

88714-6

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

November 12, 2014

Robert Rosenwasser  
Agent  
Water Science Technologies LLC  
5520 Parkview Circle  
Bessemer, AL 35022

Subject: Label Notification per PRN 98-10 – Label Changes Consistent with the Primary Supplier's Newest EPA Stamp Accepted Label.  
Product Name: K-BAC 1000  
EPA Registration Number: 88714-6  
Application Date: October 8, 2014  
Decision Number: October 9, 2014

Dear Mr. Rosenwasser

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Antimicrobials Division has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, you may contact Lorena Rivas at 703-305-5027 or via email at [rivas.lorena@epa.gov](mailto:rivas.lorena@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Julie Chao".

for

Julie Chao, Acting Product Manager 34  
Regulatory Management Branch II  
Antimicrobials Division (7510P)  
Office of Pesticide Programs



**K-BAC® 1000**

DBNPA

A MICROBICIDAL BACTERICIDE, FUNGICIDE, ALGAECIDE AND SLIMICIDE, USED IN TREATING RECIRCULATING COOLING WATER IN INDUSTRIAL COOLING SYSTEMS, PAPER MILLS, BREWERY PASTEURIZER WATER, METALWORKING CUTTING FLUIDS, NON-POTABLE REVERSE OSMOSIS SYSTEMS, ENHANCED OIL RECOVERY SYSTEMS, AIR-WASHER SYSTEMS, INDUSTRIAL PRESERVATION APPLICATIONS, AND PUBLICLY-OWNED TREATMENT WORKS.

**ACTIVE INGREDIENT:**

2,2-Dibromo-3-nitropropionamide

98%

**OTHER INGREDIENTS:**

2%

**TOTAL:**

100%

**KEEP OUT OF REACH OF CHILDREN**

**DANGER**

**FIRST AID**

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call a poison control center, or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**NOTE TO PHYSICIAN:**

Probable mucosal damage may contraindicate the use of gastric lavage.

See side panels for additional precautionary statements.

MANUFACTURED FOR:

**WATER SCIENCE TECHNOLOGIES, LLC**  
5520 PARKWOOD CIRCLE  
BESSEMER, AL 35022  
866-284-9244

Date Received: *[Signature]*  
Reviewed By: *[Signature]*

EPA Reg. No. 88714-6

EPA Est. No. (Choose on PDF)

LOT#:

NET CONTENTS:

Transportation Emergency (Spill) Tel: 800-255-3924 CHEMTEL

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
DANGER**

**CORROSIVE - CAUSES IRREVERSIBLE EYE DAMAGE.**

May be fatal if swallowed. Do not get in eyes, on skin or on clothing. Do not breathe dust. When loading or handling wear protective eyewear (goggles with side shields or face shield), wear long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

**PERSONAL PROTECTIVE EQUIPMENT: (PPE)**

Long sleeve shirt, long pants, shoes plus socks, eye protection, approved respirator, chemical-resistant gloves and a chemical resistant apron must be worn when handling.

**USER SAFETY REQUIREMENTS:**

Users must wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users must remove clothing immediately if pesticide gets inside. Wash the outside of gloves before removing. Keep and wash PPE separately from other laundry. Then wash thoroughly and put on clean clothing. Users must remove PPE immediately after handling this product.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washable exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**ENVIRONMENTAL HAZARDS:** This product is toxic to fish and aquatic organisms. Do not contaminate water by cleaning of 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 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.

**PHYSICAL OR CHEMICAL HAZARDS:** Reaction with strong reducing agents may be explosive. Avoid continuation and dusting.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE**

**-FOR WATER SOLUBLE BAGS:** Do not allow water soluble bags to become wet during storage. Do not handle water soluble bags with wet hands or wet gloves. Do not remove from container except for immediate use. Do not remove product from water soluble bag.

**-FOR EVERYTHING EXCEPT WATER SOLUBLE BAGS:** Store in a dark, cool, dry, well-ventilated area, in well-closed original containers, away from energy sources, combustible organic materials, oxidizers, and moisture.

**PESTICIDE 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 use 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 HANDLING**

**-FOR PLASTIC BAGS:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. If not emptied in this manner, the bag may be considered an acute hazardous waste and must be disposed of in accordance with local, state and federal regulations. When completely empty, offer for recycling, if available, or dispose of bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**-FOR SUPERSACKS:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Offer for recycling, if available.

**-FOR FIBER DRUM:** Nonrefillable container. Do not reuse or refill this container. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Offer for recycling, if available. Triple rinse container (or equivalent) promptly

after emptying. Triple rinse as follows: roll it back and forth ensuring at least 10 on its end and tip it back and forth seven it back and forth several times. Empty rinsate for later use or disposal. Repeat procedure two more times.

**-FOR BOTTLE / JAR / CANISTER:** Completely empty bottle/jar/canister in accordance with local, state and federal available, or dispose of bottle/jar/canister state and local authorities, by burning.

**-FOR WATER SOLUBLE BAGS:** No When all water soluble bags are used, of in a sanitary landfill or by incinerator it must be triple rinsed with clean water application equipment or a mix tank. Fi 10 seconds. Pour rinsate into applicati disposal. Drain for 10 seconds after the Then offer for recycling, if available, incineration.

**SPILLS:** When handling or dealing w protective clothing, including chemical- occurs. Sweep up dry spills and dispo with 10% sodium bicarbonate solution, disposing of as described for pestic decomposing, isolate unsealed contain sodium bicarbonate solution and large

**DIRT**

It is a violation of Federal law to use it the entire label and use strictly in at

**RECIRCULATING COOLING WATER**

**NOTE:** Add this product separately to t decomposition of this product due to th the basin (or any other point of unifor chemical feed dispenser with control rel it may be continuous or intermittent, def is begun, and the in-system retention ti continuous or intermittent treatment, discontinued for 24-48 hours.

**FOR CONTROL OF BACTERIA:** Add the system of 0.2-2.3 ppm active ingred

**-INTERMITTENT OR SLUG METHOD**

**Initial Dose:** When the system is notice a concentration in the system of 1.2-2.1. Subsequent Dose: When microbial c system every 4 days, or as needed it before treatment is begun.

**-CONTINUOUS FEED METHOD**

**Initial Dose:** When the system is notice a concentration in the system of 1.2-2.1. Subsequent Dose: Maintain a conce fouled systems must be cleaned before

**FOR CONTROL OF FUNGI AND AL**

concentration in the system of 7.0-2 contamination. **-INTERMITTENT OR SLUG METHOD** Initial Dose: When the system is notice a concentration in the system of 11.6-2-

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# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER

## CORROSIVE - CAUSES IRREVERSIBLE EYE DAMAGE.

May be fatal if swallowed. Do not get in eyes, on skin or on clothing. Do not breathe dust. When loading or handling wear protective eyewear (goggles with side shields or face shield), wear long-sleeved shirt and long pants, socks and chemical-resistant gloves. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

## PERSONAL PROTECTIVE EQUIPMENT: (PPE)

Long sleeve shirt, long pants, shoes plus socks, eye protection, approved respirator, chemical-resistant gloves and a chemical resistant apron must be worn when handling.

## USER SAFETY REQUIREMENTS:

Users must wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users must remove clothing immediately if pesticide gets inside. Wash the outside of gloves before removing. Keep and wash PPE separately from other laundry. Then wash thoroughly and put on clean clothing. Users must remove PPE immediately after handling this product. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washable exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**ENVIRONMENTAL HAZARDS:** This product is toxic to fish and aquatic organisms. Do not contaminate water by cleaning of 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 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.

**PHYSICAL OR CHEMICAL HAZARDS:** Reaction with strong reducing agents may be explosive. Avoid comminution and dusting.

## STORAGE AND DISPOSAL

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

### PESTICIDE STORAGE

**-FOR WATER SOLUBLE BAGS:** Do not allow water soluble bags to become wet during storage. Do not handle water soluble bags with wet hands or wet gloves. Do not remove from container except for immediate use. Do not remove product from water soluble bag.  
**-FOR EVERYTHING EXCEPT WATER SOLUBLE BAGS:** Store in a dark, cool, dry, well-ventilated area, in well-closed original containers, away from energy sources, combustible organic materials, oxidizers, and moisture.

**PESTICIDE 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 use 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 HANDLING

**-FOR PLASTIC BAGS:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. If not emptied in this manner, the bag may be considered an acute hazardous waste and must be disposed of in accordance with local, state and federal regulations. When completely empty, offer for recycling, if available, or dispose of bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.  
**-FOR SUPERSACKS:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Offer for recycling, if available.

**-FOR FIBER DRUM:** Nonrefillable container. Do not reuse or refill this container. Completely empty liner by shaking and bottom to loosen clinging particles. Empty residue into application equipment. Offer for recycling, if available. Triple rinse container (or equivalent) promptly

after emptying. Triple rinse as follows: Replace and tighten closures. Tip container on its side and roll it back and forth ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

**-FOR PAIL:** Non-refillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty remaining contents into application equipment or mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**-FOR BOTTLE / JAR / CANISTER:** Nonrefillable container. Do not reuse or refill this container. Completely empty bottle/jar/canister into application equipment. If not emptied in this manner, the bottle/jar/canister may be considered an acute hazardous waste and must be disposed of in accordance with local, state and federal regulations. When completely empty, offer for recycling, if available, or dispose of bottle/jar/canister in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**-FOR WATER SOLUBLE BAGS:** Non-refillable container. Do not reuse or refill this container. When all water soluble bags are used, the outer container should be clean and may be disposed of in a sanitary landfill or by incineration. If outer container contacts formulated product in any way, it must be triple rinsed with water. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and close tightly. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration.

**SPILLS:** When handling or dealing with spills, use goggles with side shields or face shield, wear protective clothing, including chemical-resistant gloves and boots; use a dust respirator if dusting occurs. Sweep up dry spills and dispose of as described for pesticide disposal. Cover wet spills with 10% sodium bicarbonate solution, water and then an inert absorbent before sweeping up and disposing of as described for pesticide disposal. If container contents are contaminated or decomposing, isolate unsealed container in the open or in a well-ventilated area; flood with 10% sodium bicarbonate solution and large volumes of water if necessary.

## DIRECTIONS FOR USE

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

**RECIRCULATING COOLING WATER IN INDUSTRIAL OR COMMERCIAL COOLING SYSTEMS**  
**NOTE:** Add this product separately to the system. Do not mix it with other additives, so as to avoid decomposition of this product due to the high pH of many additive formulations. Add this product to the basin (or any other point of uniform mixing). Addition must be made via a metering pump or chemical feed dispenser with control release mechanism that accompanies this product's container; 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 must be discontinued for 24-48 hours.

**FOR CONTROL OF BACTERIA:** Add sufficient amount of this product to reach a concentration in the system of 0.2-2.3 ppm active ingredient, depending on the severity of contamination.

### -INTERMITTENT OR SLUG METHOD

**Initial Dose:** When the system is noticeably fouled, add sufficient amount of this product to reach a concentration in the system of 1.2-2.3 ppm active ingredient. Repeat until control is achieved.  
**Subsequent Dose:** When microbial control is evident, add 0.6-2.3 ppm of this product to 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 sufficient amount of this product to achieve a concentration in the system of 1.2-2.3 ppm.

**Subsequent Dose:** Maintain a concentration of 0.2-1.2 ppm of this product in the system. Badly fouled systems must be cleaned before treatment is begun.

**FOR CONTROL OF FUNGI AND ALGAE:** Add sufficient amount of this product to reach a concentration in the system of 7.0-23.0 ppm active ingredient, depending on the severity of contamination.

### -INTERMITTENT OR SLUG METHOD

**Initial Dose:** When the system is noticeably fouled, add sufficient amount of this product to achieve a concentration in the system of 1.6-23.0 ppm active ingredient. Maintain until control is achieved.



DE AND SLIMICIDE, USED IN INDUSTRIAL COOLING SYSTEMS, WORKING CUTTING FLUIDS, OIL RECOVERY SYSTEMS, APPLICATIONS, AND PUBLICLY.

98%  
2%  
100%

## CHILDREN

water for 15-20 minutes. Remove a rinsing eye. Call a poison control immediately for treatment advice. Have a smiling unless told to do so by the to an unconscious person. Rinse skin immediately with plenty for treatment advice.

ing, call 911 or an ambulance, then ble. Call a poison control center or poison control center or doctor, or

use of gastric lavage.  
y statements.

LLC NOTIFICATION  
Reviewed By: *[Signature]*

A Est. No. (Choose on PDF)

VTS:

55-3924 CHEMTEL

**Subsequent Dose:** When microbial control is evident, add sufficient amount of this product daily to maintain a concentration in the system of 7.0-23.0 ppm active ingredient, 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 sufficient amount of this product to reach a concentration in the system of 11.6-23.0 ppm active ingredient.

**Subsequent Dose:** Maintain a continuous feed of 7.0-23.0 ppm of this product in the system. Badly fouled systems must be cleaned before treatment is begun.

**PULP AND PAPER MILL SYSTEMS**  
**NOTE:** Add this product separately to the system. Do not mix it with other additives, so as to avoid decomposition of this product 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 this product at levels of 0.03-0.10 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 this product 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 0.03-0.07 lb. of this product/ton (dry) of paper or pulp as necessary for control. Moderately fouled systems must be treated continuously with 0.07-0.10 lb. of this product/ton (dry) of paper or pulp until the slime accumulation is controlled. Subsequent rates can then be reduced to 0.03-0.07 lb. of this product/ton (dry) of pulp or 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 must be treated continuously with 0.03-0.07 lb. of this product/ton (dry) of paper or pulp, until the slime is controlled, then added on an intermittent basis to maintain control.

#### **NON-POTABLE REVERSE OSMOSIS SYSTEMS**

For controlling bacterial, fungal, and algal slimes in non-potable reverse osmosis systems and peripheral equipment, add this product to the system inlet water or before any other contamination area ahead of the reverse osmosis unit. This product must 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 this product. Add sufficient amount of this product to achieve a concentration of 0.2-24.0 ppm in the feedwater.

During use of this product both permeate and reject waters must be directed to the drain. Once treatment is completed, rinsing with feedwater must continue until conductivity values in the permeate are at or below values before treatment with this product. Badly fouled systems must be cleaned before treatment is begun.

**FOR CONTROL OF BACTERIA:** Initial Dose: When the system is noticeably fouled, add sufficient amount of this product to achieve a concentration of 1.2-2.4 ppm active ingredient in the feedwater. Minimum treatment intervals must 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, maintain a concentration of 0.6-2.4 ppm of this product in the feedwater, 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 12.0-24.0 ppm of this product to the feedwater. Minimum treatment intervals must 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, maintain a concentration of 2-24.0 ppm of this product in the feedwater, or as specified by guidelines recommended by the membrane manufacturer.

#### **METALWORKING FLUIDS CONTAINING WATER**

This product is effective in metalworking fluid concentrates which have been diluted in water at ratios of 1:100 to 1:14. 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 must be made with a metering pump.

**Initial or Slug Dose:** When the system is noticeably fouled, add 60.6 ppm of this product to the metalworking fluids. Repeat until control is achieved.

**Subsequent Dose:** When microbial control is evident, maintain a concentration of 24.4-48.4 ppm of this product in the system, or as needed to maintain control. Additions of this product can be made continuously or intermittently. Slug the system as required.

#### **BREWERY PASTEURIZER WATER**

For controlling (or inhibiting) the growth of bacteria, fungi or yeasts in brewery pasteurizing water systems, add this product at a point in the system to insure uniform mixing via metering pump or chemical feed dispenser with control release mechanism that accompanies this product's container. Initial or Slug Dose: When the system is noticeably fouled, add sufficient amount of this product to achieve a concentration of 60.6 ppm active ingredient in the system. Repeat until control is achieved.

**Subsequent Dose:** When microbial control is evident, maintain a concentration of 24.4-48.4 ppm of this product in the system, or as needed to maintain control. Additions of this product can be made continuously or intermittently. Slug the system as required. Badly fouled systems must be cleaned before treatment is begun.

#### **ENHANCED OIL RECOVERY SYSTEMS**

**NOTE:** Add this product separately to the system. Do not mix it with other additives, so as to avoid decomposition of this product due to the high pH of many additive formulations. Addition of this product 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 sufficient amount of this product to achieve a concentration in feedwater of 0.2-16.0 ppm depending on the severity of contamination. Additions must be made with a metering pump either continuously or intermittently.

**-CONTINUOUS FEED METHOD:** When the system is noticeably fouled, add 2-16 ppm of this product continuously until the desired degree of control is achieved. Subsequently, treat with 0.2-3.9 ppm of this product 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 2.0-16.0 ppm of this product 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 3-16 ppm of this product. Additions of this product must be made with a metering pump immediately after preparation of the aqueous biopolymer solution to reduce loss of viscosity.

#### **AIR-WASHER SYSTEMS**

For use only in industrial air-washer systems that maintain effective mist eliminating components. Add sufficient amount of this product via metering pump or chemical feed dispenser with control release mechanism that accompanies this product's container to reach a concentration in the system of 0.35-22.1 ppm active ingredient, 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 sufficient amount of this product to reach a concentration in the system of 0.7-22.1 ppm active ingredient. Repeat until control is achieved. Subsequent Dose: When microbial control is evident, add sufficient amount of this product every 2 days to reach a concentration in the system of 0.35-10.9 ppm active ingredient, 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 sufficient amount of this product to achieve a concentration in the system of 0.7-22.1 ppm active ingredient. Subsequent Dose: Maintain this level by pumping a continuous feed of 0.35-10.9 ppm active ingredient in the system per day. Badly fouled systems must be cleaned before treatment is begun.

#### **INDUSTRIAL PRESERVATION APPLICATIONS**

This product 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 this product to the raw material or product at a concentration of 5-408 ppm by weight. This concentration is equivalent to 0.36-28.94 lbs. of this product per 10,000 gallons. The required concentration will depend on the material being treated and the level of contamination present.

**PUBLICLY-OWNED TREATMENT WORKS TO CONTROL COLIFORM AND OTHER BACTERIA**  
Add sufficient amount of this product to reach a concentration in the system of 0.2-2.0 ppm active ingredient by weight of water being treated, depending on the severity and contamination in the system. Addition must be CONTINUOUS and must be made with a metering pump at a point in the system where mixing will be rapid and thorough. Add this product 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 sufficient amount of this product to reach a concentration in the system of 0.1-0.3 ppm of this product active ingredient by weight of water treated. Chlorination must result in a minimum detectable residual (i.e., greater than zero but less than the NPDES permit level). Addition must be CONTINUOUS and made at a point just after initial chlorine mixing. Rapid mixing is necessary for maximum effectiveness. This product must be added at a location where a contact time of 10 minutes or longer will be provided before reaching the outfall.

#### **OILFIELD AND PETROCHEMICAL SYSTEMS**

This product may be used either in slug treatment or in continuous application. Dosages may vary from as much as 40 ppm of this product in slug application to 2-10 ppm of this product in continuous

treatment (0.61 lbs. of this product per typical slug treatment is to add 2.5 lbs. prevent growth of microbial slime. Back followed by continuous treatment to m

#### **FRACTURING FLUIDS**

This product reduces bacterial contamination well stimulants in the oil and gas fracturing fluid or (in the case of direct injection at the head during the results. This product must be added at 36 ppm) depending on the quality of th

**WARRANTY:** Seller warrants that this product for the purposes stated on the label when of use, but to the extent consistent with MERCHANTABILITY OR FITNESS FOR the use of this product contrary to label in reasonably foreseeable to Seller, and Buy

Handwritten initials or mark.

Sufficient amount of this product daily active ingredient, or as needed to ensure treatment is begun.

Sufficient amount of this product to reach entire system.

Badly fouled systems must be cleaned continuously or intermittently. Slug the system as required. Badly fouled systems must be cleaned before treatment is begun.

**NOTE:** Add this product separately to the system. Do not mix it with other additives, so as to avoid decomposition of this product due to the high pH of many additive formulations. Addition of this product 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 sufficient amount of this product to achieve a concentration in feedwater of 0.2-16.0 ppm depending on the severity of contamination. Additions must be made with a metering pump either continuously or intermittently.

**-CONTINUOUS FEED METHOD:** When the system is noticeably fouled, add 2-16 ppm of this product continuously until the desired degree of control is achieved. Subsequently, treat with 0.2-3.9 ppm of this product 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 2.0-16.0 ppm of this product 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 3-16 ppm of this product. Additions of this product must be made with a metering pump immediately after preparation of the aqueous biopolymer solution to reduce loss of viscosity.

**AIR-WASHER SYSTEMS**

For use only in industrial air-washer systems that maintain effective mist eliminating components. Add sufficient amount of this product via metering pump or chemical feed dispenser with control release mechanism that accompanies this product's container to reach a concentration in the system of 0.35-22.1 ppm active ingredient, 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 sufficient amount of this product to reach a concentration in the system of 0.7-22.1 ppm active ingredient. Repeat until control is achieved. Subsequent Dose: When microbial control is evident, add sufficient amount of this product every 2 days to reach a concentration in the system of 0.35-10.9 ppm active ingredient, 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 sufficient amount of this product to achieve a concentration in the system of 0.7-22.1 ppm active ingredient. Subsequent Dose: Maintain this level by pumping a continuous feed of 0.35-10.9 ppm active ingredient in the system per day. Badly fouled systems must be cleaned before treatment is begun.

**INDUSTRIAL PRESERVATION APPLICATIONS**

This product 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 this product to the raw material or product at a concentration of 5-408 ppm by weight. This concentration is equivalent to 0.36 -28.94 lbs. of this product per 10,000 gallons. The required concentration will depend on the material being treated and the level of contamination present.

**PUBLICLY-OWNED TREATMENT WORKS TO CONTROL COLIFORM AND OTHER BACTERIA**

Add sufficient amount of this product to reach a concentration in the system of 0.2-2.0 ppm active ingredient by weight of water being treated, depending on the severity and contamination in the system. Addition must be CONTINUOUS and must be made with a metering pump at a point in the system where mixing will be rapid and thorough. Add this product 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 sufficient amount of this product to reach a concentration in the system of 0.1-0.3 ppm of this product active ingredient by weight of water treated. Chlorination must result in a minimum detectable residual (i.e., greater than zero but less than the NPDES permit level). Addition must be CONTINUOUS and made at a point just after initial chlorine mixing. Rapid mixing is necessary for maximum effectiveness. This product must be added at a location where a contact time of 10 minutes or longer will be provided before reaching the outfall.

**OILFIELD AND PETROCHEMICAL SYSTEMS**

This product may be used either in slug treatment or in continuous application. Dosages may vary from as much as 40 ppm of this product in slug application to 2-10 ppm of this product in continuous

Subsequent Dose: When microbial control is evident, maintain a concentration of 24.4-48.4 ppm of this product in the system, or as needed to maintain control. Additions of this product can be made continuously or intermittently. Slug the system as required. Badly fouled systems must be cleaned before treatment is begun.

#### ENHANCED OIL RECOVERY SYSTEMS

**NOTE:** Add this product separately to the system. Do not mix it with other additives, so as to avoid decomposition of this product due to the high pH of many additive formulations. Addition of this product 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 sufficient amount of this product to achieve a concentration in feedwater of 0.2-16.0 ppm depending on the severity of contamination. Additions must be made with a metering pump either continuously or intermittently.

**-CONTINUOUS FEED METHOD:** When the system is noticeably fouled, add 2-16 ppm of this product continuously until the desired degree of control is achieved. Subsequently, treat with 0.2-3.9 ppm of this product 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 2.0-16.0 ppm of this product 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 3-16 ppm of this product. Additions of this product must be made with a metering pump immediately after preparation of the aqueous biopolymer solution to reduce loss of viscosity.

#### AIR-WASHER SYSTEMS

For use only in industrial air-washer systems that maintain effective mist eliminating components. Add sufficient amount of this product via metering pump or chemical feed dispenser with control release mechanism that accompanies this product's container to reach a concentration in the system of 0.35-22.1 ppm active ingredient, 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 sufficient amount of this product to reach a concentration in the system of 0.7-22.1 ppm active ingredient. Repeat until control is achieved. Subsequent Dose: When microbial control is evident, add sufficient amount of this product every 2 days to reach a concentration in the system of 0.35-10.9 ppm active ingredient, 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 sufficient amount of this product to achieve a concentration in the system of 0.7-22.1 ppm active ingredient. Subsequent Dose: Maintain this level by pumping a continuous feed of 0.35-10.9 ppm active ingredient in the system per day. Badly fouled systems must be cleaned before treatment is begun.

#### INDUSTRIAL PRESERVATION APPLICATIONS

This product 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 this product to the raw material or product at a concentration of 5-408 ppm by weight. This concentration is equivalent to 0.36 -28.94 lbs. of this product per 10,000 gallons. The required concentration will depend on the material being treated and the level of contamination present.

**PUBLICLY-OWNED TREATMENT WORKS TO CONTROL COLIFORM AND OTHER BACTERIA**

Add sufficient amount of this product to reach a concentration in the system of 0.2-2.0 ppm active ingredient by weight of water being treated, depending on the severity and contamination in the system. Addition must be CONTINUOUS and must be made with a metering pump at a point in the system where mixing will be rapid and thorough. Add this product 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 sufficient amount of this product to reach a concentration in the system of 0.1-0.3 ppm of this product active ingredient by weight of water treated. Chlorination must result in a minimum detectable residual (i.e., greater than zero but less than the NPDES permit level). Addition must be CONTINUOUS and made at a point just after initial chlorine mixing. Rapid mixing is necessary for maximum effectiveness. This product must be added at a location where a contact time of 10 minutes or longer will be provided before reaching the outfall.

#### OILFIELD AND PETROCHEMICAL SYSTEMS

This product may be used either in slug treatment or in continuous application. Dosages may vary from as much as 40 ppm of this product in slug application to 2-10 ppm of this product in continuous

treatment (0.61 lbs. of this product per 10,000 gallons of water equals approximately 7 ppm). A typical slug treatment is to add 2.5 lbs. of this product per 10,000 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.

#### FRACTURING FLUIDS

This product reduces bacterial contamination and degradation of fracturing gels and fluids used as well stimulants in the oil and gas industry. This product may be added during pre-mixing of the fracturing fluid or (in the case of direct mix/injection systems) an aqueous solution may be added by direct injection at the head during the fracturing procedure.

**FREQUENCY AND DOSE:** This product must be used for each fracturing operation to ensure best results. This product must be added at a rate of 2.0-3.0 lbs. per 10,000 gallons (approximately 24-36 ppm) depending on the quality of the makeup water.

**WARRANTY:** Seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with label directions under normal conditions of use, but to the extent consistent with applicable law, neither this warranty nor any other warranty of MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, expressed or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to Seller, and Buyer assumes the risk of any such use.

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