



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

December 31, 2015

Lazelle Whitworth  
Product Regulation Coordinator  
BWA Water Additives U.S, LLC  
1979 Lakeside Parkway, Suite 925  
Tucker, GA 30084

Subject: Notification per PRN 98-10 – Add a statement “**FRUIT AND VEGETABLE WASH IS NOT APPROVED FOR USE IN CALIFORNIA**” on the label.  
Product Name: Bromicide 4000  
EPA Registration Number: 83451-17  
Application Date: 10/29/2015  
Decision Number: 511520

Dear Ms. Whitworth:

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 (AD) 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.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you have any questions, you may contact David Liem at 703-305-1284 or via email at [liem.david@epa.gov](mailto:liem.david@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "D. Fuller".

Demson Fuller, Product Manager 32  
Regulatory Management Branch II  
Antimicrobials Division (7510P)  
Office of Pesticide Programs

{All text in brackets [xxx] is optional and may or may not be included on a final label.}

{All text in braces {xxx} is administrative and will not appear on a final label.}

{PRIVATE }

## Bromicide 4000

[For use as a Bactericide, Fungicide, Algicide, and Mollusk Control Agent, and for Control of Microbial Slimes in: Recirculating Cooling Water Systems, Once-Through Cooling Water Systems, Wastewater Treatment Systems, Brewery Pasteurizers, and Pulp and Paper Mill Water.]

### ACTIVE INGREDIENT:

Sodium bromide 40.0%

OTHER INGREDIENTS: 60.0%

TOTAL: 100.0%

### NOTIFICATION

83451-17

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

12/31/2015

KEEP OUT OF REACH OF CHILDREN

### CAUTION

### FIRST AID:

#### 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 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 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.

[IN CASE OF TRANSPORT EMERGENCY, CALL [1-800-424-9300] [telephone number supplied by supplemental registrant].]

SEE OTHER PRECAUTIONS ON SIDE PANEL

Net Weight \_\_\_\_\_

Lot No. \_\_\_\_\_

EPA Reg. No. 83451-17

EPA Est. No. 5785-AR-2

BWA WATER ADDITIVES US LLC

1979 Lakeside Parkway, Suite 925

TUCKER, GA 30084

800-600-4523

**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.

**RECIRCULATING COOLING WATER SYSTEMS, INCLUDING AIR WASHERS AND BREWERY PASTEURIZERS:**

When used in conjunction with an oxidant, this product effectively controls algal, bacterial, and fungal slime and controls the settlement and growth of mollusks such as the zebra mussel (*Dreissena*) or the Asiatic clam (*Corbicula*) in commercial and industrial cooling towers; influent water systems such as flow through filters, cooling ponds, canals, and lagoons; heat exchange water systems; air washers; pasteurizers; retort systems; and industrial water scrubbing systems.

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

- 1) 1.6 to 26.5 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution; or,
- 2) 1.3 to 21.2 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

**Initial Dose:** When the system is noticeably fouled, add 0.0003 to 0.024 gallons of this product per 1000 gallons of water contained in the system and oxidize with either gas chlorine (0.008 to 0.040 pounds gas chlorine per 1000 gallons of contained water), or sodium hypochlorite solution (0.007 to 0.032 gallons of 12.5% sodium hypochlorite solution per 1000 gallons of contained water).

**Subsequent Dose:** When microbial control is evident, add 0.0002 to 0.024 gallons of this product per 1000 gallons of water contained in the system and oxidize with either gas chlorine (0.004 to 0.040 pounds gas chlorine per 1000 gallons of contained water), or sodium hypochlorite solution (0.003 to 0.032 gallons of 12.5% sodium hypochlorite solution per 1000 gallons of contained water).

**ONCE-THROUGH COOLING WATER AND WASTE WATER TREATMENT SYSTEMS:**

When used in conjunction with an oxidant, this product effectively controls algal, bacterial and fungal slime and controls the settlement and growth of mollusks such as the zebra mussel (*Dreissena*) or the Asiatic clam (*Corbicula*) in once-through fresh and sea water cooling systems, cooling ponds, canals, and lagoons and secondary and tertiary wastewater treatment systems.

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

- 1) 1.6 to 26.5 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution; or,
- 2) 1.3 to 21.2 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

Initial Dose: When the system is noticeably fouled, add 0.0008 to 0.049 gallons of this product per 1000 gallons of water contained in the system and oxidize with either gas chlorine (0.02 to 0.08 pounds gas chlorine per 1000 gallons of contained volume), or sodium hypochlorite solution (0.02 to 0.06 gallons of 12.5% sodium hypochlorite solution per 1000 gallons of contained volume).

Subsequent Dose: When microbial control is evident, add 0.0003 to 0.049 gallons of this product per 1000 gallons of water contained in the system and oxidize with either gas chlorine (0.008 to 0.08 pounds gas chlorine per 1000 gallons of contained volume), or sodium hypochlorite solution (0.006 to 0.06 gallons of 12.5% sodium hypochlorite solution per 1000 gallons of contained volume).

**FRUIT AND VEGETABLE WASH:** When used in conjunction with an oxidant (Chlorine gas or NaOCl), this product can be used for the wash and transport of fruits and vegetables. This product and oxidant should be added at a rate not to exceed a dosage of 55 ppm of product (38.5 gallons of this product per one million gallons of water treated). Apply sufficient amount of this product and chlorine or sodium hypochlorite to achieve a residual bromine level of 0.5 to 5 ppm when measured approximately 5 minutes after treatment. The recommended activation mix of this product and oxidant is a one to one molar ratio. Chlorine dose (99%) 3.3 pounds, 10% NaOCl dose (3.3 gallons) or 15% NaOCl dose (2.0 gallons) will activate one gallon of this product (40% sodium bromide solution). This product may be continuously metered to Chlorinator eductor water or mixed with a NaOCl 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, residues of the chemical.

**[FRUIT AND VEGETABLE WASH IS NOT APPROVED USE IN CALIFORNIA]**

#### **PULP AND PAPER MILLS:**

When used in conjunction with an oxidant, 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, non-potable water systems, and other process water.

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

- 1) 1.6 to 26.5 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution; or,
- 2) 1.3 to 21.2 gallons sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

Add sufficient amount of mixed product/oxidant solution to achieve a residual bromine level of 0.5 to 5.0 parts per million. For 0.5 parts per million add 0.00057 gallons of product and 0.0018 gallons of (12.5%) bleach or 0.0019 pounds gas chlorine per 1,000 gallons of water treated.

#### **SECONDARY OIL RECOVERY SYSTEMS:**

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

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 of 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.

### **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 impairs the efficiencies of the muds and fluids.

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 of 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 the 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.

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 parts per million 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.

This product weighs 11.9 pounds/gallon at 70° F.

### **STORAGE AND DISPOSAL:**

Do not contaminate water, food, or feed by 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 0°F or above.

*{Text for non-refillable containers}*

**CONTAINER DISPOSAL:** Non-refillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying.

*{For containers of 5 gallons or less}*[Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ 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 containers with capacities of greater than 5 gallons}* [Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. 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 the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.]

*{Text for refillable containers}*

**CONTAINER DISPOSAL:** Refillable container. Refill this container with sodium bromide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**PRECAUTIONARY STATEMENTS:**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS.** CAUTION. Causes moderate eye irritation. Avoid contact with eyes, skin and clothing. Wash with soap and water after handling. Remove contaminated clothing and wash 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:** This product is toxic to fish and aquatic organisms. 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.

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