

464-782

12-02-2011

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

EPA Reg. Number: <b>464-782</b>	Date of Issuance: <b>DEC 02 2011</b>
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Term of Issuance:  
**Conditional**

Name of Pesticide Product:  
**Aquacar PS 20 Water Treatment Microbiocide**

**NOTICE OF PESTICIDE:**  
 Registration  
 Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):  
 The Dow Chemical Company  
 1803 Building  
 Midland, MI 48674

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/reregistered 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 is conditionally 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. 464-782".

Signature of Approving Official:  
*Marshall Swindell* for  
 Marshall Swindell  
 Product Manager Team-33  
 Regulatory Management Branch I  
 Antimicrobials Division (7510P)

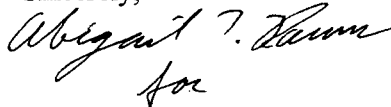
Date:  
**DEC 02 2011**

- b. To satisfy OPPTS 830.6317 (Storage Stability) and OPPTS 830.6320 (Corrosion Characteristics) requirements, results for a minimum of a 1 year from a GLP-compliant storage stability and corrosion characteristics study must be provided. Testing of the product is currently underway. The concentration of the active ingredient in the product must be determined at the beginning of the test period and every 3 months thereafter for a period of 1 year. Storage and disposal information on the product label must be revised if product composition (or packaging) deteriorates over time. The product should be tested in its commercial packaging.

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 copy of the label is enclosed for your records. Submit one (1) copy of your final printed labeling prior to release of this product for shipment. If you have any questions concerning this letter, please contact Abigail Downs at (703) 305-5259.

Sincerely,



for  
Marshall Swindell  
Product Manager Team-33  
Regulatory Management Branch I  
Antimicrobials Division (7510P)

Enclosed: [Stamped Label]

Enclosed in separate CBI envelope: [Product Chemistry Review Dated November 9, 2011] [Acute Toxicity Review dated November 8, 2011]

# AQUCAR™ PS 20 Water Treatment Microbiocide

FOR INDUSTRIAL USE

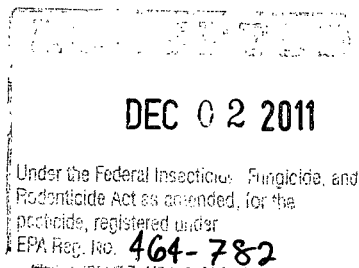
Active Ingredient:

Tetrakis(hydroxymethyl) phosphonium sulfate . . . . .	20.0%
Other Ingredients: . . . . .	80.0%
	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

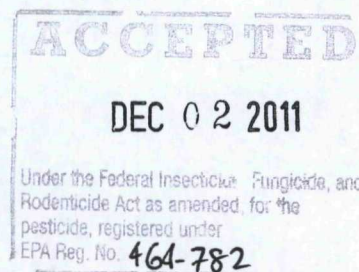
**Harmful if swallowed • Causes moderate eye irritation • Avoid contact with skin, eyes or clothing • Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals • Wear goggles and chemical resistant gloves when handling • Wash thoroughly with soap and water after handling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

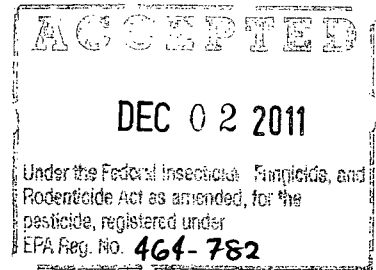
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<b>FIRST AID</b>	
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow. Do not induce vomiting unless told 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.

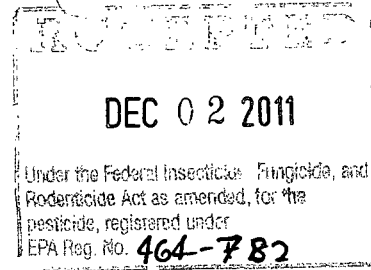
## DIRECTIONS FOR USE

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

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

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

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**

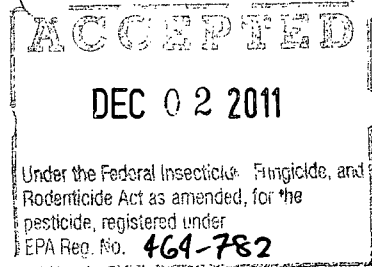
Not registered for use in the State of California

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

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.



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### **WELL REMEDIATION OPERATIONS**

Not registered for use in the State of California

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

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

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

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

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

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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 can not 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

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

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

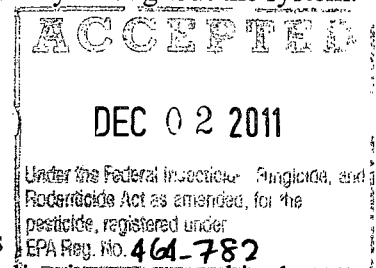
AQUCAR PS 20 Water Treatment Microbiocide should be added to service water and auxiliary systems at the same application rates and in the same manner as described above. It should be added to the system at a point of uniform mixing such as a basin area, sump area, or other reservoir or collecting area from which the treated water will be circulated uniformly throughout the system.

**HEAT TRANSFER SYSTEMS**

Not registered for use in the State of California

Evaporative Condensers, Dairy Sweetwater Systems, Hydrostatic Sterilizers and Retorts, Brewery and Other Pasteurizers, and Warmers

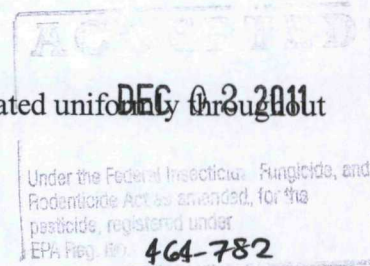
Add AQUCAR PS 20 Water Treatment Microbiocide at the same application rates, and in the same manner as described above. It should be added to the system at a point of uniform mixing such as a basin area, sump area, or other





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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

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

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 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

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 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

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% 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.

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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

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

™ Trademark of The Dow Chemical Company (“Dow”) or an affiliated company of Dow

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