

464-707

3/28/2014

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460



United States  
Environmental Protection  
Agency

Office of Pesticide Programs

The Dow Chemical Company  
1803 Building  
Midland, MI  
48674

MAR 28 2014

Attention: Ronda Vance-Moeser

**Subject:** **AQUCAR™ 504 Water Treatment Microbiocide**  
EPA Registration No: 464-707  
Amendment Dated: October 21, 2013

This will acknowledge receipt of your Amendment to update the container handling statement per PR Notice 2007-4 and make other minor changes to the product label, submitted under the provision of FIFRA Section 3(c)(9).

**Proposed Amendment:**

- To add approved uses to the label

**General Comments:**

Based on a review of the submitted material, the following comments apply:

The Amendment dated October 21, 2013 to revise the "First Aid Guidance" to revise the "Notes to Physician" to add "Glutaraldehyde" approved uses to the label. is acceptable and is in compliance with the PR Notice 98-10.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. The next label printing of this product must use this labeling unless subsequent changes have been approved. You must submit one (1) copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.13 (c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2 (gg) and it's implementing regulation at 40 CFR 152.3.

If you have any questions concerning this letter, please contact Zebora Johnson at (703) 308-63417.

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Sincerely

A handwritten signature in cursive script, appearing to read "M. Swindell".

Marshall Swindell

Product Manger (33)

Regulatory Management Branch I

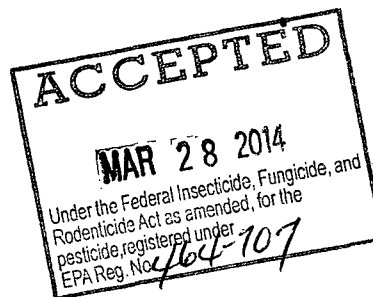
Antimicrobial's Division (7501P)

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# AQUCAR™ 504 Water Treatment Microbiocide

Active Ingredient: Glutaraldehyde ..... 4%  
Inert Ingredients: ..... 96%  
TOTAL.....100%

E.P.A. Registration No. 464-707  
E.P.A. Est. No. XXXX-XX-X



**KEEP OUT OF REACH OF CHILDREN  
DANGER**

**Precautionary Statements  
Hazards To Humans and Domestic Animals**

**DANGER**

**Corrosive • Causes irreversible eye damage • Causes skin irritation • Harmful if inhaled • Harmful if swallowed • Harmful if absorbed through skin • Prolonged or frequently repeated skin contact may cause allergic skin reaction in some individuals • Causes asthmatic signs and symptoms in hyper-reactive individuals • Do not get in eyes, on skin, on clothing • Avoid breathing vapor • Do not swallow • Wear goggles, protective clothing, and butyl or nitrile gloves • Wash thoroughly with soap and water after handling • Remove contaminated clothing and wash before reuse.**

## **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.

## STORAGE AND HANDLING

AQUCAR 504 Water Treatment Microbiocide is incompatible with many commonly used materials of construction such as steel, galvanized iron, aluminum, tin, and zinc. AQUCAR 504 Water Treatment Microbiocide can be stored and handled in baked phenolic-lined steel, polyethylene, stainless steel, or reinforced epoxy-plastic equipment. This product freezes at about 25° F (-4° C). Therefore, unless the storage tank is inside or underground, heating and insulation may be required. If heating is needed, exposure to high temperatures should be avoided. For short storage times (up to about 1 month), temperatures of up to 100° F (37.8° C) can be tolerated but the preferred maximum storage temperature is about 80° F (26.7° C). A stainless steel centrifugal pump is suggested for transfer service. Spiral-wound stainless steel with TEFLON® Polymer is suitable for gaskets and packing. Handle in a well-ventilated area. If vapors are irritating to the nose or eyes, special ventilation or respiratory protection (MSHA/NIOSH approved air purifying respirator equipped with an organic vapor cartridge) may be required.

## STORAGE AND DISPOSAL

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

**PESTICIDE DISPOSAL:** Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Pesticide wastes are toxic. 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 DISPOSAL

*Option - labels for no refillable rigid containers of all sizes.*

**Nonrefillable Container:** Do not reuse or refill this container. Triple or pressure rinse container (or equivalent) promptly after emptying. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

*Option - labels on refillable rigid containers of all sizes .*

**Refillable Container:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning of 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 container before final disposal, empty contents into application equipment and triple rinse. Pour or pump rinsate into application equipment or rinsate collection system. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

<b>FIRST AID</b>	
<b>IF SWALLOWED</b>	<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 do so by the poison control center or doctor.</li></ul>
<b>IF IN EYES</b>	<ul style="list-style-type: none"><li>• Wash immediately and continuously with flowing water for at least 30 minutes.</li><li>• Remove contact lenses after the first 5 minutes and continue washing.</li><li>• Obtain prompt medical consultation, preferably from an ophthalmologist.</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, and then give artificial respiration, using pocket mask or face protection if via mouth-to-mouth</li><li>• Call a poison control center or a doctor for further treatment advice.</li></ul>
Have product container or label with you when calling a poison control center or doctor or going for treatment.	
<b>HOT LINE NUMBER</b>	
<b>IN CASE OF AN EMERGENCY</b> endangering life or property involving this product, call collect <b>(989) 636-4400</b> .	
<b>NOTE TO PHYSICIAN</b>	
Inhalation, ingestion or aspiration may cause lung or G-I tract damage. Probable mucosal damage may contraindicate the use of gastric lavage. Chemical eye burns may require extended irrigation. No specific antidote, symptomatic treatment.	

## **DIRECTIONS FOR USE**

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

### **AIR WASHERS AND INDUSTRIAL SCRUBBING SYSTEMS/RECIRCULATING COOLING AND PROCESS WATER SYSTEMS**

This product may be used only in industrial air washers and air washer systems which have mist-eliminating components.

AQUCAR 504 Water Treatment Microbiocide should be added at the application rates described below to a water treatment system at a convenient point of uniform mixing such as the basin area. Addition may be made intermittently (SLUG DOSE) or continuously. Badly fouled systems can be shock treated with AQUCAR 504 Water Treatment Microbiocide. Under these conditions blowdown should be discontinued for up to 24 hours. AQUCAR 504 Water Treatment Microbiocide can be used in industrial process water systems that contain ultra filtration units and non-medical reverse osmosis membranes (where approved for compatibility by the membrane manufacturer) and associated distribution systems.

#### **INTERMITTENT (SLUG DOSE) METHOD**

**Initial Dose:** When the system is noticeably fouled, apply 16 to 32 fluid ounces (1 pint to 1 quart) of AQUCAR 504 Water Treatment Microbiocide per 100 gallons of water in the system. Repeat until control is achieved.

**Subsequent dose:** When microbial control is evident, add 8 to 16 fluid ounces (1 cup to 1 pint) of AQUCAR 504 Water Treatment Microbiocide per 100 gallons of water in the system weekly, 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, apply 16 to 32 fluid ounces (1 pint to 1 quart) of AQUCAR 504 Water Treatment Microbiocide per 100 gallons of water in the system.

**Subsequent Dose:** Maintain this treatment level by starting a continuous feed of 4 to 16 fluid ounces (1/2 cup to 1 pint) of AQUCAR 504 Water Treatment Microbiocide per 100 gallons of water in the system per day. Badly fouled systems must be cleaned before treatment is begun.

### **SERVICE WATER AND AUXILIARY SYSTEMS**

AQUCAR 504 Water Treatment Microbiocide should be used at the same application rates, and in the same manner as described above. It should be added to the system at a point that will allow for uniform mixing throughout the system.

### **HEAT TRANSFER SYSTEMS**

(Evaporative Condensers, Dairy Sweetwater Systems, Hydrostatic Sterilizers and Retorts, and Pasteurizers)

AQUCAR 504 Water Treatment Microbiocide should be used at the same application rates, and in the same manner as described above. It should be added to the system at a point of uniform mixing such as a basin area, sump area, or other reservoir or collecting area from which the treated water will be circulated uniformly throughout the system.

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### **INDUSTRIAL WASTEWATER SYSTEMS**

(Wastewater Systems, Wastewater Sludge And Wastewater Holding Tanks)

AQUCAR 504 Water Treatment Microbiocide should be added to a wastewater system or sludge at a convenient point of uniform mixing such as digester. Add 72 to 360 fluid ounces (2.25 to 11.25 quarts)(5,600 to 28,000 ppm) AQUCAR 504 Water Treatment Microbiocide per 100 gallons of wastewater or sludge.

### **PAPER MILLS AND PAPER MILL PROCESS WATER SYSTEMS**

AQUCAR 504 Water Treatment Microbiocide should be added to the paper making system at a point of uniform mixing such as the beaters, broke chest pump, save-all tank, or white-water tank.

**Initial Dose:** When the system is noticeable contaminated, add 6.25 to 37.5 lbs of AQUCAR 504 Water Treatment Microbiocide per ton of pulp or paper (dry basis) as a slug dose. Repeat until control is achieved. Heavily fouled systems should be boiled out prior to initial treatment.

**Subsequent Dose:** When microbial control is evident, add 3.75 to 25 lbs of AQUCAR 504 Water Treatment Microbiocide per ton of pulp or paper (dry basis) as a slug dose as necessary to maintain control.

### **PIGMENTS AND FILLER SLURRIES FOR PAPER AND PAPERBOARD**

(For use in food and non-food contact pigments and filler slurries)

Use from 1.25 to 7.5 lbs. of AQUCAR 504 Water Treatment Microbiocide per 1,000 lbs. of dry powder to produce a concentration from 1250 to 7500 ppm as product (based on slurry solids) in the mixed slurry.

### **WATER BASED COATINGS FOR PAPER AND PAPERBOARD**

**NOTE:** For use in non-food contact coatings only.

Use from 1.25 to 7.5 lbs. of AQUCAR 504 Water Treatment Microbiocide per 1,000 lbs. of dry powder to produce a concentration from 1250 to 7500 ppm as product (based on slurry solids) in the mixed slurry.

### **WATER FLOODS**

*Product not registered for this use in the State of California – Optional Statement*

AQUCAR 504 Water Treatment Microbiocide should be added to a water flood system at a point of uniform mixing.

**Initial Treatment:** When the system is noticeably contaminated, add 1,250 to 62,500 ppm AQUCAR 504 Water Treatment Microbiocide to the system (1.13 to 55 gallons AQUCAR 504 Water Treatment Microbiocide per 1,000 gallons flood water). Repeat until control is achieved.

**Subsequent Dose:** When microbial control is evident, add 250 to 62,500 ppm AQUCAR 504 Water Treatment Microbiocide (0.25 to 55 gallons AQUCAR 504 Water Treatment Microbiocide per 1,000 gallons flood water) to the system weekly, or as needed to maintain control.

## FRAC FLUIDS

*Product not registered for this use in the State of California – Optional Statement*

AQUCAR 504 Water Treatment Microbiocide reduces bacterial contamination and degradation of fracturing fluids and gels used in oil and gas well stimulations. Add AQUCAR 504 Water Treatment Microbiocide to the frac water storage tanks or directly into the well head injection pipeline as the water is being pumped down-hole.

**Dose Range:** AQUCAR 504 Water Treatment Microbiocide should be added at a rate of 1,250 to 62,500 ppm (11.25 – 553 gals per 10,000 gallons) depending on the degree of bacterial fouling in the source water.

## DRILLING, COMPLETION, AND WORKOVER FLUIDS

*Product not registered for this use in the State of California – Optional Statement*

AQUCAR 504 Water Treatment Microbiocide should be added to a drilling fluid system at a point of uniform mixing such as the circulating mud tank.

**Initial treatment:** Add 625 to 12,500 ppm AQUCAR 504 Water Treatment Microbiocide (2.5 to 46.3 gallons AQUCAR 504 Water Treatment Microbiocide per 100 barrels of fluid) to a freshly prepared fluid depending on the severity of contamination.

**Maintenance dosage:** Maintain a concentration of 625 to 12,500 ppm AQUCAR 504 Water Treatment Microbiocide by adding 2.5 to 46.3 gallons of AQUCAR 504 Water Treatment Microbiocide per 100 barrels of additional fluid, or as needed, depending on the severity of contamination.

## PACKER FLUIDS

*Product not registered for this use in the State of California – Optional Statement*

AQUCAR 504 Water Treatment Microbiocide should be added to a packer fluid at a point of uniform mixing such as a circulating holding tank. Add 625 to 7,500 ppm AQUCAR 504 Water Treatment Microbiocide (2.5 to 27.5 gallons AQUCAR 504 Water Treatment Microbiocide per 100 barrels of fluid) to a freshly prepared fluid depending on the severity of contamination. Seal the treated packer fluid in the wall between the casing and production tube.

## OIL PRODUCTION AND TRANSMISSION PIPELINES AND SYSTEMS

*Product not registered for this use in the State of California – Optional Statement*

AQUCAR 504 Water Treatment Microbiocide should be added to an oil production or transmission line via direct injection. The application should be conducted to ensure maximum distribution of AQUCAR 504 Water Treatment Microbiocide throughout the entire internal pipeline surface by adding a sufficient amount of biocide to detect/measure a residual concentration at the back end of the pipeline system. Criteria for success of the treatment will be a reduction in bacterial counts and/or reduced corrosion rates. To facilitate application, it may be desirable to dilute the AQUCAR 504 Water Treatment Microbiocide with an appropriate solvent immediately before use. The concentration in the solvent should not fall below an active concentration range of 500 to 5,000 ppm based on the volume of water in the pipeline. Injections to the system should be weekly, or as needed to maintain control.



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### **GAS PRODUCTION AND TRANSMISSION PIPELINES AND SYSTEMS**

*Product not registered for this use in the State of California – Optional Statement*

AQUCAR 504 Water Treatment Microbiocide should be added to a gas production or transmission pipeline via direct injection. The application should be conducted to ensure maximum distribution of AQUCAR 504 Water Treatment Microbiocide throughout the entire internal pipeline surface by adding a sufficient amount of biocide to detect/measure a residual concentration at the back end of the pipeline system. Criteria for success of the treatment will be a reduction in bacterial counts and/or reduced corrosion rates. To facilitate application, it may be desirable to dilute the AQUCAR 504 Water Treatment Microbiocide with an appropriate solvent immediately before use. The concentration in the solvent should not fall below an active concentration range of 500 to 5,000 ppm based on the volume of water in the pipeline. Injections to the system should be weekly, or as needed to maintain control.

### **GAS STORAGE WELLS AND SYSTEMS**

*Product not registered for this use in the State of California – Optional Statement*

Individual injection wells should be treated with a sufficient quantity of AQUCAR 504 Water Treatment Microbiocide to produce a concentration of 6,250 to 62,500 ppm AQUCAR 504 Water Treatment Microbiocide when diluted by the water present in the formation. Injection should take place before gas is injected (during the summer). Injections should be repeated yearly, or as needed to maintain control. Individual drips should be treated with a sufficient quantity of AQUCAR 504 Water Treatment Microbiocide to produce a concentration of 2,500 to 25,000 ppm AQUCAR 504 Water Treatment Microbiocide when diluted by the water present in the drip. Injections should be repeated yearly, or as needed to maintain control.

### **HYDROTESTING**

*Product not registered for this use in the State of California – Optional Statement*

Water used to hydrotest pipelines or vessels should contain 1,250 to 50,000 ppm AQUCAR 504 Water Treatment Microbiocide (1.13 to 43.8 gallons AQUCAR 504 Water Treatment Microbiocide per 1,000 gallons water), depending on water quality and length of time the equipment will remain idle.

### **PIPELINE PIGGING AND SCRAPING OPERATIONS**

*Product not registered for this use in the State of California – Optional Statement*

Add AQUCAR 504 Water Treatment Microbiocide to a slug of water immediately following the scraper (ideally this water volume can be kept to a minimum and contained between the scraper and a trailing pig). Sufficient AQUCAR 504 Water Treatment Microbiocide should be added to produce a concentration of 1.25 to 12.5% (1.13 to 11.25 gallon AQUCAR 504 Water Treatment Microbiocide per 100 gallons water), depending on the length of the pipeline and the severity of biofouling.

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**WARRANTY DISCLAIMER**

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY

NET WT:

Lot:

Produced For (*used when manufactured by contract manufacturer*)

Dow Diamond TM  
**THE DOW CHEMICAL COMPANY**  
Midland, Michigan 48674  
989-636-4400

® TM Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

MADE IN U.S.A.

**Optional** - 3<sup>rd</sup> party certification label verbiage and symbols in label space outside of FIFRA elements.  
Example: NSF Certification