

10324-88

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JUL 25 2012

Ms Elizabeth Tannehill
Regulatory Manager
Mason Chemical Company
721 W Algonquin Rd
Arlington Heights IL 60005

Subject **Maquat 4450-10%-S&W**
EPA Registration No 10324-88
Applications Date April 24 2012
EPA Received Date May 2 2012

Dear Ms Tannehill

The following amendment submitted in connection with registration under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA) Section 3(c)7(a) as amended is acceptable with comments

Proposed Amendments

- Revised per letter dated 4/11/12

Labeling Comments

Revise the "For Use on Refillable Containers with Commercial/Industrial Uses" as follows

Add the following statement to the section beginning "Cleaning the container before final disposal " and ending " is the responsibility of the refiller " Add "*When empty return to point of sale for refilling* "

Add the following statements to both the Container Handling/Residue Removal Instructions for all refillable containers except fixed tank containers as well as fixed tanks Revise to begin "*Refillable container Refill this container with pesticide only Do not reuse this container for any other purpose To clean the container* "

Add the following statement to both the Container Handling/Residue Removal Instructions for all refillable containers except fixed tank containers as well as fixed tanks

CONCURRENCES

SYMBOL									
SURNAME	.								
DATE	.								

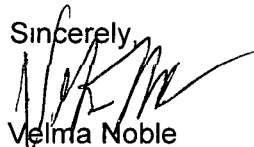
tanks Revise to end as follows "Puncture or dispose of in a sanitary landfill or by other procedures approved by State and local authorities "

Add the following statements to the Container Handling/Residue Removal Instructions for fixed tanks Revise to include " application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds Drain for 10 seconds after the flow begins to drip Drain rinsate into application "

General Comments

A stamped copy of the acceptable labeling is enclosed Submit one (1) copy of your final printed labeling before distributing or selling the product bearing the revised labeling

Should you have any questions concerning this letter please contact Drusilla Copeland at (703) 308-6224 or Velma Nobel at (703) 308-6233

Sincerely,


Velma Nobel
Product Manager (31)
Regulatory Management Branch I
Antimicrobials Division (7510P)

Stamped label

MASON CHEMICAL COMPANY
"The Quaternary Specialists"

721 W Algonquin Road | Arlington Heights IL 60005 | 847 290 1621 or 800 362 1855

EPA Reg No 10324 88
EPA Est No 10324 IL 1

MAQUAT® 4450-10%-S&W

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 Harmful if swallowed inhaled or absorbed through the skin Do not get in eyes on skin or on clothing Wear protective eyewear (goggles face shield or safety glasses) rubber gloves and protective clothing when handling Avoid breathing vapor Wash thoroughly with soap and water after handling and before eating drinking using tobacco or using the toilet Remove contaminated clothing and wash before reuse

(if container is 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 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

(For containers up to and including 5 gallons use the following environmental hazard)

ENVIRONMENTAL HAZARD

This product is toxic to fish

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame

Do not mix with oxidizers soap or anionic detergents or other water treating chemicals

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

A Water Treatment Microbiocide for Recirculating Cooling Water Towers Retort Water Systems Auxiliary Water and Waste Water Systems Oil Field Water Flood/Salt Water Disposal Systems and Swimming Pools Outside Spas/Whirlpools/Hot Tub Baths (Containerized) Decorative Fountains and Pools (Outside description Containerized and Retort Water Systems not for use in California)

(Product of USA) (Made in the USA)

ACTIVE INGREDIENT

Didecyl dimethyl ammonium chloride

INERT INGREDIENTS

TOTAL

10.0%
90.0%
100.0%

Weight approx 8 lbs /gallon

KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

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

(Note to Reviewer This information has been verified per DOT regulations It is NOT required to be on the label but is being requested by a customer)

Transportation Information

DOT Hazard Class 8 Corrosive

DOT Proper Shipping Name Disinfectant Liquid Corrosive (Quaternary Ammonium Compound) 8 UN1903 PGI1

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)

ACCEPTED
with COMMENTS
in EPA Letter Dated
JUL 25 2017

Under the Federal Insecticide Fungicide and Rodenticide Act as amended for the pesticide registered under EPA Reg No. 10324-88

- 10% Concentration
 - Kills and prevents all type of Algae
- This formulation (Maquat[®] 4450 10% S&W) 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 **WATER TREATMENTS** in EPA Letter Dated, **ACCEPTED JUL 25 2012**
 - Oil field injection and waste water
 - Gas production and transmission pipelines and systems
 - Gas storage wells and systems
 - Pipeline pigging and scraping operations
 - Drilling completion and workover fluids systems registered under EPA Reg No. **10334-53**
 - 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 microbicide 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 microbicide 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

When this product is used as directed it will prevent development of Chloroella pyrenoidosa (green algae) Phormidium inundatum (black algae) Phormidium retzi (blue green algae) Lyngba versicolor (blue green algae) and other swimming pool algae

This product is compatible with many swimming pool chemicals and when used as directed it is not harmful to the metal paint plastic or tile surfaces of the swimming pool

This product when used as directed will help improve the appearance and cleanliness of the swimming pool water

- This product helps inhibit the growth of unsightly algae
- One gallon treats 50 000 gallons
- 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 Direct For Use)

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling 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 tower influent systems such as flow through filters and lagoons industrial water scrubbing systems and brewery pasteurizers

To control algae and bacterial slimes use this product as directed For best results slug feed The frequency of addition of microbicide needed depends on many factors To optimize your use of this product follow this procedure

INDUSTRIAL AND/OR COMMERCIAL RECIRCULATING COOLING WATER TOWERS RETORT WATER 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 should be applied when the system is in jeopardy of being affected or after cleaning systems where efficiency is already impaired

3 Methods of Application Initially use 25.6 fluid ounces per 1 000 gallons of water to be treated (20 ppm active quaternary) Should the above dosage not give satisfactory results use 45 fluid ounces per 1 000 gallons of water Repeat the initial dose every seven days or increase the frequency if needed

4 When the above treatment is successful use 10 to 15 fluid ounces per 1 000 gallons of water to maximize efficiency Repeat weekly as needed Should slime develop again go back to initial dosage

Cooling towers that are inherently low in algae growth and bacteria count may be adequately controlled by the lower range of these dosages slug fed every seven days Dilute the appropriate amount of this product in 5 or 10 gallons of water then add to the tower **Note** This product weighs 8.0 lbs per gallon (at 20°C) Should tower be heavily fouled a precleaning is required

(OR)

INDUSTRIAL AND/OR COMMERCIAL RECIRCULATING COOLING WATER TOWERS RETORT WATER 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 25.6 to 51.2 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 6.4 to 19.2 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 25.6 to 51.2 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 system has been lost by blowdown

Subsequent Dose When control of microbial growth is evident apply 19.2 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 25.6 to 51.2 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 6.4 to 19.2 ounces per 1000 gallons of water in the system

c CONTINUOUS FEED METHOD

Initial Dose When the system is noticeably fouled apply 25.6 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 6.4 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 WATER COOLING SYSTEM

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 10 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 0.75 to 7.5 fluid ounces (0.6 to 6 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 ratio to be used is 5 ppm of clay to 5 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 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

(OR)

ONCE THROUGH FRESH AND SEA WATER COOLING SYSTEM

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 10 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 0.75 to 7.5 fluid ounces (0.6 to 6 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 ratio to be used is 5 ppm, clay to 5 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

(OR)

ONCE THROUGH FRESH AND SEA WATER COOLING SYSTEMS

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 0.75 to 7.5 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 is 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 1 ppm product.

Subsequent Dose When microbial control is evident add 3/8 to 3/75 fluid ounces (0.3 to 3 ppm on an active quaternary basis) per 1,000 gallons of water based upon system flow rates on an as needed basis to maintain control. Frequency of feed must be tied to an in-plant monitoring program for macro clogging 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.

DEACTIVATION Use bentonite clay at the minimum ratio of 5 ppm clay to 1 ppm product. This product must be deactivated prior to discharge of the NPDES outfall. Do not apply this product more than 4 times a year.

OIL FIELD & GAS PRODUCTION TREATMENT

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, separators, ballast storage, and mixing tanks. Screens surface injection equipment production equipment (such as injection and production piping, 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 fouling.

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

- 1 This product must be added to the water flood or salt water disposal system at the point of uniform mixing. For the control of slime forming and sulfate reducing bacteria in oil field water flood or salt water disposal systems add 5 ppm (active) of this product (4.7 - 9.5 gallons 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 (4.7 - 18.9 gallons 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 5.20 ppm active of this product (4.7 - 18.9 gallons 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 (22.5 fluid ounces per 1,000 gallons of water) when system is noticeably fouled. When microbial control is evident, add this product at 15 ppm (20 fluid ounces per 1,000 gallons of water) to maintain control.
- 2 BATCH TREATMENT Add this product at 180 ppm (230 fluid ounces per 1,000 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 (115 fluid ounces per 1,000 gallons of water) over a period of 4 - 6 hours, one or more times 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 is to 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.

DOSAGE APPLICATIONS

a SLUG METHOD

Initial Dose When the system is noticeably fouled, apply 56.5 gallons (60 ppm active ingredient) of this product per 1,000 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 28.25 gallons (ppm active ingredient) of this product per 1,000 gallons of water in the system daily or as needed to maintain control.

INTERMITTENT DOSAGE

Initial Dose When the system is noticeably fouled, apply 56.5 gallons (60 ppm active ingredient) of this product per 1,000 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 28.25 gallons (30 ppm active ingredient) of this product per 1,000 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 1,000 gallons of water in the system.

ACCEPTED COMMENTS Letter Dated 6/25/2021

JUL 25 2021

Federal Insecticide, Fungicide, and Rodenticide Act

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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

GAS PRODUCTION AND TRANSMISSION PIPELINES AND SYSTEMS

For the control of sulfate reducing bacteria and slime forming bacteria this product must be added to a gas production or transmission pipeline via direct injection at a point where uniform and maximum distribution will occur

GAS STORAGE WELLS AND SYSTEMS

Treat individual injection wells with this product to produce effective concentration of 65 1000 ppm (active) of this product Update treatment rate as needed This product must be diluted by the water present in the formation Injection may be repeated yearly or as needed to maintain control

PIPELINE PIGGING AND SCRAPING OPERATIONS

Add this product to slug of water immediately following the scraper (keep the water volume to a minimum and contained between the scraper and the following pig) Add an effective concentration to produce 75 - 500 ppm depending on the length of the pipeline and the severity of the biofouling

DRILLING COMPLETION AND WORKOVER FLUIDS SYSTEMS

Add to the fluid system at a point of uniform mixing such as circulating mud tank Initial treatment 65 - 1000 ppm (active) added to a freshly prepared fluid Maintenance dosage 65 - 1000 ppm so as to maintain control

PACKER FLUIDS

Add to a packer fluid at a point of uniform mixing such as a circulating holding tank at a rate of 65 - 1000 ppm (active per 100 barrels of fluid) to a freshly prepared fluid depending on the severity of contamination Seal the fresh packer fluid in the wall between the casing and the production tube

HYDROTESTING

Treat water used to hydrotest pipelines or vessels at 65 - 1000 ppm active depending on the water quality and length of time the equipment will remain idle

AUXILIARY SERVICE WATER AND WASTE WATER SYSTEM

This product is effective for the control of odor forming and slime forming bacterial fungi and algae in auxiliary 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

SWIMMING POOLS

Ensure all pool equipment is working properly Backwash the filter system following manufacturer's directions Adjust pH to between 7 2 7 6 In outdoor chlorine treated pools 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 present add a stain and scale inhibitor to prevent staining of pool surface 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

choice When using other products as outlined in directions for this product always follow directions on those products

Allow filter to run for at least 6 hours after adding algaecide Add this product directly into pool by pouring around entire outside perimeter of pool Wait 15 minutes before entering pool

Initial Dose Vacuum pool after 24 hours to remove algae debris If visible algae are still present or reappear repeat this treatment procedure as necessary When pool is free of visible algae use the recommended maintenance dose Add 26 25 fluid ounces of this product to 10 000 gallons of pool water Wait 15 minutes before entering pool

Maintenance Dose Maintenance dose should be added after a heavy or prolonged rainfall If make up is added at the rate of more than 10% per week of pool capacity add 2 5 fluid ounces of this product for each 1 000 gallons of fresh make up water added Add 6 25 fluid ounces of this product to 10 000 gallons of pool water If pool has a visible algae growth treat with initial dose Maintenance dose should be added weekly If high temperatures prevail or pool has unusually heavy use add maintenance dose more frequently Wait 15 minutes before entering pool

When swimming season is over add maintenance dose prior to closing 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 microorganism growth add 15 18 ounces of product per 5 000 gallons of water into the skimmer with the filter pump running After one minute shut off the pump and allow the system remain off over night The following day re start the filter pump and add 15 18 75 ounces of product per 5 000 gallons of water into the pool Run the filter continuously for 24 48 hours brushing the sides and bottom of pool frequently (OR)

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 best when added by itself directly to the 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 follow manufacturer's 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

ACCEPTED COMMENTS with letter
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Initial Application for Swimming Pools

(Note to reviewer The term to waste is not for use in California)

- 1 Backwash the filter thoroughly
- 2 Vacuum algae debris to waste and thoroughly brush pool
- 3 Add 1 gallon of this product to 50 000 gallons of water (26 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
- 7 Recirculation accomplished by running the filter will assure rapid dispersion of product

Maintenance Application

Add 1 quart of this product of 50 000 gallons of water every 3 5 days or as needed to maintain 0 5 ppm active Quaternary Test Kits are available for this use

If high temperatures prevail or pool has unusually heavy use add maintenance dose more frequently

Booster Application

Use one quart 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 24 000 gallons 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 Bacquacil 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 satin 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 do not allow swimmers in the water

Initial Application for Swimming Pools

(Note to reviewer The term to waste is not for use in California)

- 1 Backwash the filter thoroughly
- 2 Vacuum algae debris (to waste) and thoroughly brush pool
- 3 Add 1 gallon of this product to each 50 000 gallons of water (26 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 one quart of this product in 50 000 gallons of water every 3 5 days or as needed

Booster Application

Add one quart 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 24 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 1 gallon of this product to 50 000 gallons of water left in pool This dose helps provide a measure of control of algae growth during the winter months

For persistent algae or slime producing organisms add 1 quart of this product in to the skimmer with the filter pump running After one minute shut off pump and allow system to remain off overnight The following day restart the filter pump and add 1 quart 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 one gallon containers)

Swimming Pool Capacity Gallon of Water	Initial Treatment	Maintenance Dose Booster Dose
5 000	12 8 ounces	3 2 ounces
10 000	25 6 ounces	6 4 ounces
20 000	51 2 ounces	12 8 ounces
25 000	64 0 ounces	16 0 ounces
30 000	76 8 ounces	19 2 ounces
40 000	102 4 ounces	25 6 ounces
50 000	128 0 ounces	32 0 ounces

(OR)

(Usage chart for one quart containers)

Swimming Pool Capacity Gallon of Water	Initial Treatment	Maintenance Dose Booster Dose
5 000	12 8 ounces	3 2 ounces
10 000	25 6 ounces	6 4 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 32 ounces per 4 000 gallons (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

ACCEPTED
with COMMENTS
in EPA Letter Dated
JUL 25 2012

Under the Federal Insecticide Fungicide and Rodenticide Act as amended by the FIFRA Act of 1972, this product is registered for use in swimming pools.

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 5 1 fluid ounces of this product per 2000 gallons of pool water Initial dose is used upon filling of spa/whirlpool/hot tub bath

Maintenance Dose Add 1 3 fluid ounces of this product per 2000 gallons of water Maintenance dose must be added at 3 5 day intervals If high temperatures prevail or spa/whirlpool/hot tub bath has unusually heavy use add maintenance dose more frequently Drain and clean spa/whirlpool/hot tub bath at least once a month or as needed depending on bather load

CONTROLLING ALGAE GROWTH

BIRD BATHS Do not use with fish Clean to remove algae growth properly filling birdbath Then spray all exposed surfaces with a solution of 1 ounce 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 water is present

Initial Dose

- 1 Drain Bird Bath
- 2 Wipe mop or spray all exposed surfaces using 1 ounce of this product per gallon of water Spray device must be a mechanical coarse spray device Do not use with spray device surfaces must be sprayed until thoroughly wetted Do not rinse 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 For heavy infestations spray or swab a solution of 1 ounce 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 (air) 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 DO NOT use this product when fish are present

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 32 ounces per 12 500 gallons or ratio thereof

Weekly Maintenance Dose Add one quart 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
12 500	32 ounces	8 ounces
6 250	16 ounces	4 ounces
3 125	8 ounces	2 ounces
1 562	4 ounces	1 ounce
781	2 ounces	½ ounce (1 Tablespoon)
390	1 ounce	¼ ounce
195	½ ounce (1 Tablespoon)	0 125 ounces

(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 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 nearest 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 ¾ 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: 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: 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]



ACCEPTED
with COMMENTS
in EPA Letter Dated
JUL 25 2021

Under the Federal Insecticide
Fungicide and Rodenticide Act as
registered under EPA Reg. No. 10394-88

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