



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Lisa M. Amadio
Mason Chemical Company
721 W. Algonquin Road
Arlington Heights, IL 60005

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

JUN 16 2014

Subject: Maquat® 4450-CT
EPA Registration Number: 10324-70
Application Dated: March 24, 2014
EPA Received Date: March 25, 2014

Dear Ms. Amadio:

The following amendment, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

- To update label language.
- To update the Storage and Disposal section

Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data. A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. The next label printing of this product must use this labeling unless subsequent changes have been approved. You must submit one (1) copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

General Comments

Should you have any questions concerning this letter, please contact Emilia Oiguenblik at (703) 347 0199 or Velma Noble at (703) 308-6233.

Sincerely,

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



MASON CHEMICAL COMPANY
"The Quaternary Specialists"
721 W. Algonquin Road, Arlington Heights, IL 60005 | 847-290-1621 or 800-362-1855

EPA Reg. No. 10324-70
EPA Est. No.

MAQUAT® 4450-CT
Batch No.

Net Contents:

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

DANGER. Corrosive. Causes irreversible eye damage and skin burns. May be fatal if swallowed, inhaled or absorbed through the skin. Do not get into eyes, on skin or on clothing. Avoid breathing vapor. Wear a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P or HE filter. Wear protective eyewear (goggles, face shield or safety glasses), rubber gloves and protective clothing when handling. 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.

ENVIRONMENTAL HAZARDS

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.

PHYSICAL OR CHEMICAL HAZARDS

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

FIRST AID

In case of emergency, call a poison control center or doctor for further treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
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. **IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. **IF SWALLOWED:** 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. Call a poison control center or doctor immediately for treatment advice.
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.
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

A Water Treatment Microbiocide for Recirculating Cooling Water Tower, Retort Water Systems, Auxiliary Water and Waste Water Systems, Oil Field Water Flood/Salt Water Disposal Systems, Once Through Fresh Water Cooling Systems and Fracturing Fluids Systems and Fracturing Fluids Systems "not for use in California."
(Product of USA) (Made in the USA)

ACCEPTED

06/16/2014

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 10324-70

ACTIVE INGREDIENT

Didecyl dimethyl ammonium chloride..... 50.0%
INERT INGREDIENTS:..... 50.0%
TOTAL:..... 100.0%

Weight: Approx. 8lbs./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: The below statements are optional.)

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

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

Manufacturing and/or Lot no. Date:

• 50% Concentration

- Kills and prevents all type of Algae

This formulation (Maquat 4450-CT) is for use in:

- Industrial and/or commercial recirculating cooling water towers.
- Once through water cooling systems.
- Oil field water flood or salt water disposal system and fracturing fluids.
- 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.
- 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, 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.

This product is efficient and stable in use dilution.

DIRECTIONS FOR USE

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

(Note to Reviewer: Text in () is optional. Brackets [] indicate that at least one option within the brackets must be used in the final label text. Parentheticals () indicate optional language. "This product" can be substituted with actual product name.)

(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 1/4 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

(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 to 9 fluid ounces (20 to 35 ppm on an active quaternary basis) per 1000 gallons of water in the system. Repeat every seven days or increase frequency if needed.

Subsequent Dose: When microbial control is evident, add 2 to 3 fluid ounces (8 to 12 ppm on an active quaternary basis) per 1000 gallons of water in the system weekly or as needed to maintain control. Badly fouled systems must be cleaned before treatment is begun. Should slime develop again, repeat initial dosage.

b. MODIFIED INTERMITTENT METHOD

Initial Dose: When the system is noticeably fouled, apply 5 to 9 fluid ounces (20 to 35 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 2 to 3 fluid ounces (8 to 12 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. Repeat weekly as needed. Should slime develop again, repeat initial dosage.

(OR)

INTERMITTENT OR SLUG METHOD

When this treatment is required, add this product at the rate of 5 to 9 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 2 to 3 ounces per 1000 gallons of water in the system.

c. CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably fouled, apply 5 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 2 fluid ounces (8 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 COOLING SYSTEMS

- 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.
- 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.
- Method Of Applications:**
 - Wear safety glasses, rubber gloves and impervious apron.
 - Add product directly from drum or add the product at a point where it will be mixed uniformly.
 - To reduce foaming, mix 2 parts of water to 1 part of this product.
 - Add 0.15 to 1.5 fluid ounces (0.6-6 ppm on an active quaternary basis) per thousand gallons.
 - 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 1 ppm of product.
 - Do not use product more than 4 times per year.
 - Treatment time can not exceed 120 hours/application.
 - 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

(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 via slug, continuous injection, or on an intermittent basis.

(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 casing, 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 must 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

This product must be added to the water flood or salt water disposal system at a 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 – 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.
- 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.
- For treatment of flow back return water (Post Hydraulic Fracturing – Dose at a 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.

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:

- 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.
- 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 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.

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.

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 amount of product to produce 75 - 500 ppm depending on the length of the pipeline

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 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, settling 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.

STORAGE AND DISPOSAL

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

(PESTICIDE) STORAGE: Store only in original container. 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 HANDLING:

(Note to Reviewer: One or more of the following paragraphs for Container Handling will be selected, depending on packaging use/type.)

{For products with industrial, institutional, commercial use - May choose appropriate non-refillable/refillable statement.}

{For non-refillable containers equal to or less than 5 gal.}

Non-Refillable Container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Fill the container ¼ full with water and recap. Shake for 10 seconds. Drain for 10 seconds after the flow begins to drip. Follow Pesticide Disposal instructions for rinsate disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

