



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Antimicrobials Division (7510C)  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C. 20460

EPA Reg. Number:  
9386-45

Date of Issuance:  
NOV 23 2005

Term of Issuance:  
CONDITIONAL

Name of Pesticide Product:  
AMA-4900B

NOTICE OF PESTICIDE:  
  X   Registration  
       Re-registration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP code):

Kemira Chemical, Inc.  
245 Townpark Drive, Suite 200  
Kennesaw, GA 30144-5515

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Antimicrobials 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/reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended.

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 is conditionally registered in accordance with FIFRA Section 3(c) (7) (A) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA Section 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, or as required by registration review under FIFRA Section 3(g).

2. Make the following labeling changes:

a. Revise the EPA Registration Number to read,  
"EPA Reg. No.9386-45".

Signature of Approving Official:

Marshall Swindell, Product Manager, Team 33,  
Regulatory Management Branch I, Antimicrobials Division

Date:

NOV 23 2005

page 2  
EPA Reg. No. 9386-45

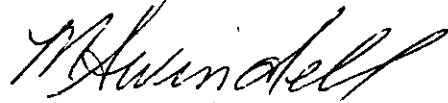
3. Submit three copies of a final printed production label.

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

A stamped copy of the accepted label is enclosed for your records.

If you have any questions concerning this letter, please contact Karen M. Leavy at (703)-308-6237.

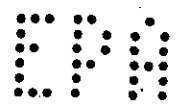
Sincerely,



Marshall Swindell :  
Product Manager 33  
Regulatory Management Branch 1  
Antimicrobial Division(7510C)

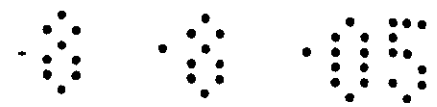
Enclosure

3/0



AMA®-4900B labeling right-center panel (3 of 4)

# AMA®-4900B



ACTIVE INGREDIENT:  
 2-Bromo-2-nitropropane-1,3-diol..... 10.0%  
 INERT INGREDIENTS: ..... 90.0%  
 TOTAL: ..... 100.0%

**KEEP OUT OF REACH OF CHILDREN**

## DANGER

FIRST AID	
IF IN EYES:	<ul style="list-style-type: none"> <li>• Hold eyes open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first five minutes, then continue rinsing eyes.</li> <li>• Call a poison control center for treatment advice.</li> </ul>
IF SWALLOWED	<ul style="list-style-type: none"> <li>• Call a 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 by a poison control center or doctor.</li> </ul>
IF ON SKIN:	<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.</li> </ul>
IF INHALED:	<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, preferable mouth to mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment.</li> </ul>
HOT LINE NUMBER	
IN CASE OF EMERGENCY endangering life or property involving this product, call CHEMTREC 800-424-9300. 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 labage.	

EPA Reg. No. 9386-XX EPA Est. No. 9386-GA-3

**Manufactured By:**

**KEMIRA CHEMICALS, INC.**  
 245 TownPark Drive, Suite 200  
 KENNESAW, GA 30144

ACCEPTED  
 with COMMENTS  
 EPA Letter Dated:

**NOV 23 2005**

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

9386-45

4/16

# AMA<sup>®</sup>-4900B labeling left panel (1 of 4)

## DIRECTIONS FOR USE

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

**GENERAL USE DIRECTIONS:** to control the growth of slime-forming, spoiling, odor-causing and corrosion inducing bacteria and algae in industrial applications.

AMA<sup>®</sup>-4900B can be dosed directly by preparing a stock solution immediately prior to application either by open pouring (not cooling water treatment) or by metered pump.

For product preservation AMA<sup>®</sup>-4900B is best added after any heating stage or when the product has cooled below 40°C.

**ADHESIVES:** For the control of microbial contamination, add 1.0 to 10.0 lb of AMA<sup>®</sup>-4900B per 1000 lb. total formulation weight. The addition is best accomplished by adding the product to any water to be incorporated into the formulation.

**PAINTS AND LATEX:** To provide in-can preservation and prevent bacterial spoilage during storage of acrylic, styrene-acrylic, polyvinyl acetate and other emulsion concentrates and latex emulsion based paints. To prevent spoilage of in-service paint application tanks. Add AMA<sup>®</sup>-4900B at any convenient point during the manufacturing process. Ideally it should be added as a final step just prior to packing of the product into bulk or sales packs. If a heating stage is involved in the manufacture, add AMA<sup>®</sup>-4900B after this stage when the product has cooled to below 40°C. Addition to application tanks should be by slug dosing the tank as needed to prevent bacterial spoilage.

**FREQUENCY AND DOSE:** AMA<sup>®</sup>-4900B should be dosed at 1000-5000 ppm based on the final formulation volume (8-40 pt./1000 gallons).

**PAPER MILLS - BULK PULP:** To preserve bulk quantities of pulp in paper and paperboard manufacturing systems or to prevent foul odors and general biodeterioration of stock when it is stored in bulk for any significant period of time, add AMA<sup>®</sup>-4900B directly into the hydropulper, machine chest or stock chest.

**FREQUENCY AND DOSE:** In general, a single slug dose will provide control for up to 3 days or longer depending upon the initial level of contamination in the stock. In situations where contamination is high, repeat dosing every 1-7 days may be required. AMA<sup>®</sup>-4900B should be dosed at 4-16 pt./1000 gallons per ton of stock depending on the type and degree of contamination.

**PAPER MILL PROCESS WATER:** To control slime-forming bacteria in paper or paperboard process water systems, AMA<sup>®</sup>-4900B may be dosed at a convenient point early in the process system. Suitable dosing points are the machine chest, constant head box or backwater loop system.

**FREQUENCY AND DOSE:** AMA<sup>®</sup>-4900B should be shock-dosed once, twice or three times daily in quantities sufficient to meet the required dose based on the daily production of finished products. Dose at between 0.2-5 pints per ton of finished paper or paperboard depending on the complexity of the system, quality of raw paper and type and degree of contamination.

**STARCH, PIGMENT AND EXTENDER SLURRIES:** To inhibit the growth of spoilage bacteria during the manufacture, storage and distribution of water-based suspension concentrates, AMA<sup>®</sup>-4900B may be dosed at or close to the end of the manufacturing process in a quantity of the process water. If the manufacturing process involves a heating stage, the AMA<sup>®</sup>-4900B should be added after this stage when the product has cooled to below 40°C.

**FREQUENCY AND DOSE:** AMA<sup>®</sup>-4900B should be dosed at 1000-5000 ppm based on the final formulation volume (8-40 pt./1000 gallons).

### OIL FLOODING/INJECTION WATERS

To inhibit the growth of slime-forming or corrosion-inducing sulfate-reducing bacteria in oil well injection waters, inject AMA<sup>®</sup>-4900B as a slug dose at any convenient point.

**FREQUENCY AND DOSE:** Depending on severity and rapidity of contamination, AMA<sup>®</sup>-4900B should be used from once a week to once a month at a concentration of 2-8 pt./1000 gallons.

### DRILLING FLUIDS

To preserve oil and gas well drilling muds by inhibiting growth of cellulolytic, slime-forming or sulfate-reducing bacteria. AMA<sup>®</sup>-4900B may be dosed directly into the mud hopper.

**FREQUENCY AND DOSE:** A single slug dose one to three times each 24 hours. Each slug dose should be 0.18 to 0.36 pt./barrel total mud volume.

### DRILLING FLUIDS AND WORKOVER AND COMPLETION FLUIDS

For use in oil and gas well drilling muds, and brines, inhibiting growth of cellulolytic, slime-forming or sulfate-reducing bacteria. AMA<sup>®</sup>-4900B may be dosed directly into the mud or brine.

**FREQUENCY AND DOSE:** A single slug dose one to three times each 24 hours. Dosing may be less frequent where the contamination is low. Each slug dose should be 0.18 to 0.36 pt./barrel total mud volume.

### INJECTION FLUIDS

To control contamination and corrosion from bacterial sources in fluids/waste fluids that are disposed of through injection into an approved well following approved guidelines, add AMA<sup>®</sup>-4900B to each volume of fluid prior to injection.

**FREQUENCY AND DOSE:** AMA<sup>®</sup>-4900B should be added at a rate of 500-1000 ppm (0.18-0.36 pt./barrel) based on the water percent of the injection fluid.

### ENHANCED OIL RECOVER (EOR) FLUIDS

For the effective control of bacterial growth and eliminating degradation of EOR gels and fluids used in the oil and gas industry, add AMA<sup>®</sup>-4900B during mixing or by injecting during the EOR procedure.

**FREQUENCY AND DOSE:** AMA<sup>®</sup>-4900B should be added throughout the EOR operation. AMA<sup>®</sup>-4900B should be added at the rate of 500-1000 ppm (0.18-0.36 pt./barrel) depending on the quality of the makeup water.

### WELL SQUEEZE FLUIDS

For the effective control of aerobic and anaerobic bacterial in squeeze fluids and downhole well bore areas, add AMA<sup>®</sup>-4900B during pre-mixing of the well squeeze fluid or by direct injection at the well head during the well squeeze procedure.

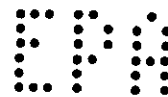
**FREQUENCY AND DOSE:** AMA<sup>®</sup>-4900B should be used for each well squeeze operation to ensure best results. Add AMA<sup>®</sup>-4900B at a rate of 2-8 pt./1000 gallons, depending on the quality of the makeup water.

ACCEPTED

with COMMENTS  
EPA Letter Dated: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CONTAINS: 2-BROMO-2-NITRO-1,3-PROPANEDIOL), 8, UN 3265, PGIII

NOV 23 2005

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



5/10

## AMA®-4900B labeling left-center panel (2 of 4)

### FRACTURING FLUIDS

AMA®-4900B reduces bacterial contamination and degradation of fracturing gels and fluids used as well stimulants in the oil and gas industry. Add AMA®-4900B directly to the water phase at any stage of the fracturing operation, for example, at the pre-mixing stage or by direct injection at the well head in combined mix/injection procedures.

**FREQUENCY AND DOSE:** AMA®-4900B should be used for each fracturing operation to ensure best results. Add AMA®-4900B at a rate of 4.8 pt./1000 gallons, depending on the quality of the makeup water.

### INDUSTRIAL RECIRCULATING WATER COOLING TOWERS AND EVAPORATIVE CONDENSERS

To control slime-forming bacteria and algae in industrial recirculation cooling towers and evaporative condensers. AMA®-4900B may be slug-dosed directly into the sump or basin or it may be added by a suitable pump. Where metering pumps are used, these must be set to deliver the required dose as fast as possible (e.g. within 1 hour). The dosing point should be located close to the outlet from the basin to ensure rapid dispersal around the system.

**FREQUENCY AND DOSE:** AMA®-4900B may be shock-dosed once or twice weekly as a normal routine. Where contamination is heavy, more frequent dosing may be required. In heavily fouled systems, the tower should be drained and cleaned before treating with AMA®-4900B. AMA®-4900B should be shock-dosed at between 2-8 pt./1000 gallons depending on the condition of the tower, the quality of raw water input, and the amount of bleed off.

### PRODUCED WATER

To inhibit the growth of slime-forming or corrosion-inducing sulfate-reducing bacteria in formation water produced by wells together with oil or gas, inject AMA®-4900B into the water-containing oil or gas stream at any convenient point. It should be injected as slug doses, not as a continuous feed.

**FREQUENCY AND DOSE:** Depending on severity and rapidity of contamination, AMA®-4900B should be slug-dosed from once a week to once a month with 0.083-0.33 pt./barrel.

### INDUSTRIAL PROCESS WATER

Use AMA®-4900B to effectively control bacterial and algal growth in industrial process water including closed circuit machine cooling (injection molding, etc.) and stored (nonpotable) water, as well as to reduce the biofouling of pipework, heat exchangers, condenser tubes, and to minimize microbially produced corrosion. Dosing should be carried out into the sump/tank of the process water system.

Shock-dosing is preferred. AMA®-4900B can also be used as an intermittent, flush treatment during regular maintenance cleaning of watertanks (non-potable) or equipment.

**FREQUENCY AND DOSE:** In open systems, shock-dosing should be carried out on a once weekly to once monthly basis, depending on the degree of contamination. In closed circuit systems with little possibility of re-infection or loss of AMA®-4900B because of makeup or dilution, less frequent dosing (once monthly/twice monthly) should be sufficient. Dosing should be carried out to give an initial concentration of 500 ppm AMA®-4900B (4 pt./1000 gallons). When the above treatment has been successful, dosing can be lowered to a minimum of 100 ppm AMA®-4900B (0.8 pt./1000 gallons). For intermittent treatment of industrial process waters during routine maintenance, AMA®-4900B should be used at 1000 ppm (8 pt./1000 gallons) and a contact time of at least one hour.

### ABSORBENT CLAYS, CORN COBS AND GROUND WOOD

Impregnate absorbent clays, corn cobs or ground wood with AMA®-4900B to inhibit growth of odor-causing bacteria. The suggested application rate is 250-2000 ppm) 0.4-3.2 oz. av. Per 100 pounds absorbent material.

### PIPELINE MAINTENANCE

To control aerobic and anaerobic bacteria, particularly sulfate-reducing bacteria, growth in oil and gas related production piping and transportation systems, inject AMA®-4900B directly into the pipeline or add to the hydrocarbon phase. Addition of the AMA®-4900B will produce long-term water concentrations by a diffusion process.

**FREQUENCY AND DOSE:** Slug treatments are recommended and can vary from daily to monthly to control growth. AMA®-4900B should be dosed at a rate which will achieve concentrations of 250-2000 ppm in the aqueous phase. Higher concentrations may be used to allow diffusion into the aqueous phase. Dose will depend on the volume of crude or oil and the expected water fraction.

### WATER-BASED PRINTING INKS AND FOUNT SOLUTIONS

To inhibit the growth of spoilage bacteria during the storage and use of water-based printing inks and fount solutions. For in-can preservation, add AMA®-4900B at any convenient point during the manufacturing process. Ideally, it should be added as a final step after any heating stage and when the product has cooled to below 40°C. To control bacterial spoilage during the use of fount solutions. AMA®-4900B should be shock-dosed at a suitable point in the fount reservoir where there is adequate flow or turbulence to ensure quick mixing. AMA®-4900B may be shock-dosed once or twice weekly as a normal routine. Where conditions indicate, more frequent shock-dosing may be required.

**IN-CAN PRESERVATION:** AMA®-4900B should be dosed at 1000 to 5000 ppm based on the final formulation volume pending on the contamination levels in the font reservoir.

**FOUNT SOLUTIONS:** AMA®-4900B should be shock-dosed at between 200 and 1000 ppm (1.6 to 8 pt./1000 gallons) depending on the contamination levels in the fount reservoir.

### WATER BOTTOMS IN OIL OR TRANSPORTATION TANKS

For effective control of bacterial contamination in water bottoms, in crude, and refined hydrocarbon storage systems. Above and below ground storage tanks and large marine systems are all suitable for treatment. AMA®-4900B may be injected directly into the water bottom or may be sprayed over surface of the hydrocarbon phase and allowed to percolate through.

**FREQUENCY AND DOSE:** Direct addition to the water phase by injection or percolation should be carried out every 30-60 days, depending on the severity of the problem. Addition to the hydrocarbon phase into the water phase (depending on storage conditions). Incorporate AMA®-4900B at a rate which will achieve concentration of 500-1000 ppm in the aqueous phase. Larger quantities may be added when dosing the hydrocarbon phase to allow diffusion of active ingredient into the water bottom during the long term.

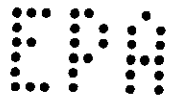
ACCEPTED  
with COMMENTS  
EPA Letter Dated:

NOV 23 2005

Under the Federal Insecticide,  
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9386-45

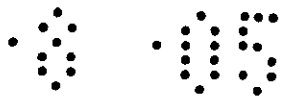
6/6



AMA®-4900B labeling right panel (4 of 4)

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**



**CORROSIVE:** Causes irreversible eye damage and skin irritation. Harmful if swallowed, absorbed through the skin, or inhaled. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

Do not get in eyes, on skin, or on clothing. Wear overalls over long-sleeved shirt and long pants, socks, chemical resistant footwear, goggles or face shield, and chemical resistant gloves (such as nitrile, butyl rubber, neoprene rubber, or barrier laminate). Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Wash the outside of gloves before removing. As soon as possible wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS:** This pesticide is toxic to fish. 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 and Chemical Hazards**

This product is corrosive to mild steel.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal. Keep away from heat.

**PESTICIDE STORAGE:** Do not store or transport in unlined metal container.

**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 of the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Empty residue into application equipment, triple rinse (or equivalent), then offer drum for recycling or reconditioning, or puncture. Dispose of container in sanitary landfill, or by incineration, if allowed by State and local authorities. If burned, stay out of smoke.

**LOT #**

**NET WT. X,XXX Pounds**

**ACCEPTED  
with COMMENTS  
EPA Letter Dated:**

**LABEL DATE: 25 Jul 05**

**NOV 23 2005**

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act as  
amended, for the pesticide,  
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9386-45