



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

March 21, 2017

Alexis Chapman  
Product Stewardship Sr. Regulatory Specialist  
The Dow Chemical Company  
200 Larkin Center  
Midland, MI 48674

Subject: Notification per PRN 98-10 – Removing Non Food Contact Language and Lowering Use Rates  
Product Name: Aquacar PS 20 Water Treatment Microbiocide  
EPA Registration Number: 464-782  
Application Date: March 6, 2017  
Decision Number: 527082

Dear Ms. Chapman:

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 Terria Northern at 703-347-0265 or via email at [northern.terria@epa.gov](mailto:northern.terria@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "J. Hebert", written over a horizontal line.

for

John Hebert, Chief  
Regulatory Management Branch I  
Antimicrobials Division (7510P)  
Office of Pesticide Programs

# AQUCAR™ PS 20 Water Treatment Microbiocide

FOR INDUSTRIAL USE

Active Ingredient:

Tetrakis(hydroxymethyl) phosphonium sulfate . . . . .	20.0%
Other Ingredients: . . . . .	<u>80.0%</u>
	Total 100%

**E.P.A. Registration No. 464-XXX**  
**E.P.A. Est. XXX-XX-XX**

**KEEP OUT OF REACH OF CHILDREN**

CAUTION

## PRECAUTIONARY STATEMENTS

**Hazards to Humans and Domestic Animals**

### CAUTION

**Harmful if swallowed • Causes moderate eye irritation • Avoid contact with skin, eyes or clothing • Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals • Wear goggles and chemical resistant gloves when handling • Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet**

### NOTIFICATION

464-782

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:

03/21/2017

<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. 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 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 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. If breathing is difficult, oxygen should be administered by qualified personnel.</li> </ul>
<b>HOT LINE NUMBER</b>	
<p><b>IN CASE OF AN EMERGENCY</b> endangering life or property involving this product, call collect (989) 636-4400. Have product container or label with you when calling a poison control center or doctor or going for treatment.</p>	

### **ENVIRONMENTAL HAZARDS**

This product 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 DISPOSAL**

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

**Pesticide Storage:** Store this product in a cool, dry area away from direct sunlight and heat to avoid deterioration. Keep container tightly closed when not in use. In case of a spill, flood the area with large quantities of water.

**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 Disposal:**

#### *Option to use for labels on nonrefillable rigid containers of all sizes*

Nonrefillable container. Do not reuse or refill this container. Triple rinse 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 to use for labels on refillable rigid tote containers*

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 sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

## **DIRECTIONS FOR USE**

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

## **OIL FIELD AND PETROCHEMICAL OPERATIONS**

Not registered for use in the State of California- Optional statement

AQUCAR PS 20 Water Treatment Microbiocide is effective in controlling sulfate reducing bacteria, general aerobic bacteria, including microorganisms that contribute to biofilm formation in oil field recovery, processing and distribution applications and supporting systems; such as injection water, water holding tanks, industrial disposal well water, recirculating water handling systems, and pipelines. AQUCAR PS 20 Water Treatment Microbiocide has been shown to dissolve

iron sulfide and sequester iron when used under these conditions, leading to improved filter life and well injectivity, and reduction of hydrocarbon sheen. AQUCAR PS 20 Water Treatment Microbiocide is also effective for use in controlling microbial growth in fluids used for drilling and stimulation of oil and gas wells.

## **WATER FLOODS**

Not registered for use in the State of California- Optional statement

AQUCAR PS 20 Water Treatment Microbiocide should be added to a water flood system at a point where uniform mixing will occur.

### Initial Treatment:

For a noticeably fouled system, add 349 1,312 ppm AQUCAR PS 20 Water Treatment Microbiocide. When added to a flowing system, slug dose for 2-6 hours based on flow rates. Repeat as necessary until control is achieved.

### Subsequent Treatment:

Once control has been achieved, add 53 – 368 ppm AQUCAR PS 20 Water Treatment Microbiocide weekly or as needed to maintain control. When added to a flowing system, slug dose for 2-6 hours based on flow rates.

### Continuous Treatment:

AQUCAR PS 20 Water Treatment Microbiocide can be dosed continuously at a level of 53 – 251 ppm.

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

Not registered for use in the State of California- Optional statement

AQUCAR PS 20 Water Treatment Microbiocide should be added at a point in the pipeline where uniform mixing will occur. The application should be conducted to ensure maximum distribution of product through the internal surface of the pipeline by adding an amount of biocide which eventually comes out the other end of the pipeline. Criteria for success of the treatment will be reduction in bacterial count and/or corrosion rates.

### Slug Dosing:

Follow instructions for water flood treatment.

### Continuous Dosing:

AQUCAR PS 20 Water Treatment Microbiocide can be dosed continuously at a level of 53 – 375 ppm.

## **DRILLING MUDS, PACKER FLUIDS, COMPLETION AND WORKOVER FLUIDS**

Not registered for use in the State of California- Optional statement

AQUCAR PS 20 Water Treatment Microbiocide should be added to these fluids at a point where uniform mixing will occur. Add 124 – 5250 ppm of product to a freshly prepared fluid depending on severity of contamination.

## **GAS STORAGE WELL AND SYSTEMS**

Not registered for use in the State of California- Optional statement

Individual injection wells should be treated with AQUCAR PS 20 Water Treatment Microbiocide at the same application rates and in the same manner as described under Water Floods. Injections should be repeated as needed to maintain control. Individual drips should be treated with a sufficient quantity of product to produce a concentration of 125 – 500 ppm when diluted by the water present in the drip. Injections should be repeated as needed to maintain control.

### **WELL REMEDIATION OPERATIONS**

Not registered for use in the State of California- Optional statement

Individual production or injection wells may be bullheaded with AQUCAR PS 20 Water Treatment Microbiocide to control bacteria and simultaneously dissolve iron sulfide deposits. Pump the product into the well as a solution in water containing from 50 - 100% AQUCAR PS 20 Water Treatment Microbiocide.

The well should be shut-in for a period of time (at least 6 hours) then put back into operation.

### **HYDROTESTING**

Not registered for use in the State of California- Optional statement

Water used to hydrotest pipelines or vessels should contain 250 – 2500 ppm AQUCAR PS 20 Water Treatment Microbiocide, depending on water quality and length of time the equipment will remain idle.

### **PIPELINE PIGGING AND SCRAPING OPERATION**

Not registered for use in the State of California- Optional statement

Add AQUCAR PS 20 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 product should be added to produce a concentration of 263 – 2625 ppm in the water at the discharge point or pig trap, depending on the length of the pipeline and the severity of biofouling.

### **INDUSTRIAL AND COMMERCIAL RECIRCULATING COOLING WATER SYSTEMS**

Not registered for use in the State of California- Optional statement

Note: For cooling water systems of equal to or greater than 4000 gallons, do not apply by open pouring of liquid to cooling water systems; a metering pump delivery system is required for this use and application method.

For control of bacteria, fungi and algae:

Initial Slug Dose: Add 349 – 1313 ppm of AQUCAR PS 20 Water Treatment Microbiocide based on total water volume. Repeat until control is obtained.

Thereafter, add either intermittently 131 – 525 ppm of AQUCAR PS 20 Water Treatment Microbiocide (26 – 105 ppm THPS) or continuously 70 – 245 ppm of AQUCAR PS 20 Water Treatment Microbiocide per day. Dirty systems must be cleaned prior to treatment.

### **INDUSTRIAL FRESH WATER SYSTEMS**

Not registered for use in the State of California- Optional statement

AQUCAR PS 20 Water Treatment Microbiocide is effective in controlling algae in holding ponds and in controlling bacteria and fungi in holding and processing tanks of industrial fresh water systems supplying water to pulp and paper mills, textile mills and other manufacturing plants. In pulp and paper mills, treatment of the fresh water with AQUCAR PS 20 Water Treatment Microbiocide can make an important contribution to slime control. The use of AQUCAR PS 20 Water Treatment Microbiocide as described will reduce the development of slime in fresh water pipes and other equipment, and on the pulp and paper mill machine parts contacted by fresh water. If water is used in the manufacture of paper and paperboard products that may contact food the concentration of THPS in the slurry cannot exceed 315 ppm.

#### For the control of algae in industrial fresh water systems

AQUCAR PS 20 Water Treatment Microbiocide should be added to provide a concentration of 5 – 50 ppm of product. Treatment should be based on the amount of water entering a pond or reservoir or leaving the pond or reservoir and entering the immediate processing operations. While treatment can be made continuously, regular slug-dosing treatment will provide adequate control.

### **INDUSTRIAL WASTEWATER SYSTEMS**

#### **WASTEWATER SYSTEMS, WASTEWATER SLUDGE AND WASTEWATER HOLDING TANKS**

Not registered for use in the State of California- Optional statement

AQUCAR PS 20 Water Treatment Microbiocide should be added to a wastewater system or sludge at a convenient point of uniform mixing such as digester. Add 1250 – 6250 ppm of AQUCAR PS 20 Water Treatment Microbiocide to wastewater or sludge.

### **MACROFOULING CONTROL**

Not registered for use in the State of California- Optional statement

AQUCAR PS 20 Water Treatment Microbiocide should be added continuously to maintain a level of 20 ppm active ingredient (THPS) in the system for a period of at least 96 hours.

Initial Dose: When macrofouling is present in the system, apply 100 ppm of AQUCAR PS 20 Water Treatment Microbiocide based on total water volume.

Continue to add AQUCAR PS 20 Water Treatment Microbiocide as needed to maintain the 20 ppm active ingredient (THPS) level for a period of at least 96 hours.

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

Not registered for use in the State of California- Optional statement

AQUCAR PS 20 Water Treatment Microbiocide should be added to service water and auxiliary systems 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.

### **HEAT TRANSFER SYSTEMS**

Not registered for use in the State of California- Optional statement  
Evaporative Condensers, Dairy Sweetwater Systems, Hydrostatic  
Sterilizers and Retorts, Brewery and Other Pasteurizers, and Warmers

Add AQUCAR PS 20 Water Treatment Microbiocide 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.

### **AIR WASHER SYSTEMS**

Not registered for use in the State of California- Optional statement  
For control of bacteria and fungi.

Note: This product should only be used in air washer systems which have mist eliminating components.

Pre-clean the system with detergent and allow air washer to run with fan on for two hours. Flush and check nozzles, manually cleaning as necessary. Add 131 – 358 ppm of AQUCAR PS 20 Water Treatment Microbiocide at a point where uniform mixing and even distribution will occur. Repeat as needed to maintain control.

### **PAPER AND PAPERBOARD MANUFACTURING**

Not registered for use in the State of California- Optional statement  
For control of bacteria, fungi and algae.

~~For use as a slimicide in the manufacture of paper and paperboard products and adhesives that do not contact food.~~

Dosing: Additions should be made at a point in the system where mixing action is good, e.g. raw stock chest beater or mixing unit.

Add intermittently or continuously depending on mill conditions.

Intermittent Dosing: Add 123 – ~~5000~~ 2000 ppm of AQUCAR PS 20 Water Treatment Microbiocide based on total water volume or an equivalent based on dry weight of paper produced.

Continuous Dosing: Add 200 – 700 ppm of AQUCAR PS 20 Water Treatment Microbiocide based on total water volume or an equivalent based on dry weight of paper produced.

### **COATINGS, PIGMENTS AND FILLER SLURRIES**

Not registered for use in the State of California- Optional statement

~~Note: Do not use in paper and paperboard and adhesives that will contact food.~~

For use as a preservative to retard microbial growth in water-based coatings, starches, pigments and filler slurries. The treatment rate necessary to retard spoilage of the additive will vary with



the extent of contamination of make-up water and the length of storage. Dosing: Apply from 875 – ~~2500~~ 2000 ppm of AQUCAR PS 20 Water Treatment Microbiocide to the additive to be preserved based on the total weight of the additive and water.

### **EMULSION AND SOLUTION PRESERVATION**

Not registered for use in the State of California- Optional statement

~~Note: Not for use in manufacture of paper and paperboard products and adhesives that may come in contact with food.~~

For the preservation of solutions, emulsions, adhesives and other aqueous liquid products, add 0.0875% to ~~0.875%~~ 0.20% AQUCAR PS 20 Water Treatment Microbiocide. Add at a point in the processing system where there will be sufficient time and agitation for good mixing and dispersion. The exact amount of AQUCAR PS 20 Water Treatment Microbiocide to be added for the preservation of given formulations will depend on the components as well as local storage time and requirements.

### **FIRE PROTECTION SYSTEMS**

Not registered for use in the State of California- Optional statement

AQUCAR PS 20 Water Treatment Microbiocide is effective at controlling microbial growth in waters and on pipe surfaces in fire protection systems. Such microbial growth when combined with other forms of corrosion can lead to accelerated corrosion rates and pitting corrosion, commonly referred to as microbiologically influenced corrosion. AQUCAR PS 20 Water Treatment Microbiocide also removes free oxygen from the water, thus eliminating an important nutrient for bacteria and an important reactant in many corrosion reactions.

AQUCAR PS 20 Water Treatment Microbiocide should be added to a fire protection system using a chemical metering pump capable of variable pump rates. AQUCAR PS 20 Water Treatment Microbiocide should be injected at a point, such as a riser, manifold or makeup feed water line, where uniform mixing and distribution will occur. Add 375 – 1500 ppm AQUCAR PS 20 Water Treatment Microbiocide depending on severity of microbial contamination in the system. Repeat as needed.

NET WT:

Produced For – *When product produced by contract manufacturer*

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

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