

AQUCAR™ BP 100 Water Treatment Microbiocide

Active Ingredient(s)

2-Bromo-2-nitropropane-1,3-diol 99.0%

Inert Ingredient(s) 1.0%

Total 100%

E.P.A. Registration No. 464-675

E.P.A. Est. 83434-IL-001

KEEP OUT OF REACH OF CHILDREN DANGER

PRECAUTIONARY STATEMENTS

Hazards To Humans And Domestic Animals

CORROSIVE • CAUSES IRREVERSIBLE EYE DAMAGE AND SKIN IRRITATION • MAY BE FATAL IF SWALLOWED OR ABSORBED THROUGH SKIN. • HARMFUL IF INHALED • PROLONGED OR FREQUENTLY REPEATED SKIN CONTACT MAY CAUSE ALLERGIC REACTION IN SOME INDIVIDUALS.

Do not get in eyes, on skin, or on clothing. Do not breathe dust. Wear goggles and chemical resistant rubber gloves. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing 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. Do not contaminate water by cleaning of equipment, or disposal of wastes.

PHYSICAL AND CHEMICAL HAZARDS

Avoid contact with metal equipment such as scoops, mills or sieves

Produced for: *When produced by a contract manufacturer*



The Dow Chemical Company
Midland, Michigan 48674 U.S.A.
(989) 636-4400

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FIRST AID

IF IN EYES	<ul style="list-style-type: none">• Wash immediately and continuously with flowing water for at least 30 minutes.• Remove contact lenses if present, after the first 5 minutes and continue washing.• Obtain prompt medical consultation, preferably from an ophthalmologist.
IF SWALLOWED	<ul style="list-style-type: none">• Call a 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 a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15–20 minutes.• Call a poison control center or doctor for treatment.
IF INHALED	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.• Call a poison control center or doctor for further treatment.

HOT LINE NUMBER

IN CASE OF AN EMERGENCY endangering life or property involving this product, call collect (989)636-4400. 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 lavage.

STORAGE AND DISPOSAL

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

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: Nonrefillable container: Do not reuse or refill this container. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then offer for recycling if available, or dispose of liner in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner.

LIMITED WARRANTY AND DISCLAIMER

Seller warrants that the product conforms to its chemical description as contained on this label and is reasonably fit for the purposes stated on this label when used in accordance with directions under normal conditions of use. THE WARRANTIES MADE IN THIS PARAGRAPH ARE SELLER'S SOLE WARRANTIES WITH RESPECT TO THE PRODUCT AND ARE MADE EXPRESSLY IN LIEU OF AND EXCLUDE ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER EXPRESS OR IMPLIED REPRESENTATIONS AND WARRANTIES.



STATE OF HAWAII
Department of Agriculture

ACCEPTED

LICENSE NO. **9197.305**

Disc.

See Directions For Use Label Adjacent To The AQUCAR BP 100 Water Treatment Microbiocide Drum Label.

NET WT: 55.1 lb / 25 kg

LOT:

AQUCAR™ BP 100 Water Treatment Microbiocide

Directions For Use label to be used with AQUCAR BP 100 Water Treatment Microbiocide drum label.

IN CASE OF AN EMERGENCY endangering life or property involving this product, call collect (989)636-4400. Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment.

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, spoilage, odor-causing and corrosion inducing bacteria and algae in industrial applications.

Not For Control Of Algae In The State Of California.

AQUCAR BP 100 Water Treatment Microbiocide can be dosed directly or by preparing a stock solution immediately prior to application either by open pouring (not cooling water treatment) or by metered pump. For product preservation AQUCAR BP 100 Water Treatment Microbiocide is best added after any heating stage or when the product has cooled below 40°C. This product may be used in terrestrial and off-shore oil drilling muds and packer fluids. 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.

Applicators and other handlers must wear:

Coveralls, over long-sleeved shirt and long pants

Goggles and face shield.

Socks plus shoes.

Chemical resistant gloves.

Dust/mist filtering respirator (MSHA/NIOSH) approval number prefix (TC-21C), or a NIOSH approved respirator with any N, R, P, or HE prefilter).

Follow manufacturer's instruction for cleaning/maintaining PPE. If there are no such instructions for washables, 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.

INDUSTRIAL RECIRCULATING WATER COOLING TOWERS AND EVAPORATIVE CONDENSERS

To control slime-forming bacteria and algae in industrial recirculation towers and evaporative condensers, AQUCAR BP 100 Water Treatment Microbiocide may be dosed as the solid directly into the sump or basin or it may be added to the cooling water return at a suitable point. The AQUCAR BP 100 Water Treatment Microbiocide should be added at a point where there is adequate flow or turbulence to ensure quick dissolution (e.g. the pump outlet from the tower sump).

Frequency And Dose: AQUCAR BP 100 Water Treatment Microbiocide may be slug-dosed once or twice weekly as a normal routine. Where contamination is heavy, more frequent dosing may be required. AQUCAR BP 100 Water Treatment Microbiocide should be shock-dosed at between 0.21-0.84 lb/1000 gallons depending on the condition of the tower, the quality of the 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, AQUCAR BP 100 Water Treatment Microbiocide may be used as the solid or pre-dissolved in a quantity of warm water or alcohol, then injected 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, AQUCAR BP 100 Water Treatment Microbiocide should be slug-dosed from once a week to once a month with 0.018-0.036 lb per barrel.

DRILLING FLUIDS AND WORKOVER AND COMPLETION FLUIDS

To inhibit growth of cellulolytic, slime-forming or sulfate-reducing bacteria in oil and gas well drilling muds and brines, AQUCAR BP 100 Water Treatment Microbiocide may be used as the solid or pre-dissolved in a quantity of warm water, then 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 0.018 to 0.036 lb per barrel total mud volume.

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INDUSTRIAL PROCESS WATER

Use AQUCAR BP 100 Water Treatment Microbiocide to effectively control bacterial and algal growth in industrial process water, including closed circuit machine cooling (injection molding, etc.) and stored (non-potable) 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. It is not necessary to dilute AQUCAR BP 100 Water Treatment Microbiocide concentrate prior to dosing. AQUCAR BP 100 Water Treatment Microbiocide can also be used as an intermittent, flush treatment during regular maintenance cleaning of tank and 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, less frequent dosing (once or twice monthly) would be sufficient. Dosing should be carried out to give an initial concentration of 50 ppm (0.42 lb / 1000 gallons). When the above treatment has been successful, dosing can be lowered to a minimum of 10 ppm AQUCAR BP 100 Water Treatment Microbiocide (0.08 lb / 1000 gallons). For intermittent treatment of industrial process waters during routine maintenance, AQUCAR BP 100 Water Treatment Microbiocide should be used at 100 ppm (0.84 lb / 1000 gallons) and a contact time of at least one hour.

WATERFLOOD

To inhibit the growth of anaerobic and aerobic bacteria and all waterflood base fluids used in recovery of oil and gas reservoirs, add AQUCAR BP 100 Water Treatment Microbiocide as a dry product or pre-dissolve in any base fluid, or inject directly at the well head.

Frequency And Dose: AQUCAR BP 100 Water Treatment Microbiocide should be added continuously to waterflood fluids or slug-dosed depending on the bottom hold temperature and fluid chemistry at the rate of 25-100 ppm (0.009-0.036 lb per barrel) depending on the quality of the base fluid.

INJECTION FLUIDS

For the control of contamination and corrosion from bacterial sources in fluids/waste fluids that are disposed of through injection into an approved well following approved guidelines, add AQUCAR BP 100 Water Treatment Microbiocide as a dry product or pre-dissolved in each volume of fluid prior to injection.

Frequency And Dose: AQUCAR BP 100 Water Treatment Microbiocide should be added at a rate of 50-100 ppm (0.018-0.036 lb per barrel) based on the water percent of the injection fluid.

ENHANCED OIL RECOVERY (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 AQUCAR BP 100 Water Treatment Microbiocide during mixing as a dry product or pre-dissolve or add by injection during the EOR process.

Frequency And Dose: AQUCAR BP 100 Water Treatment Microbiocide should be added throughout the EOR operation at the rate of 50-100 ppm (0.018-0.036 lb per barrel) depending on the quality of the makeup water.

WELL SQUEEZE FLUIDS

For the effective control of aerobic and anaerobic bacteria in squeeze fluids and downhole well bore areas, add AQUCAR BP 100 Water Treatment Microbiocide during pre-mixing of the well squeeze fluid or (in the case of direct mix injection systems) an aqueous solution may be added by direct injection at the well head during the well squeeze procedure.

Frequency And Dose: AQUCAR BP 100 Water Treatment Microbiocide should be used for each well squeeze operation to ensure best results. Add AQUCAR BP 100 Water Treatment Microbiocide at a rate of 0.21-1.68 lb / 1000 gallons, depending on the quality of the makeup water.

FRACTURING FLUIDS

AQUCAR BP 100 Water Treatment Microbiocide reduces bacterial contamination and degradation of fracturing gels and fluids used as well stimulants in the oil and gas industry. AQUCAR BP 100 Water Treatment Microbiocide may be added during pre-mixing of the fracturing fluid or (in the case of direct mix injection systems) an aqueous solution may be added by direct injection at the head during the fracturing procedure.

Frequency And Dose: AQUCAR BP 100 Water Treatment Microbiocide should be used for each fracturing operation to ensure best results. AQUCAR BP 100 Water Treatment Microbiocide should be added at a rate of 0.42-0.84 lb / 1000 gallons depending on the quality of the makeup water.

PAPER MILL PROCESS WATER

To control slime-forming bacteria in paper or paperboard process water systems, AQUCAR BP 100 Water Treatment Microbiocide may be dosed as the solid 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: AQUCAR BP 100 Water Treatment Microbiocide 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 0.02-0.5 lb per ton of finished paper or paperboard depending on the complexity of the system, quality of the raw paper and type and the degree of contamination.

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 AQUCAR BP 100 Water Treatment Microbiocide as the solid or pre-dissolve in a quantity of warm water, then dose directly into the hydropulper, machine chest, or stock chest.

Frequency And Dose: In general, a single slug dose will provide protection 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. AQUCAR BP 100 Water Treatment Microbiocide should be dosed at between 0.09-0.44 lb per ton of stock (0.42-1.7 lb / 1000 gallons) depending on the type and degree of contamination.

USES UNAPPROVED IN CALIFORNIA

PIPELINE MAINTENANCE

To control aerobic and anaerobic bacteria, particularly sulfate-reducing bacteria, growth in oil and gas related production piping and transportation systems, pre-dissolve AQUCAR BP 100 Water Treatment Microbiocide in warm water or in a carrier solvent to give up to 20% concentrate. This concentrate can be injected directly into the pipeline or may be added to the hydrocarbon phase. Using carrier solvent addition of the AQUCAR BP 100 Water Treatment Microbiocide will produce long-term water phase concentrations by a diffusion process.

Frequency And Dose: Carrier additions will vary with the degree of contamination and volume of fluids through the pipeline. Slug treatments are recommended and can vary from daily to monthly to control growth. AQUCAR BP 100 Water Treatment Microbiocide should be dosed at a rate which will achieve concentrations of 25-200 ppm in the aqueous phase. When using a carrier solvent, 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 BOTTOMS IN HYDROCARBON STORAGE SYSTEMS AND TRANSPORTATION TANKS

For effective preservative 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. AQUCAR BP 100 Water Treatment Microbiocide may be pre-dissolved in warm water to give up to a 20% concentrate. This concentrate can be injected directly into the water bottom or may be sprayed over the surface of the hydrocarbon phase and allowed to percolate through. Using a carrier solvent for addition of AQUCAR BP 100 Water Treatment Microbiocide into the hydrocarbon phase will provide long-term water concentrations by a diffusion process.

Frequency And Dose: Direct addition to the water phase should be carried out every 30-60 days. Using a carrier solvent for addition to the hydrocarbon phase will provide long term water concentrations depending on frequency of hydrocarbon movement, draining of water bottom, and other factors. AQUCAR BP 100 Water Treatment Microbiocide should be dosed at a rate which will achieve concentrations of 50-100 ppm in the aqueous phase. When using a carrier solvent, higher initial concentrations may be used to allow diffusion into the aqueous phase.