UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

January 30, 2020

Ryan J. Connair
Registration specialist
Mason Chemical Company
9075 Center Dri., Suite 400
West Chester, OH 45069

Subject: Notification per PRN 98-10 – To update label
Product Name: Maquat® TC 76-50%
EPA Registration Number: 10324-19
Application Date: December 19, 2019
Decision Number: 558651

Dear Mr. Connair:

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 Emilia Oiguenblik by phone at 703 347 0199, or via email at Oiguenblik.emilia@epa.gov or Eric Miederhoff by phone at 703 347 8028, or via email at Miederhoff.eric@epa.gov.

Sincerely,

E. Miederhoff

Eric Miederhoff
Product Manager 31
Regulatory Management Branch I
Antimicrobials Division (7510P)
Office of Pesticide Programs

MASON CHEMICAL COMPANY
"The Quaternary Specialists"
9075 Centre Pointe Dr., Suite 400 I West Chester, OH 45069 I 513-326-0600 or 800-70-PILOT

E.P.A. Reg. No. 10324-19
E.P.A. Est. No. ~~10324-IL-1~~

MAQUAT® TC76-50%

Net Contents: Batch No:

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER. Keep out of Reach of Children. Corrosive. Causes irreversible eye damage and skin burns. May be fatal if inhaled, swallowed or absorbed through skin. Do not get into eyes, on skin or on clothing. Do not breathe vapor or spray mist. Wear protective eyewear (goggles, safety glasses or face shield), protective clothing, and rubber gloves. Wash thoroughly with soap and water after handling and before eating, drinking, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

(If container is equal to or larger than 5 gallons, the following statement must appear on the label)

ENVIRONMENTAL HAZARD

This pesticide is toxic to fish, aquatic invertebrates, oysters, and shrimp. 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 into sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

(For containers up to 5 gallons, use the following environmental hazard statement.)

ENVIRONMENTAL HAZARD

This product is toxic to fish.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame or in car.
Do not mix with soap, anionic detergents or oxidizers.

FIRST AID

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. **IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. **IF SWALLOWED:** 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 INHALED:** 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 advice. **NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

ACCEPTED
01/30/2020
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 10324-19

For Control of Algae and Algal Slime Growth in Swimming Pools, Outside Spas/Whirlpools/Hot Tub Baths, Decorative Fountains and Pools, Industrial and/or Commercial Recirculating Cooling Water Towers, Auxiliary Water and Waste Water Systems, Oil Field Water Flood/Salt Water Disposal Systems, Retort Water Systems and Molluscs in Once Through Cooling Systems. Controls bacteria and fungal slimes in pulp, paper mills, and paper manufacturing. *(Use for fungal slime and molluscs and use sites "Retort Water Systems", "Oil field Water Flood/Salt Water Disposal Systems", and "Auxillary Water and Waste Water Systems" not allowed in California)*

(Product of USA) (Made in the USA)

ACTIVE INGREDIENTS

Alkyl (60%C_{14}, 30%C_{16}, 5%C_{12}, 5%C_{18}) dimethyl benzyl ammonium chloride	49.8%
Dialkyl (60%C_{14}, 30%C_{16}, 5%C_{12}, 5%C_{18}) methyl benzyl ammonium chloride	0.2%
INERT INGREDIENTS:	50.0%
TOTAL:	100.0%

Weight: Approx. 8lbs./gallon

KEEP OUT OF REACH OF CHILDREN
DANGER

See left (back) (side) (right) panel of label) (below) for additional precautionary statements and first aid statements.

PELIGRO: SI NO PUEDE LEER EN INGLES, PREGUNTE A SU SUPERVISOR SOBRE LAS INSTRUCCIONES DE USO APROPIADAS ANTES DE TRABAJAR CON ESTE PRODUCTO.

DANGER: IF YOU CANNOT READ ENGLISH, ASK YOUR SUPERVISOR TO EXPLAIN THE APPROPRIATE DIRECTIONS FOR USE BEFORE WORKING WITH THIS PRODUCT.

(Manufacturing and/or Lot no. Date:)

- 50% Concentration
- Kills and prevents Algae

This formulation (Maquat© TC76-50%) is for use in:

- Industrial and/or commercial recirculating cooling water towers.
- Once through water cooling systems.
- Paper mills and paper mill process water systems.
- Oil field water flood or salt water disposal system and fracturing fluids.
- Oil field injection and waste water.
- Gas production and transimission pipelines and systems.
- Gas storage wells and systems.
- Pipeline pigging and scraping operations.
- Drilling, completion and workover fluids systems.
- Packer fluids.
- Hydrotesting

This product has been designed specifically for control of sulfate-reducing bacteria (SRB) that contribute to souring, the production of sulfide, and abiotic corrosion in water cooling systems, paper mill process water systems, oil field systems, gas production and transmission pipelines and systems.

A microbiocide for use in controlling sulfate-reducing bacteria and slime forming bacteria in oil well drilling, oil field processing applications, oil field water systems, oil and gas productions and transmission pipelines and systems, and gas storage fields and equipment; such as steam-injection water holding tanks, flood water, injection water, holding pond water, disposal-well water, water holding tanks, fuel storage tanks and related refinery and oil field closed, industrial recirculating water handling systems.

A highly effective microbiocide for use in controlling bacteria including slime forming bacteria and sulfate-reducing bacteria (SRB) and fungi (yeast and molds) and algae in air washers and industrial scrubbing systems, recirculating cooling and process water systems including those that contain reverse osmosis membranes and in service water and auxiliary systems and heat transfer systems and in wastewater systems including wastewater sludge and holding tanks, and in paper mills and paper mill process water systems and water based coatings for paper and paperboard.

This product is efficient and stable in use dilution.

This product is compatible with most chemicals used in pool water and will not damage tile, concrete, metal or plastics.

This product keeps pool water free and sparkling, clear of visible green and blue-green algae, slime and green brown colors.

This product improves filter operation and reduces need for other chemicals.

This product imparts tone and a pleasant “feel” to swimming pool water.

This product is formulated to complement swimming pool water being treated with normal chlorine systems. It is especially effective against growth of algae and being non-volatile, aids in maintaining pool water clarity and sparkle. The residual effectiveness of this algaecide tends to stabilize the total chemical treatment system.

This product is compatible with most chemicals normally used in swimming pool maintenance: however, in its concentrated form, this chemical must not come in contact with high concentrations of chlorine or any other oxidizer. **DO NOT MIX THIS PRODUCT AND CHLORINE OR ANY OTHER OXIDIZER TOGETHER** before adding to the pool. These chemicals must be handled separately.

This product was formulated to complement most swimming pool sanitizers. This product is not a stand-alone product. It must be used with either halogen based or non-halogen based pool sanitizers. This product supports your overall pool chemical maintenance program, offering a residual effectiveness that protects your pool against algae formation while keeping your pool water sparkling clear. This product protects the unattended pool when you’re away (refer to Vacation Treatment section in Directions For Use).

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Please read entire label and use strictly in accordance with precautionary statements and directions.

Do not use water containing residues from use of this product to irrigate crops for food or feed.

*(**Note to Reviewer:** This paragraph will be used only for Once Through Cooling Systems)*
Use of the product in either public/municipal or single or multiple family private/residential potable/drinking water systems is strictly prohibited. Use of the product in any cooling water system that discharges effluent within ¼ mile of either a public/municipal or single or multiple family private/residential potable/drinking water intake is strictly prohibited.

INDUSTRIAL WATER TREATMENT

This product aids in the control of bacterial, fungal and algal slimes in evaporative condensers, heat exchange water systems, industrial and commercial cooling towers, influent systems such as flow through filters and lagoons, industrial water scrubbing systems and brewery pasteurizers.

INDUSTRIAL AND/OR COMMERCIAL RECIRCULATING COOLING WATER TOWERS, RETORT WATER SYSTEMS, EVAPORATIVE CONDENSERS, HEAT EXCHANGE WATER SYSTEMS, INFLUENT SYSTEMS

(Note: Retort Water Systems use site not applicable in California.)

1. **Dosing Location:** This product is to be applied at a point in the system where it will be uniformly mixed, such as at the sump**.**
2. **Dosing Conditions:** This product must be applied when the system is in jeopardy of being affected or after cleaning systems where efficiency is already impaired.
3. **Method Of Application:**
   - ***a. INTERMITTENT OR SLUG METHOD***
     Initial Dose: When the system is noticeably fouled, apply 5.25 to 10.25 fluid ounces (20 to 40 ppm on an active quaternary basis) per 1000 gallons of water in the system. Repeat until control is achieved.
     Subsequent Dose: When microbial control is evident, add 1.33 to 3.85 fluid ounces (5 to 15 ppm on an active quaternary basis) per 1000 gallons of water in the system twice weekly or as needed to maintain control. Badly fouled systems must be cleaned before treatment is begun.
   - ***b. MODIFIED INTERMITTENT METHOD***

Initial Dose: When the system is noticeably fouled, apply 5.25 to 10.25 fluid ounces (20 to 40 ppm on an active quaternary basis) per 1000 gallons of water in the system. Apply half of this initial dose when half of the water in the system has been lost by blowdown.

Subsequent Dose: When control of microbial growth is evident, apply 1.33 to 3.85 fluid ounces (5 to 15 ppm on an active quaternary basis) per 1000 gallons of water in the system. Apply half of this subsequent dose when half of the water in the system has been lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.

(OR)

INTERMITTENT OR SLUG METHOD

When this treatment is required, add this product at the rate of 5.25 to 10.25 ounces per 1000 gallons of water already in the system, or being added to the system, for 4 to 8 hours, 1 to 4 times per week or as needed to achieve the desired level of control. When control is obtained, add this product at the rate of 1.33 to 3.85 ounces per 1000 gallons of water in the system.

c. CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably fouled, apply 5.25 fluid ounces (20 ppm on an active quaternary basis) per 1000 gallons of water in the system.

Subsequent Dose: Maintain this treatment by starting a continuous feed of 1.33 fluid ounces (5 ppm on an active quaternary basis) per 1000 gallons of water lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.

ONCE THROUGH FRESH AND SEA WATER WATER COOLING SYSTEMS *(Not for use in CA)*

1. **Dosing Location:** This product is to be applied at a point in the system where it will be uniformly mixed, such as at the sump.
2. **Dosing Conditions:** This product must be applied when the system is in jeopardy of being affected or after cleaning systems where efficacy is already impaired.
3. **Method Of Applications:**

a. INTERMITTENT OR SLUG METHOD

Initial Dose: When the system is noticeably fouled, apply 0.154 to 1.54 fluid ounces (0.6 to 6 ppm on an active quaternary basis) per 1,000 gallons of water based on system flow rates. The minimum treatment must be 6 to 24 hours. Repeat until control is achieved. Deactivation must be conducted prior to discharge from the system by using bentonite clay at a minimum ratio of 5 ppm clay to 1ppm product.

Subsequent Dose: When microbial control is evident, add 0.075 to 0.75 fluid ounces (0.3 to 3 ppm on an active quaternary basis) per 1,000 gallons of water based upon system flow rates on a as needed basis to maintain control. Frequency of feed must be tied to an in-plant monitoring program for macro cowling growth. Deactivation must be conducted prior to discharge from the system by using bentonite clay at a minimum ratio of 5 ppm clay to 1 ppm product.

TO DEACTIVATE: Use bentonite clay at the minimum ratio of 5 ppm clay to 1 ppm product. Deactivation must occur prior to discharge of the NPDES outfall. Do not apply this product more than 4 times a year.

(OR)

ONCE THROUGH FRESH AND SEA WATER WATER COOLING SYSTEMS *(Not for use in CA)*

1. **Dosing Location:** This product is to be applied at a point in the system where it will be uniformly mixed, such as at the sump.
2. **Dosing Conditions:** This product must be applied when the system is in jeopardy of being affected or after cleaning systems where efficiency is already impaired.
3. **Method Of Applications:**
   a) Wear safety glasses, rubber gloves and impervious apron.
   b) To reduce foaming, mix 2 parts of water to 1 part of this product.
   c) Add product directly from drum or add the product at a point where it will be mixed uniformly.
   d) Use 0.25 to 2.575 fluid ounces (1-10 ppm on an active quaternary basis) per thousand gallons.
   e) Do not discharge without performing proper deactivation. To perform deactivation use Bentonite Clay. The minimum ration to be used is 5 ppm of clay to 1 ppm of product.
   f) Do not use product more than 4 times per year.
   g) Treatment time cannot exceed 120 hours/application.
   h) Avoid oxidizers and reducing agents. Product is cationic and must not be mixed with soap or anionic surfactants.

TO DEACTIVATE: Use bentonite clay at the minimum ratio of 5 ppm clay to 1 ppm product. Deactivation must occur prior to discharge of the NPDES outfall. Do not apply this product more than 4 times a year.

OIL FIELD & GAS PRODUCTION TREATMENT *(Not for use in CA)*

Specific treatment requirements vary among oil and/or gas field sites and subsystem components. The Primary point of treatment will vary among oil and/or gas field operations depending on the site problems, water-flood treatment methods and equipment. This product must be added where it will disperse rapidly and uniformly to the desired area of treatment.

Additions of this product must be made with the proper type of metering pump equipment, suction (low pressure) side of pumping equipment or similar device. This product must be added to the system by slug, continuous or on an intermittent basis, depending on the degree of system fouling.

OR

Specific treatment requirements vary among oil and/or gas field sites and subsystem components. Oil field fluids and subsystems most commonly requiring microbial contamination control are raw water sources, spearators, ballast, storage and mixing tanks, screens, surface injection equipment, production equipment (such as injection and production piping casting, completion and valving) and the formation itself. The primary point of treatment will vary among oil and/or gas field operations depending on the site problems, water-flood treatment methods and equipment. This product must be added where it will disperse rapidly and uniformly to the desired area of treatment.

Additions of this product must be made with the proper type of metering pump equipment, suction (low pressure) side of pumping equipment or similar device. This product can be added to the system by slug, continuous or on an intermittent basis, depending on the degree of system found.

OIL FIELD WATER FLOOD OR SALT WATER DISPOSAL SYSTEMS AND FRACTURING FLUIDS

1. For the control of slime forming and sulfate reducing bacteria in oil field water flood or salt water disposal systems, add 5 – 10 ppm (active) of this product (120.75 – 241.75 ounces per 3,000 barrels of water) continuously. Levels for effective control will vary depending on conditions at the site.
2. For intermittent use, dose at rate of 5 – 20 ppm (active) of this product (120.75 – 483.75 ounces per 3,000 barrels of water) for 4 to 8 hours per day, one to four times a week as needed to maintain control.
3. For treatment of flow back return water (Post Hydraulic Fracturing – Dose at a rate of 5-20ppm active of this product (120.75 – 483.75 ounces per 3,000 barrels of water) for 4 to 8 hours per day, one to four times a week as needed to maintain control.

OILFIELD INJECTION AND WASTE WATER

This product must be added to the water handling system at a point of uniform mixing such as the area of addition of make-up water to the holding tank.

Method of application:

1. **Continuous injection:** Add this product at 30 ppm active (7.5 fluid ounces per 1000 gallons of water) when system is noticeably fouled. When microbial control is evident, add this product at 15 ppm active (3.75 fluid ounces per 1000 gallons of water) to maintain control.
2. **Batch treatment:** Add this product at 180 ppm active (46.25 fluid ounces per 1000 gallons of water) over a period of 4 – 6 hours one or more times per week when the system is noticeably fouled. When microbial control is evident, add this product at 90 ppm active (23 fluid ounces per 1000 gallons of water) over a period of 4 – 6 hours one or more time per week.

OR

For use in oil field and/or petrochemical water subsurface injection systems of secondary and/or tertiary oil recovery systems to reduce the number of anaerobic bacteria, aerobic bacteria, sulfate-reducing bacteria.

1. **DOSING LOCATION** (site of use)**:** This product is to be applied at a point in the recovery system where it will be uniformly mixed, such as at the screens, storage tanks and other mixing device locations.
2. **DOSING CONDITIONS:** This product should be applied when the system is in jeopardy of being affected. Badly fouled systems must be cleaned before treatment is begun.
3. **EQUIPMENT USED:** Use the injection pump to apply the product.
4. **USE LIMITATIONS:** Dependent upon pH, temperature and salt content, adjust according to conditions found at the site as needed to maintain control.
5. **DOSAGE APPLICATIONS:**

a. SLUG METHOD

Initial Dose: When the system is noticeably fouled, apply 15.25 ounces (60 ppm active ingredient) of this product per 1000 gallons of water in the system. Apply for 3 to 8 hours daily until control is achieved.

Subsequent Dose: When microbial control is evident, add 7.5 ounces (30 ppm active ingredient) of this product per 1000 gallons of water in the system daily or as needed to maintain control.

b. INTERMITTENT DOSAGE

Initial Dose: When the system is noticeably fouled, apply 15.25 ounces (60 ppm active ingredient) of this product per 1000 gallons of water in the system. Apply for 3 to 8 hours daily until control is achieved.

Maintenance Dose: When control of microbial growth is evident, apply 7.5 gallons (30 ppm active ingredient) of this product per 1000 gallons of water in the system daily or as needed to maintain control.

c. CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably fouled, apply 3.75 ounces (15 ppm active ingredient) of this product per 1000 gallons of water in the system.

Subsequent Dose: Maintain this treatment by starting a continuous feed of 3.75 ounces (15 ppm active ingredient) of this product per 1000 gallons of water daily or as needed to maintain control.

OIL AND GAS PRODUCTION AND TRANSMISSION PIPELINES AND SYSTEMS

For the control of sulfate-reducing bacteria and slime forming bacteria, this product must be added at a point in the production or transmission pipeline via direct injection where uniform. The application must be conducted to ensure maximum distribution of the 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. To facilitate applications, it is desirable to dilute the product with an appropriate solvent immediately before use. The concentration in the solvent must 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 must be weekly, or as needed to maintain control.

GAS STORAGE WELLS AND SYSTEMS

Individual injection wells must be treated with a sufficient quantity of this product to produce concentration of 65-1000 ppm (on an active quaternary basis) when diluted by the water present in the formation. Injection should take place before gas is injected (during the summer). Injections must be repeated yearly or as needed to maintain control

PIPELINE PIGGING AND SCRAPING OPERATIONS

Add this product 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 the trailing pig). Sufficient product is added to produce an effective concentration of 75 – 500 ppm on an active quaternary basis (1.9 to 12.8 ounces per 100 gallons of water) depending on the length of the pipeline and the severity of the biofouling.

DRILLING, COMPLETION AND WORKOVER FLUIDS SYSTEMS

This product is to be applied to these fluid systems at a point of uniform mixing, such as a circulating holding tank and other mixing device locations.

Initial Treatment: Add 65 – 1000 ppm (on an active quaternary basis) of this product (52.5 to 807 ounces of this product per 100 barrels) to a freshly prepared fluid. Levels for effective control will vary depending on conditions at the site and the severity of the contamination.

Maintenance Dosage: Add 65 – 1000 ppm (on an active quaternary basis) of this product (52.5 to 807 ounces of this product per 100 barrels) to the fluid. Levels for effective control will vary depending on conditions at the site and the severity of the contamination.

PACKER FLUIDS

This product is to be added to the packer fluid at a point of uniform mixing such as a circulating holding tank and other mixing device locations. Add 52.5 to 807 ounces (65 – 1000 ppm active quaternary basis) of this product per 100 barrels of packer fluid. This product is applied to a freshly prepared fluid. Levels for effective control will vary depending on conditions at the site and the severity of the contamination. Seal the treated packer fluid in the wall between the casing and the production tube.

HYDROTESTING

Treat Water in the hydrotest pipelines or vessels with 65 – 1000 ppm on a active quaternary basis (16.6 to 256 ounces per 1000 gallons of water) of this product, depending on water quality and length of time the equipment will remain idle.

AUXILLARY SERVICE WATER AND WASTE WATER SYSTEM

This product is effective for the control of odor-forming and slime-forming bacterial, fungi and algae in auxillary service water systems such as fire protection systems and pump or screen bays, water waste systems such as storage tanks, storage piles, associated piping, setting ponds or lagoons, transport spillways or canals and disposed wells.

Add 5 – 180 ppm (active) of this product (0.95 - 34 gallons per 3,000 barrels of water) continuously. This product must be added to the system at a point of uniform mixing by slug or intermittent feed or by spraying onto a waste pile. The frequency of feed or spray and the duration of treatment will depend upon the severity of the contamination. Additions to water systems must be made during the pumping operation and as close to the pump as possible to ensure adequate mixing.

PULP AND PAPER MILLS

SLIMICIDE APPLICATIONS *(Not for use in CA)*

This product can be used as a slimicide in the manufacture of paper and paperboard, depending on the type of stock, quality of raw water, complexity of the system, and degree of contamination. Apply this product intermittently or continuously depending on mill conditions to the paper making system at a point of uniform mixing such as a the beaters, thin or thick stock chests, broke chest pump, save-all tank, process tank or whitewater tank. Do not use to treat paper or paperboard which will contact food.

Initial Dose: When system is noticeably contaminated, add 0.80 to 160 pounds of this product per 100,000 gallons of whitewater to be treated (1.0 to 200 ppm of product) as a continuous or slug dose. Repeat until control is achieved. Heavily fouled systems must be boiled out prior to initial treatment.

Subsequent Dose: When microbial control is evident, add 0.80 to 80 pounds of this product per 100,000 gallons of whitewater to be treated (1.0 to 100 ppm of product) as necessary to maintain control.

CONTROL OF BACTERIAL, FUNGI/MOLD AND ALGAE ON PULP, PAPERBOARD & WET LAP *(Not for use in CA)*

This product is used to inhibit fungal growth, which causes discoloration, odor and degradation of paper, paperboard or wet lap. Application of this product must be made at a point in the system where mixing action is good. Application can also be made at the size press or water box. Apply at a rate of 0.4 to 80 pounds of this product per ton (dry basis) of pulp or paperboard produced.

Dosing Application: This product may be drip fed continuously from the drum, diluted and showered to the wet sheet or fed by suitable pumps.

For inhibition of wet lap or sheet pulp this product must be applied to the dewatered pulp surface via applicator rolls or showers. Application can also be made at the size press or water box.

SWIMMING POOLS

This product requires no special equipment for treating swimming pool water. The correct use dilution may be added directly to the pool in any spot or added to the water circulation equipment. This product works the best when added by itself directly to pool water.

INSTRUCTIONS FOR USE WITH HALOGEN BASED POOL SANITIZERS

This product is formulated to complement most swimming pool sanitizers. When using other products as outlined in Directions For Use on those products, always follow Directions For Use of those products. This product is effective against the growth of algae. This product is efficient and non-staining when used as directed. This product will not evaporate and its algae fighting abilities actually increase as pool water temperature increases.

Ensure all pool equipment is working properly. Backwash the filter system following manufacturers directions. Adjust pH between 7.2-7.6. Adjust chlorine residual to 1-3 ppm. In a chlorine treated pool, add stabilizer to establish a minimum level of 40-50 ppm to reduce the degradative effects of sunlight upon the chlorine residual. Check for metals and if present add stain and scale inhibitor to prevent staining of pool surface due to metals. Check chlorine residual and adjust to 1-3 ppm. Maintain sanitizer residual in accordance with label directions found on your sanitizer of choice. When using other products as outlined in directions for this product, always follow directions on those products.

Add this product directly into pool by pouring around entire outside perimeter of pool. Allow the filter to run for at least six (6) hours after adding algaecide. During this period, swimmers must not be allowed into the water.

Initial Application For Swimming Pools

1. Backwash the filter thoroughly.
2. Vacuum algae debris and thoroughly brush pool.
3. Add 26 ounces of this product to each 50,000 gallons of water (5.2 ounces per 10,000 gallons) or ratio thereof.
4. Vacuum pool after 24 hours to remove dead algae.
5. If algae is still visible repeat dose (steps 3 & 4) as necessary until pool is free of visible algae.
6. Once algae are under control, clean filter and return to normal operation.

Maintenance Application

Add 6.5 ounces of this product in 50,000 gallons of water every 3-5 days or as needed.

Booster Application

Add 6.5 ounces of this product in 50,000 gallons of water after a heavy or prolonged rainfall or when there is a heavy bathing load.

The above directions must be followed even when the pool is not in use.

If algae growth is noticeable, apply initial dose.

Vacation Treatment

When you are going to be away for one week or more add 4.8 ounces of this product per 10,000 gallons of water for every week unattended. Pour product around the edges of the shallow end of the pool, if shock is also being applied in the deep end of pool.

OPTIONAL INSTRUCTIONS FOR USE WITH NON-HALOGEN BASED POOL SANITIZERS

This product is formulated to complement swimming pool water being treated with the BioGuard® Softswim System, Baquacil® and other non-halogen systems. When using other products as outlined in Directions For Use for this product, always follow Directions For Use of those products. This product is efficient and non-staining when used as directed. This product will not evaporate and its algae fighting abilities actually increases as the pool water temperature increases. The residual effectiveness of this product tends to stabilize the total chemical treatment system.

Ensure all pool equipment is working properly. Backwash the filter system following manufacturers directions. Adjust pH between 7.2-7.6. Check for metals and if present add stain and scale inhibitor to prevent staining of pool surface due to metals

Add this product directly into pool by pouring around entire outside perimeter of pool. Allow the filter to run for at least six (6) hours after adding algaecide. During this period, swimmers must not be allowed into the water.

Initial Application for Swimming Pools

1. Backwash the filter thoroughly.
2. Vacuum algae debris and thoroughly brush pool.
3. Add 26 ounces of this product to each 50,000 gallons of water (5.2 ounces per 10,000 gallons).
4. Vacuum pool after 24 hours to remove dead algae.
5. If algae is still visible repeat dose (steps 3 & 4) as necessary until pool is free of visible algae.
6. Once algae are under control, clean filter and return to normal operation.

Maintenance Application

Add 6.5 fluid ounces of this product in 50,000 gallons of water every 3-5 days or as needed.

Booster Application

Add 6.5 ounces of this product in 50,000 gallons of water after a heavy or prolonged rainfall or when there is a heavy bathing load.

The above directions must be followed even when the pool is not in use.

If algae growth is noticeable, apply initial dose.

Vacation Treatment

When you are going to be away for one week or more add 4.8 ounces of this product per 10,000 gallons of water for every week unattended. Pour product around the edges of the shallow end of the pool, if shock is also being applied in the deep end of pool.

WINTERIZING TREATMENT *(not applicable in California)*

When swimming pool season is over, add 26 ounces of this product per 16,000 gallons (1.6 ounces per 1,000 gallons) (or ratio thereof) of water left in pool. This dose helps provide a measure of control of algae growth during the winter months. This treatment will also help the servicing of the pool before it is returned to use the following season.

For persistent algae or slime producing organisms add 6.5 ounces of this product into the skimmer with the filter pump running. After one minute shut off pump and allow the system to remain off overnight. The following day, restart the filter pump and add 6.5 ounces of this product to the pool. Run filter continuously for 24-48 hours brushing the sides and bottom of the pool frequently.

(Usage chart for quart and one-gallon containers)

Swimming Pool Capacity Gallon of Water	Initial Treatment	Maintenance Dose Booster Dose
5,000	2.6 ounces	0.65 ounces
10,000	5.2 ounces	1.3 ounces
20,000	10.4 ounces	2.6 ounces
25,000	13.0 ounces	3.25 ounces
30,000	15.6 ounces	3.9 ounces
40,000	20.8 ounces	5.2 ounces
50,000	26.0 ounces	6.5 ounces

ALTERNATE WINTERIZATION METHOD *(not applicable in California)*

This product may be used with the following pool chemicals to form a winterization "package".

Directions:

1. Add a maintenance dose of chloride or oxygen shock.
2. Top up BioGuard Softswim System, Bacquacil or other non-halogen systems to 50 ppm.
3. Add 16.0 ounces of this product per 10,000 gallons (6.4 ounces per 4,000) (or ratio there of) of water left in pool. This dose helps provide a measure of control of algae growth during the winter months. This treatment will also help the servicing of the pool before it is returned to use the following season.
4. Allow filter to run for several hours after chemical additions for good mixing.

Note: Before using chlorine or oxygen shock, read the Directions for Use and Precautionary Statements specific to that product.

TO DETERMINE POOL CAPACITY

Rectangular Pools: Length *(times)* width (*times)* average depth (in feet) (*times)* 7.5 (*equals)* gallons.

Round and Oval Pools: Long diameter (*times)* short diameter (*times)* average depth (in feet) (*times)* 5.9 (*equals*) gallons

OTHER

DIRECTIONS FOR USE IN (OUTSIDE) SPAS/WHIRLPOOLS/HOT TUBS

("Outside" description not for use in California)

Initial Dose: Add 2.6 ounces of this product per 5,000 gallons of water. Initial dose is used upon filling of spa/whirlpool/hot tub bath.

Maintenance Dose: Add 0.65 ounces of this product per 5,000 gallons of water. Maintenance dose must be added at 3-5 day intervals. If high temperatures prevail or outside spa/whirlpool/hot tub bath has unusually heavy use, add maintenance dose more frequently. Drain and clean outside spa/whirlpool/hot tub bath at least once a month or as needed depending upon bather load.

CONTROLLING ALGAE GROWTH

Bird Baths: Do not use with fish. Clean to remove algae growth prior to filling birdbath. Then spray all exposed surfaces with a solution of 0.2 ounces of this product per gallon of water. Allow to air dry and brush off dead algae.

(Or)

INSTRUCTIONS FOR BIRD BATHS

This product is toxic to fish. **DO NOT** use this product when fish are present.

Initial Dose:

1. Drain Bird Bath.
2. Wipe, mop or spray all exposed surfaces using 0.2 ounces of this product per gallon of water. Spray device must be a mechanical coarse spray device. When applied with spray device, surfaces must be sprayed until thoroughly wetted. Do not rinse.
3. Allow to air dry and brush off dead algae. Repeat, if necessary, until no algae is visible.
4. Refill Bird Bath with fresh water.

Maintenance Dose: Repeat initial treatment when algae growth returns.

ALGAE CONTROL ON WALKWAYS *(Not for use in CA)***:** For heavy infestations, spray or swab a solution of 0.2 ounces of this product per gallon of water. Let stand for an hour or more then brush and wash away dead algae. Soak area again with the solution. Do not rinse. Allow to dry on the surface and repeat application when algae growth returns.

INSTRUCTIONS FOR (CONTAINERIZED) DECORATIVE FOUNTAINS AND POOLS

(Note to Reviewer: "Containerized" description must be used in California.)

This product is not to be used in open water ways connected to larger watersheds or in waters that serve as natural habitats for aquatic and amphibious organisms. **DO NOT** use when fish or other wildlife (for example, amphibians) are present. This product is toxic to fish.

Initial Dose:

1. Remove floating algae by raking, dragging with cable or chain or any other suitable method. It is more economical to remove floating type algae (if possible) before the water is treated.
2. Add this product at any point that is convenient, such as the bowl, pool, or sump.
3. Add 25.6 ounces of this product to each 50,000 gallons (6.4 ounces per 12,500 gallons) or ratio thereof.

Weekly Maintenance Dose: Add 6.4 ounces of this product to each 50,000 gallons of water every 3-5 days or as to maintain 0.5 ppm active.

Each month drain and clean bowl. Refill with fresh water and repeat initial treatment. Draining removes airborne dirt, dust, contamination and alkali buildup.

Decorative Fountain or Pools Capacity in gallons of water	Initial Treatment	Maintenance Dose Booster Dose
50,000	25.6 ounces	6.4 ounces
25,000	12.8 ounces	3.2 ounces
12,500	6.4 ounces	1.6 ounces
6,250	3.2 ounces	0.8 ounce
3,125	1.6 ounces	0.4 ounce
1,562	0.8 ounce	0.2 ounce
781	0.4 ounce	0.1 ounce
390	0.2 ounce	0.05 ounce
195	0.1 ounce	0.025 ounce

*(**Note to reviewer:** The title and first statement of this section must appear on every label, followed by the appropriate Storage and Disposal section. Brackets [ ] indicate that one option within the brackets MUST be used in the final label text. Each option within the brackets is enclosed in a set of parenthesis ( ). All "Notes" are only for reviewers and will not be included on label.)*

STORAGE AND DISPOSAL

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

(For Swimming Pool Use and Decorative Fountains and Pools in nonrefillable containers up to and including 5 gallons)

Nonrefillable container. Store in original container in areas inaccessible to small children. Keep from freezing. Offer for recycling if available or wrap and discard in trash (or recycle).

(For Swimming Pool Use and Decorative Fountains and Pools in containers over 5 gallons)

PESTICIDE STORAGE: Store in original containers and place in locked storage area. Keep from freezing. Do not contaminate water, food, or feed by storage or disposal.

SPILL OR LEAK PROCEDURES: Small spills may be mopped up or flushed away with water or absorbed on some absorbent material and incinerated.

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 the label instructions, contact your State Pesticide or Environmental Control agency or the Hazardous Waste representative at the nears EPA Regional Office for guidance.

CONTAINER DISPOSAL: Non-refillable container. Do not reuse container (bottle, cans, jars). Triple rinse (or equivalent). Offer for recycling if available or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

(FOR USE ON NON-REFILLABLE CONTAINERS WITH COMMERCIAL/INDUSTRIAL USES)

*(**Note:** For use on containers of 5 gallons or less.)*

PESTICIDE STORAGE: Store only in original container. Keep from freezing. If a leaky container must be contained within another, mark the outer container to identify the contents. Keep this product under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use.

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/RESIDUE REMOVAL: Non-refillable container. Do not reuse empty container. Triple rinse as follows: Fill container ¼ full with water and recap. Shake for 10 seconds. Follow Pesticide Disposal instructions for rinsate disposal. Drain for 10 seconds after the flow begins to drip. Repeat procedure two more times. Wrap container and put in trash or offer for recycling or reconditioning. If not available, puncture and dispose of in a sanitary landfill.

SPILL OR LEAK PROCEDURES: Small spills may be mopped up or flushed away with water or absorbed on some absorbent material and incinerated. Large spills should be contained and the material then moved into containers and disposed of by approved methods for hazardous wastes.

(FOR USE ON NON-REFILLABLE CONTAINERS WITH COMMERCIAL/INDUSTRIAL USES)

(Note: For use on containers greater than 5 gallons)

PESTICIDE STORAGE: Open dumping is prohibited. Store only in original container. Keep from freezing. If a leaky container must be contained within another, mark the outer container to identify the contents. Keep this product under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use.

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: *(Note: Only one of the following Container Disposal paragraphs will be used, depending on packaging type)*

Non-refillable container. Do not reuse this container to hold materials other than pesticides or diluted pesticides (rinsate). Offer for recycling if available or puncture and dispose in a sanitary landfill, or by other procedures approved by state and local authorities. If rinsate cannot be used, follow pesticide disposal instructions.

(Note: Several of our customers' packaging options are sealed containers or bottles designed to reduce worker exposure to the concentrate. None of these can be triple rinsed because they are closed sealed containers. The following text will be used on these ***non-refillable sealed container*** *types only.)*

Nonrefillable container. Do not reuse or refill this container. Wrap empty container and put in trash.

RESIDUE REMOVAL INSTRUCTIONS: To clean the container before final disposal, empty the remaining contents from this container into [(application equipment) (a mix tank)]. Fill the container ¼ full with water. Replace and tighten closures. [(Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds then stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times) (Agitate vigorously or recirculate water for 30 seconds)]. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Follow Pesticide Disposal instructions for rinsate disposal. Repeat this procedure two more times.

(FOR USE ON REFILLABLE CONTAINERS WITH COMMERCIAL/INDUSTRIAL USES)
*(**Note:** For use on all refillable containers.)*

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

PESTICIDE STORAGE: Open dumping is prohibited. Store only in original container. If a leaky container must be contained within another, mark the outer container to identify the contents. Keep this product under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use.

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.

(For use on all refillable containers except fixed tank containers)

CONTAINER HANDLING/RESIDUE REMOVAL INSTRUCTIONS: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. To clean the container before final disposal, empty the remaining contents from this container into [(application equipment) (a mix tank)]. Fill the container ¼ full with water. Replace and tighten closures. [(Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds then stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times) (Agitate vigorously or recirculate water for 30 seconds)]. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Follow Pesticide Disposal instructions for rinsate disposal.

(Note: To be used on fixed tanks only)

CONTAINER HANDLING/RESIDUE REMOVAL INSTRUCTIONS: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. To clean the container before final disposal; empty the remaining contents from this container into application equipment or a mix tank. Drain rinsate into application equipment and dispose of according to Pesticide Disposal instructions. Triple rinse container (or equivalent) promptly after emptying. Continue to drain for 10 seconds after the flow ends. Repeat this procedure two more times.

Made in USA

[Optional – for use on residential use swimming pool and spa products.]

[Optional – for use only on swimming pool products with no other use sites. Minor variations on this image, such as substituting in a different individual, are acceptable.]