

88714-6

2/12/2013

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**U.S. ENVIRONMENTAL PROTECTION AGENCY**

Office of Pesticide Programs  
Antimicrobials Division (7510C)  
1200 Pennsylvania Avenue NW  
Washington, D.C. 20460

EPA Reg. Number:

88714-6

Date of Issuance:

FEB 12 2013

Term of Issuance:

1200 Per

Conditional

Name of Pesticide Product:

K-BAC 1000

**NOTICE OF PESTICIDE:**

- Registration
- Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Water Science Technology  
5520 Parkwood Circle  
Bessemer, AL 35022

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product (OPP Decision Number: D-470447) is unconditionally registered in accordance with FIFRA sec 3(c)(7)(a) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for re-registration of your product under FIFRA section 4.
2. Make the labeling changes listed below before you release the product for shipment:
  - a. Revise the EPA Registration Number to read, "EPA Reg. No. 88714-6".

Signature of Approving Official:

Jacqueline Campbell-McFarlane, Product Manager Team 34  
Regulatory Management Branch II  
Antimicrobials Division (7510P)

Date:

FEB 12 2013

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped label with comments is enclosed for your records. Submit one (1) copy of your final printed labeling prior to release of this product for shipment. Should you have any questions concerning this letter, please contact me by telephone at (703) 308-6416 during the hours of 8:00 am to 4:00 pm EST.

Sincerely,



Jacqueline Campbell  
Product Manager 34  
Regulatory Management Branch II  
Antimicrobials Division (7510P)

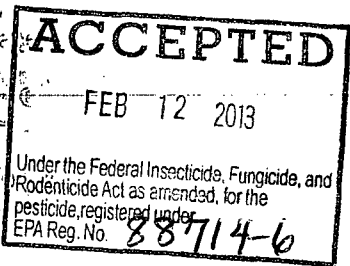
Enclosures: (Stamped Label)

{All text in brackets [xxx] is optional and may or may not be intended on a final label}  
{All text in braces {xxx} is administrative and will not appear on a final label}

reference for  
**K-BAC® 1000**

DBNPA for you

A MICROBIOCIDAL BACTERICIDE, FUNGICIDE, ALGAEICIDE 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-nitrilopropionamide.....	98%
OTHER INGREDIENTS: .....	2%
TOTAL: .....	100%

**KEEP OUT OF REACH OF CHILDREN  
DANGER**

FIRST AID	
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call poison control center, or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>NOTE TO PHYSICIAN</b>	
Probable mucosal damage may contraindicate the use of gastric lavage.	

See [back] [side] panels for [additional precautionary statements] [and] [first aid]

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

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 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.

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**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 invertebrates. 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.

**CHEMICAL AND PHYSICAL HAZARDS**

Reaction with strong reducing agents may be explosive. Avoid comminution and dusting.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**TREATING 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 of this product to reach a concentration in the system of 0.2 – 2.3 ppm active ingredient, depending on the severity of contamination.

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**INTERMITTENT OR SLUG METHOD**

Initial Dose: When the system is noticeably fouled, add sufficient 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 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 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 of this product to achieve a concentration in the system of 11.6 – 23.0 ppm active ingredient. Maintain until control is achieved.

Subsequent Dose: When microbial control is evident, add sufficient 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 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.

**TREATING 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 be first 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 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.

**TREATING NON-POTABLE REVERSE OSMOSIS SYSTEMS**

For controlling bacteria, fungi and algae 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 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.

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**FOR CONTROL OF BACTERIA**

Initial Dose: When the system is noticeably fouled, add sufficient 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 7.2 – 24.0 ppm of this product in the feedwater, or as specified by guidelines recommended by the membrane manufacturer.

**TREATING 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.

**TREATING 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 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.

**TREATING 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 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.

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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.

#### **DIRECTIONS FOR TREATING AIR-WASHER SYSTEMS**

Add sufficient 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 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 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 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.

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

#### **DIRECTIONS FOR 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 to 408 ppm by weight. This concentration is equivalent to 0.036 to 2.894 lbs. of this product per 1,000 gallons. 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 sufficient of this product to reach a concentration in the system of 0.2 to 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 of this product to reach a concentration in the system of 0.1 to 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.

#### **DIRECTIONS FOR TREATING 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 to 10 ppm of this product in continuous treatment (0.061 lbs. of this product per 1,000 gallons of water equals approximately 7 ppm).

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A typical slug treatment is to add 0.25 lbs. of this product 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.

### DIRECTIONS FOR TREATING FRACTURING FLUIDS

This product reduces bacterial contamination and degradation of fracturing gels and fluids used as well as 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:

K BAC 1000 must be used for each fracturing operation to ensure best results. This product must be added at a rate of 2.0 to 3.0 lbs. per 10,000 gallons (approximately 24 to 36 ppm) depending on the quality of the makeup water.

### STORAGE AND DISPOSAL

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

#### PESTICIDE STORAGE

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 non-refillable container less than or equal to 50 lbs}

[Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty remaining contents into application equipment or mix tank. Fill the container ¼ 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.]

{For Water soluble bag}

[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 clean water. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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 impact-resistant goggles with side shields, or face shield; wear body-covering clothes, including impervious rubber 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 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.



