contact can be used as the determining factors to assure disinfection. These factors can be used after experience with different types of treated sewage is sufficient to establish a relationship between the residual bromine content of the final effluent and the contact time necessary to ensure the desired bacteriological results. Bacteriological testing should be conducted periodically to ensure that conditions have not changed. Treat sewage near the influent detention basin. The feed rate for this product must be adjusted to the higher dosages usually required for sewage practices. Where temporary disinfection prior to dilution in a body of water is desired, the following will generally suffice: Raw sewage - 23-68 ppm bromine; Primary treated sewage - 11-45 ppm bromine; Sewage after primary and secondary treatment (or secondary treatment alone) - 5-11 ppm. Confirm the efficacy of these levels using bacteriological testing in your system.



**COMMERCIAL AIR CONDITIONER/REFRIGERATION CONDENSATE AND DEHUMIDIFIER BASINS OR DRIP PANS**

When used as directed, this product effectively controls algal, bacterial, and fungal slime in air conditioner/refrigeration condensate water systems (air conditioner water, pan coil drain water, refrigeration water, evaporative cool pads and air conditioner vats and dehumidifier basins).

**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.

Add this product to the system at a 0.125 to 2.0 sodium bromide/oxidant mole ratio. For example:

- 1) 1.8 to 29.0 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution;
- 2) 1.4 to 23.2 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

Add sufficient amount of this product and oxidize with either gas chlorine or sodium hypochlorite solution to achieve a residual bromine level of 5 ppm or as needed to maintain control of the system. This product can be added whenever chlorination is applied. Feed this product either before or after the oxidant injection point into the water to be treated. Be sure rapid mixing of the treated water, this product and oxidant is achieved.

**OIL RECOVERY DRILLING MUDS AND PACKER FLUIDS:**

When used as directed, this product will control the growth of bacteria such as anaerobic sulfate-forming bacteria (*Desulforibrio cesulfuricans*) and aerobic slime-forming bacteria (*Pseudomonas sp.* and *Bacillus sp.*) which impair the efficiency of the muds and fluids.

**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.

Add this product to the system at a 0.125 to 2.0 sodium bromide/oxidant mole ratio. For example:

- 1) 1.8 to 29.0 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution;
- 2) 1.4 to 23.2 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

Add sufficient amount of this product directly to the drilling muds and packer fluids and oxidize with either gas chlorine or sodium hypochlorite solution to achieve a residual bromine level of up to 5 ppm or as needed to maintain control of the system. Fracturing fluids may be added and premixed prior to the fracturing operation or may be added directly to the blender during the operation. Be sure rapid mixing of the treated water with this product and oxidant is achieved.

**SECONDARY OIL RECOVERY SYSTEMS:**

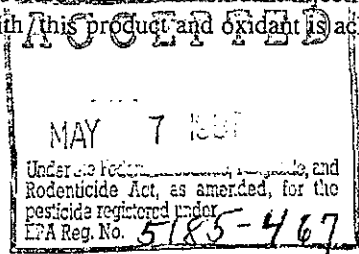
This product may be used in secondary oil recovery water systems, such as oil field water flood or salt water disposal systems for the control of sulfate-reducing bacteria and aerobic slime forming bacterial, which impair the efficiency of the system.

**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.

Add this product to the system at a 0.125 to 2.0 sodium bromide/oxidant mole ratio. For example:

- 1) 1.8 to 29.0 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution;
- 2) 1.4 to 23.2 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

Add sufficient amount of this product and oxidize with either gas chlorine or sodium hypochlorite solution to achieve a residual bromine level of up to 5 ppm or as needed to maintain control of the system. This product can be added whenever chlorination is applied. Feed this product either before or after the oxidant injection point into the water to be treated. Be sure rapid mixing of the treated water with this product and oxidant is achieved.



**LAKES, PONDS, RESERVOIRS, ORNAMENTAL PONDS AND FOUNTAINS (WITHOUT HUMANS OR WILDLIFE)**

When used as directed, this product effectively controls algal, bacterial, and fungal slime in lakes, ponds, reservoirs, ornamental ponds and fountains.

**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.

Add this product to the system at a 0.125 to 2.0 sodium bromide/oxidant mole ratio. For example:

- 1) 1.8 to 29.0 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution;
- 2) 1.4 to 23.2 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

Add sufficient amount of this product and oxidize with either gas chlorine or sodium hypochlorite solution to achieve a residual bromine level of 5 ppm or as needed to maintain control of the system. This product can be added whenever chlorination is applied. Feed this product either before or after the oxidant injection point into the water to be treated. Be sure rapid mixing of the treated water, this product and oxidant is achieved.

**STORAGE AND DISPOSAL**

**STORAGE.** Keep product dry in tightly closed original container when not in use. Store in a cool, dry, well ventilated area. Product should be stored at 50°F. or above.

**DISPOSAL.** (Pails/drums) Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **DO NOT REUSE EMPTY CONTAINER.** Triple rinse the container (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incinerate. Burn only if allowed by state and local authorities. If burned, stay out of smoke.

**DISPOSAL.** (Bags) Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS.** **WARNING.** Irritation may develop from eye and skin exposure. Avoid contact with eyes. Wear gloves and safety goggles. Wash contaminated clothing before reuse.

**PHYSICAL AND CHEMICAL HAZARDS**

Sodium bromide is not flammable. However, in fires fueled by other materials, hydrogen bromide or bromine may be released. In case of fire, wear self-contained breathing apparatus.

**ENVIRONMENTAL HAZARDS.** 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 the 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.

**OPTIONAL TEXT**

Treatment levels of this product and oxidant can best be measured with test kits for either bromine or chlorine. Tests should be made immediately after drawing water samples from the system. Use test kits according to directions.

- 1) When a bromine test kit is used results can be read directly as ppm bromine.
- 2) When a chlorine test kit is used, results can be expressed in terms of bromine by multiplying chlorine values by the conversion factor 2.25.

**NOTE:** Buyer assumes all responsibility for safety and use not in accordance with directions.

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