

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DEC 26 2006

Ms. Elizabeth Tannehill
721 W. Algonquin Road
Arlington Heights, IL 60005

Subject: Maquat 20-M
EPA Registration No.: 10324-94
Amendment Date: June 29, 2006
EPA Receipt Date: July 10, 2006

Dear Ms. Tannehill,

The following amendment, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); as amended, is acceptable subject to the conditions listed below:

- Addition of directions for use and marketing claims

Conditions

Revise the label as follows:

1) Add the following two statements to the "Precautionary Statements" section on page one of the label. Add these to the last set of statements for the use of this product in a commercial setting in this section: *"Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing."*

2) Revise the following statements on page two and page five to include mandatory language (PR Notice 2000-5) as follows:

- "This product *is for use* as a sanitizer on dishes..."
- "This product *is for use* as a sanitizer in public eating places..."
- "This product *is for use* as a sanitizer on food processing equipment..."
- "This product *is for use* as a sanitizer in bottling and beverage..."
- "This product *is for use* as a sanitizer in sanitary filling of..."
- "This product *is for use* in sanitizing bottles or cans in the final rinse..."
- "This product *is for use* as a sanitizer in beer fermentation..."

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- "This product is for use as a sanitizer in wineries..."
- "This product is for use in household and commercial humidifiers..."
- "This product is for non-scratch cleaning of showers..."
- "This product is for use in Poultry Premise Sanitation..."
- "This product is for use in Swine Premise Sanitation..."

- 3) Revise the 13th claim in the right column on page 2 by deleting "automatic washing systems" from the list of application methods because the directions do not support the use of this type of application system. Should you decide to add this application method in the future, you must revise the label directions to indicate where and how this type of system will be used.
- 4) Revise the 20th and 21st claims in the left column on page 3 by deleting the word, "safe," and state "Will not harm."
- 5) Delete the heading: "Organism Guide" on page five and replace with: "Directions for Use" as this section is describing the directions for use of the product.
- 6) The species identification for *Salmonella choleraesuis* has been changed by ATCC. Revise page five to indicate the new designation, *Salmonella enterica* on page five.
- 7) Immediately preceding the section beginning: "Add 1.5 ounces of this product to 5 gallons of water..." on page five, place the heading: "General Disinfectant: Non-Medical (schools, restaurants, food services, beverage and food processing plants)" so that the user will be clear on when this use rate is appropriate.
- 8) Correct the rate in the section which begins: "At 2.5 ounces per 5 gallons (703 ppm..." on page five so that the ppm is in agreement with the rate. Correct to state: "At 2.25 ounces per 5 gallons (703 ppm..."
- 9) Revise the label by placing the "Animal Premise Virucidal Performance" section on page five such that it immediately precedes your directions for use in animal facilities on page eight.
- 10) Revise page six by indicating that the submitted data support the mitigation of *Clostridium perfringens* in its vegetative form by stating *Clostridium perfringens* - vegetative (ATCC 13124).
- 11) Revise the following headings on pages six and twelve to include mandatory language (PR Notice 2000-5)

"Dilution Chart:
For Hospital or Medical Environment Claims..."

"General Disinfectant-Non-Medical Dilution Chart..."

"Hospitals, Dental Offices, Nursing Homes and other Health care Institutions
Disinfection and Virucidal Dilution Chart..."

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"Sanitizing Dilution Chart..."

12) Delete the heading: "Directions for Use" on page six as this section of the label begins on page five.

13) As per the Agency letter dated for the last stamped label, delete the "Dressing Plant and Rendering Plant Disinfectant Directions..." for treatment at 1.5 ounces per 5 gallons on page 9 because it is not in agreement with disinfection rated needed to mitigate the pathogens commonly controlled at these facilities.

14) Revise the "Farm Premise Disinfection Directions" on page nine by deleting the reference to "disinfection or" as the disinfection rate will not provide efficacy against the animal pathogens (viruses) listed on your label.

15) Revise the following sections on page eleven: "Special Instructions for Cleaning Carpet Against Odor Causing Bacteria" and "Carpet Deodorization against Odor-Causing Bacteria for Home, Institutional and Hospital Use". Revise such that the use categories are in agreement with the sites you have listed: "...be used in industrial, institutional, commercial and residential areas such as..."

16) Revise the Sanitizing Hatchery Rooms and Sanitizing Incubators and Hatchers on page eleven by adding the following statement to each section: "...(or equivalent use dilution). Vacate the area of all personnel for a minimum of 2 hours. Insert the nozzle..."

17) Revise the "Sanitizing Dilution Chart" on page twelve to include the following statement: "...Prepare correct dilution rate based upon the directions below associated with the appropriate use site."

18) Revise the "For Public Eating Places, Dairy Processing Equipment and Food Processing Equipment and Utensils" and "For Food Processing Equipment and Utensils" sections on page twelve to include the following statement: "Surfaces must remain wet for at least 1 minute."

19) Revise the "For Public Eating Places, Dairy Processing Equipment and Food Processing Equipment and Utensils" section on page twelve to read as follows: "Prepare a fresh solution at least daily or when use..."

20) Correct the "Directions for Sanitizing Food Contact Surfaces in Public Eating Places..." on page twelve to be in agreement with PR Notice 2000-5 as follows: "...Articles that can be immersed in solution must remain in solution of 60 seconds..." Make this same correction to the "Directions for Sanitizing Food Contact Surfaces in Food Processing Equipment and Utensils, as Regulated by 40 CFR sec 180.940(c)" section, item #6 on page fourteen.

21) Revise the directions for "Wisconsin State Division of Health Directions for Eating Establishments (closed loop dilution centers)" on page thirteen to be in agreement with closed loop dilution. Delete the phrase in #4 "(or equivalent use dilution)" as this is not appropriate for a closed system.

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22) Delete the repetitive statement on page fourteen in the "Directions for Sanitizing Food Contact Surfaces in Food Processing Equipment and Utensils, as Regulated by 40 CFR sec 180.940(c)". Delete statement #5 from this section.

23) Revise the directions on page fifteen "For Sanitizing in Fisheries, Milk, Wine, Citrus, Potato & Ice Cream Processing Plants" to read as follows: "For use on conveyors as directed under "For Continuous Treatment of Meat and Poultry or Fruit and Vegetable Conveyors" and equipment to reduce or eliminate odors in the processing area. Also, for use on filling equipment to reduce bacteria associated with condensation on equipment and pipes. Follow directions for "Sanitary Filling Equipment Sanitizer Directions."

24) Add the following statement to the Commercial "Horticultural and Ornamental Plant" section on page 15 as well as the Residential "Horticultural and Ornamental Plant" section on page 17 as per the Reregistration Eligibility Decision (RED) for this active ingredient. Add: "Treatment is restricted to indoor uses or uses in which controlled conditions to prevent runoff and exposure to the environment. In the case of diseased trees, the spot treatment of trees must be at least 100 feet from any pond, lake, stream, or river to prevent possible runoff of the product into the waterway. Do Not Apply by Aerial Spray."

25) Correct the directions for Cutting Tools on page 16 to read: "...cutting edge of tool for 10 minutes..."

26) Correct the use rate under Algae Control on page 16 for Greenhouse Glass to 0.13 oz. and House plants to 0.03 oz. as per the cited "me-too" product.

27) Correct the use rate under "Decorative Pools" on page 16 such that the Initial Dose is "0.13 oz. (1 tsp) per 52 gallons of water (5 ppm*)". Also correct the Operating Fountains Applications to read: "Add a 0.06 (0.5 tsp) of this product..." as per the cited "me-too" product.

28) Revise the rate for "Treatment of Lawns, Golf Courses and Commercial Turf" on page 17 by limiting the Golf Course treatment to "greens and tees only". Revise the application rate for the treatment of Lawns, Golf Courses and Commercial Turf to 0.3 ounces per gallon to treat 1000 square feet of lawn deleting references to any other application rate. In addition, add the following language as per the Reregistration Eligibility Decision (RED) for this active ingredient: "Do not exceed 25 gallons per 1000 sq. ft. Do not to exceed treatment of 10 acres (2000 gallon) with retreatment at 10 day intervals not to exceed 6 treatments per year."

29) Add the following language to the "Mosquito Control" sections on pages 17 and 18 as per the Reregistration Eligibility Decision (RED) for this active ingredient:

"This product is not intended to be used for broadcast mosquitocide application but rather is limited to small residential ponds, decorative ponds, and similar areas.

"This product is not to be used in open waterways connected to larger watersheds or in waters that serve as natural habitats for aquatic and amphibious organisms. This product controls mosquitoes where they breed (fountains, water displays, decorative pools, decorative ponds

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sewage treatment systems, spas, hot tubs, swimming pools and standing water in old tires, empty tin cans, barrels, puddles, and water drains around buildings). Do not exceed 10 applications at a minimum of 10-day intervals per year. NOTE: Only out-of-season, not-in-service, or inactive spas, hot tubs, swimming pools require treatment for mosquito control. Do not treat during the swimming season. Spray from fountains treated with this product will not harm poolside plantings. DO NOT use when fish or other wildlife (for example, amphibians) are present."

30) Add the following language to beginning of the "Note" on page 17 and 19 as per the cited "me-too" product: "Not all varieties or strains of plants listed have been tested."

31) Delete the following statements from the Residential "Horticultural and Ornamental Plant" section on page 17 as this language is not appropriate for residential users: "Only protected handlers...responsible for pesticide regulation."

32) Correct the use rate under Algae Control on page 18 for Greenhouse Glass to 0.13 oz. and House plants to 0.03 oz. as per the cited "me-too" product.

33) Correct the section on page 18 beginning: "Fountains, Water Displays..." by deleting the references which are not appropriate for a residential use product. Delete: "(in such places as puddles at golf courses, recreational parks, amusement parks, universities and cemeteries)" and "Where spray rig is available, it may be used to apply the use solution instead of hand dribbling method." Also delete the reference to "Swimming Pools" as you have not included directions for this use.

34) Correct the use rate under "Decorative Pools Applications" on page 18 such that the Initial Dose is "0.13 oz. (1 tsp) per 52 gallons of water (5 ppm*)". Also correct the Operating Fountains Applications to read: "Add a 0.06 (0.5 tsp) of this product..." as per the cited "me-too" product.

35) Revise the rate for "Treatment of Lawns" on page 18 to 0.4 ounces per gallon to treat 40 square feet of lawn deleting references to any other application rate. In addition, add the following language as per the Reregistration Eligibility Decision (RED) for this active ingredient: "Limited to spot treatment of diseased areas. Do not exceed 25 gallons per 1000 sq. ft. with retreatment at 10 day intervals not to exceed 6 treatments per year."

36) Delete the following language from the "Mosquito Control" section on page 18 as it is not appropriate for residential use: "sewage plant treatment systems".

37) Most of the use rates in ounces on pages 20, 21 and 22 are not in agreement with the cited "me-too" product. Revise all references on these three pages as follows:

- A) Revise 0.25 ounces to read 0.2 ounces
- B) Revise 0.333 ounces to read 0.25 ounces
- C) Revise 0.055 ounces to read 0.04 ounces
- D) Revise 0.166 ounces to read 0.13 ounces
- E) Revise 0.125 ounces to read 0.09 ounces

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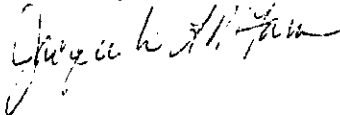
General Comments

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

Submit and/or cite all data required for registration/reregistration of your product under FIFRA section 3 (c) (5) and section 4 (a) when the Agency requires all registrants of similar products to submit such data.

If the above conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6 (e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions. Should you have any questions concerning this letter, please contact Tracy Lantz at (703) 308-6415.

Sincerely,



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

Enclosure: Stamped Label
7510P:T.Lantz:12/13/06:10324-94



MASON CHEMICAL COMPANY

"The Quaternary Specialists"

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

E.P.A. Reg. No. 10324-94

E.P.A. Est. No. 10324-IL-1

MAQUAT® 20-M

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 swallowed. Harmful if absorbed through the skin. Do not get into eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves and protective clothing when handling. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

(The following Worker Protection Standard (WPS) and Personal Protective Equipment (PPE) language is required for when this product label is designed for use in a commercial setting - these WPS and PPE language statements must be removed when the product is clearly sold and distributed for residential use)

PERSONAL PROTECTIVE EQUIPMENT: Applicators and other handlers must wear coveralls worn over long-sleeved shirt and long pants, waterproof gloves, chemical-resistant footwear and socks, protective eyewear, chemical-resistant headgear when using this product for algae control in overhead watering system and chemical-resistant apron when mixing, loading or cleaning equipment.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

(If container is 5 gallons or larger the following statement must appear on the label.)

ENVIRONMENTAL HAZARD

This pesticide is toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product 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 oxidizers, anionic soaps and detergents.

(If the container is greater than one gallon use the following storage and disposal statements.)

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Open dumping is prohibited. Store only in original container. Do not reuse empty 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 DISPOSAL (Larger than 1 gal.): Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. In addition, plastic containers may be disposed of by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(If container is one gallon or less use the following storage and disposal statements.)

STORAGE AND DISPOSAL

Store in original container in areas inaccessible to small children. Do not store on side. Avoid creasing or impacting of side walls. Do not reuse empty container. Wrap and discard in trash (or recycle).

Disinfectant - Sanitizer - Deodorizer - Fungicide - Mildewstat - Virucide* - With Organic Soil Tolerance For Hospitals Nursing Home, Whirlpool, Home, Hotels & Motels, Waterbed Conditioner, Institutional, Industrial, School, Dairy, Equine, Poultry/Turkey Farm, Veterinary, Restaurant, Food Handling and Process Areas, Federally Inspected Meat and Poultry Plants, Bar and Institutional Kitchen Use and for Sanitizing Ice Machines. Greenhouse Disinfectant for Orchids & Ornamentals - For Use Against Fungal, Bacterial, Algal and Viral Plant Pathogens and Their Odors.

Non-Acid Bathroom Cleaner

Athletic Surface Disinfectant.

Formulated for effective Poultry Sanitation.

Formulated for effective Swine Premise Sanitation.

Formulated for effective Mushroom Farm Sanitation.

Small Fly Ovicidal Treatment

Swimming Pool Algaecide

Disinfectant for use against fungal, bacterial, algal and viral plant pathogens and their odors

ACTIVE INGREDIENTS:

Alkyl (C ₁₄ 60%, C ₁₆ 30%, C ₁₂ 5%, C ₁₈ 5%) dimethyl benzyl ammonium chloride	10.0%
Alkyl (C ₁₂ 68%, C ₁₄ 32%) dimethyl ethylbenzyl ammonium chloride	10.0%

INERT INGREDIENTS: 80.0%

TOTAL: 100.0%

ACCEPTED
with COMMENTS
in EPA Letter Date:

DEC 26 2006

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KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

See left panel for additional precautionary statements

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 the 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.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

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

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This product contains no phosphorous.

This product is a phosphate-free formulation designed to provide effective cleaning, deodorizing and disinfection in areas where housekeeping is of prime importance in controlling the hazard of cross contamination on treated surfaces.

This product maximizes (improves) labor results by effectively controlling odors.

This product cleans by removing dirt, grime, blood, urine, fecal matter and other common soils found in animal housing facilities, livestock, swine poultry facilities, grooming facilities, farms, kennels, pet stores, veterinary clinics, laboratories or other small animal facilities. It (also) eliminates odors leaving surfaces smelling clean and fresh.

This product can be used to disinfect, clean and deodorize terrarium and small animal cages, hot rock, substrate and cage furniture (plastic terrarium ornaments, driftwood, heat caves and water dishes.

This product is for use in kitchens, bathrooms, and other household areas.

This product is a multi-surface cleaner, deodorizer and disinfectant. Use on windows, mirrors, and other non-food contact glass surfaces.

When used as directed, this product will deodorize surfaces in rest room and toilet areas, behind and under sinks and counters, garbage cans and garbage storage areas, and other places where bacterial growth can cause malodors.

Cross contamination is of major housekeeping concern. This product has been formulated to aid in the reduction of cross-contamination on treated surfaces not only in hospitals, but also in schools, institutions and industry.

This product delivers non-acid disinfection performance in an economical concentrate.

This product is a concentrated Hospital Use disinfectant that is effective against a broad spectrum of bacteria, is virucidal*, (and) fungicidal, and eliminates odor causing bacteria when used as directed.

This product is an economical concentrate that can be used with a mop and bucket, trigger sprayers, sponge or by soaking.

This product will not leave a grit or soap scum.

Will not cause swelling of transducer membrane or harm compressor plates.

This product is a versatile Disinfectant & Sanitizer for Veterinarian, Veterinary Practice, Animal Care, Animal Laboratory, and Agricultural and Farm Premise applications.

This product is a complete, chemically balanced disinfectant/sanitizer that provides clear use solutions even in the presence of hard water.

This product inhibits bacterial growth on moist surfaces and deodorizes by killing microorganisms that cause offensive odors. *(Not applicable in CA)*

This product is recommended for use as a sanitizer on dishes, glassware and utensils (at 200 ppm active) and as a disinfectant on hard, non-porous surfaces (at 625 ppm active). A potable water rinse is not allowed when used as a sanitizer on food contact surfaces.

OR

This product is recommended for use as a sanitizer in public eating places, dairy processing equipment and food processing equipment and utensils (at 200 ppm active) and as a disinfectant on hard, non-porous surfaces (at 625 ppm active). A potable water rinse is not allowed when used as a sanitizer on food contact surfaces.

This product is recommended for use as a sanitizer on food processing equipment and utensils (at 400 ppm active) and as a disinfectant on hard, non-porous surfaces (at 625 ppm active). A potable water rinse is not allowed when used as a sanitizer on food contact surfaces.

This product is recommended for use as a sanitizer in bottling and beverage dispensing equipment.

This product is recommended for use as a sanitizer in sanitary filling of bottles and cans.

This product is recommended for use in sanitizing bottles or cans in the final rinse application, and for external spraying of filling and closing machines.

This product is recommended for use as a sanitizer in beer fermentation and holding tanks.

This product is recommended for use as a sanitizer in wineries for use on holding tanks, floors and processing equipment.

This product is recommended for use in household and commercial humidifiers. Use of this product will control unpleasant (malodors) odors. *(Not applicable in CA)*

This product is a versatile cleaner and broad spectrum disinfectant formulated for use in Ultrasonic Baths (Ultrasonic cleaning units).

This product is a versatile cleaner and broad-spectrum disinfectant formulated for use on bath and therapy equipment (Whirlpools).

Use this product to sanitize and disinfect non-porous salon/barber tools and instruments: (such as) combs, brushes, scissors, clippers, trimmers, razors, blades, tweezers and manicure instruments.

This product is a one-step disinfectant that is effective against a broad spectrum of bacteria, is virucidal* (including HIV-1, HCV & HBV) and inhibits the growth of mold and mildew and their odors when used as directed.

This product is recommended for use as a Food Grade Egg Shell sanitizer, with best results achieved in water temperatures ranging from 78°-110°F.

This product may be applied through automatic washing systems, immersion tanks, foaming apparatus, low pressure sprayers, and fogging (wet misting) systems.

This product neutralizes musty odors and tough odors from smoke, pet accidents, and spills on contact.

This product is specially formulated to effectively eliminate offensive odors caused by mold and mildew.

This product controls (reduces) (eliminates) (neutralizes) (destroys) odors to make your home (kitchen) (bathroom) sanitary.

This product is effective against household germs and odors cause(d) by animal waste, septic tank or sewage backup, smoke and bathroom and kitchen odors.

Use this product on the multi-touch surfaces responsible for cross-contamination.

This product is effective at controlling mold and mildew on shower curtains.

This product is recommended for non-scratch cleaning of showers and tubs, shower doors and curtains, fixtures and toilet bowls.

This product is a no-rinse disinfectant cleaner that disinfects, cleans and deodorizes in one labor saving step.

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This product may be used in work areas such as tool rooms and garages for odor control and light duty cleaning.

This product provides long lasting freshness against tough (pet) odors, such as odors from litter boxes and pet accidents.

This product provides effective cleaning strength that will not dull most metal-interlock floor finishes, and does not require a rinse prior to recoat.

This product cleans, shines, deodorizes and disinfects all hard non-porous surfaces listed on the label. It inhibits the growth of mold and mildew, leaving bathrooms and kitchens clean and fresh smelling.

This product is an effective antimicrobial cleaner, designed for use by wholesale and retail florists, shippers and green houses. *(Not applicable in CA)*

When used as directed, this product will disinfect hard, non-porous surfaces, such as flower buckets, floors and walls of coolers, design and packing benches, and countertops. *(Not applicable in CA)*

This product may be relied on to deodorize coolers, buckets, garbage pails and other areas where obnoxious odors may develop. *(Not applicable in CA)*

Use this product to clean, disinfect and deodorize flower buckets, walls, floors of coolers, shippers, greenhouse packing areas, garbage pails and other areas where obnoxious odors may develop. *(Not applicable in CA)*

This product may be used as a general purpose antimicrobial detergent in florist shops, wholesale florist, shippers, green house packing areas and other commercial floriculture places for efficient cleaning and antimicrobial action against certain bacteria which cause: *(Not applicable in CA)*

1. Plugging of stems with slime, which reduces uptake of water for various flowers including roses, chrysanthemums, gladioli and tulips.
2. Production of ethylene gas, which may injure blooms of the various sensitive flowers including carnations, snapdragons, some orchids, baby's breath, sweet peas, freesia and alstroemeria.

Stable – Mixes Readily with Water

Does Not Separate – A Good Wetting Agent

Leaves No Residue Marks on Foliage

Floor cleaner.

One-step cleaner.

Cleans everyday kitchen messes.

Cleans kitchen surfaces and food preparation areas.

Cleans and shines.

Great for use (on) (in) the (kitchen), (bathroom), (floors) and other household areas. Removes (eliminates) odors. Deodorizes. Safe for most surfaces.

Safe for most surfaces. For a cleaner, fresher household. Removes stains. Removes dirt. Non-staining. Clear formula.

Eliminates odors caused by bacteria (and) (mildew) (and) (non-fresh foods). Kills odor causing bacteria in the kitchen (bathroom).

Cleans everyday kitchen messes like dirt, grease and food stains. Cuts through tough grease and grim.

Disinfects (and sanitizes) kitchen surfaces (bathroom surfaces and floors). Sanitizes kitchen surfaces (bathroom surfaces and floors). Kills germs. Kills household bacteria.

Antibacterial.

Kills Athlete's Foot fungus on bathroom surfaces.

Hospital Use Disinfectant. Institutional Disinfectant (Sanitizer).

Kills common kitchen (bathroom) germs (and viruses*).

Maquat 20-M for use in:

- Hospitals, nursing homes, medical and dental offices and clinics, physician offices, operating rooms, isolation wards, and medical research facilities.
- Patient care rooms & facilities, recovery rooms, anesthesia, Emergency Rooms, X-ray cat labs, newborn nurseries, orthopedics, whirlpool surfaces, footbath surfaces, respiratory therapy, surgi-centers, labs, blood collection rooms, central supply, housekeeping & janitorial rooms.
- EMS & fire facilities, emergency vehicles, ambulance(s), ambulance equipment/surfaces, police cars.
- Day care centers and nurseries, sick rooms.
- Acute care institutions, alternate care institutions, home healthcare institutions.
- Life care retirement communities.
- Restaurants, restaurants and bars, bars, cafeterias, institutional kitchens, fast food operations and food storage areas.
- Supermarkets, convenience stores, retail and wholesale establishments, department stores, shopping malls, gift shops, video stores, bookstores, dressing rooms and laundries, photo copy centers, bicycle shops, auto repair centers.
- Computer manufacturing sites, toy factories.
- Food establishments, coffee shops, donut shops, bagel stores, pizza parlors, liquor stores.
- Crime scenes and funeral homes, mortuaries, burial vaults, mausoleums, autopsy rooms.
- Police stations, courthouses, correctional facilities, jails, prisons, municipal government buildings, penitentiaries, correctional institutions, bus stations, train stations.
- Institutional facilities, laboratories, factories, business and office buildings, restrooms, hotels and motels, and transportation terminals.
- Public restrooms, public facilities, waysides, travel rest areas, shower rooms, shower stalls, bathrooms.
- Hotel, motels, dormitories.
- Kitchens, bathrooms and other household areas.
- Homes (households).
- Institutions, schools and colleges, churches, classrooms, community colleges, universities, athletic facilities and locker rooms, exercise rooms, exercise facilities, gyms, gymnasiums.
- Cosmetic manufacturing facilities, medical device manufacturing facilities, biotechnology firms, pharmaceutical manufacturing facilities.

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- Heath clubs, spas, tanning spas/beds, footbath surl s, massage/facial salons, hair/nail/pedicure salons, barber/beauty shops, salons, tattoo parlors.
- Museums, art galleries, post offices, performance/theater centers, banks, libraries, movie houses, bowling alleys.
- Recycling centers.
- Humidifier water tanks. . (Not for use in California)
- Campgrounds, playgrounds, recreational facilities, picnic facilities, sports arenas, sports complexes.
- Food processing plants, USDA inspected food-processing facilities, dairy farms, hog farms, equine farms, poultry and turkey farms and egg processing plants, meat/poultry processing plants, meat/poultry producing establishments, mushroom farms, rendering plants.
- Processing facilities for Fish, Milk, Citrus, Wine, Fruit, Vegetable, Ice Cream and Potatoes and beverage plants.
- Tobacco plant premise and equipment.
- Veterinary clinics, animal life science laboratories, kennels, dog/cat animal kennels, breeding and grooming establishments, pet animal quarters, zoos, pet shops, tack shops and other animal care facilities.
- Household and automotive garages, boats, ships, barges, campers, trailers, mobile homes, cars, trucks, buses, trains, taxis and airplanes.
- Cruise lines, airline terminals, airports, shipping terminals, public transportation.
- Commercial florist and flower shops.
- Basements, cellars, bedrooms, attics, living rooms, porches.

This product may be used on washable hard non-porous surfaces such as:

- Food preparation and storage areas.
- Dishes, glassware, silverware, cooking utensils, eating utensils, plastic and other non-porous cutting boards, plastic and other non-porous chopping blocks, coolers, ice chests, refrigerator bins used for meat, vegetables, fruit and egg, Tupperware®.
- Kitchen equipment such as food processors, blenders, cutlery, trash compactors and other utensils.
- Counters (countertops), Slurpy® machines, stoves (stovetops), sinks (bathroom, kitchen), tub surfaces, appliances, refrigerators, ice machines.
- Interior hard, non-porous surfaces of water softeners, reverse osmosis units, ice machines, water coolers, water holding tanks and pressure tanks.
- Glass, metal, stainless steel, glazed porcelain, glazed ceramic, granite, marble, plastic (such as polystyrene or polypropylene), sealed limestone, sealed slate, sealed stone, sealed terra cotta, sealed terrazzo, chrome and vinyl.
- Enameled surfaces, painted woodwork (finished), Formica®, vinyl and plastic upholstery.
- Foundations steps, plumbing fixtures, finished baseboards and window sills.
- Tables, chairs, desks, bed frames, lifts, washable walls, cabinets, doorknobs and garbage cans, cuspidors and spittoons.

- Exhaust fan. efrigerated storage and display equipment, coils and drain pans of: air conditioning and refrigeration equipment and heat pumps.
- Large inflatable non-porous plastic and rubber structures: animals, promotional items, moonwalks, slides, obstacle course play and exercise equipment.
- Beer fermentation and holding tanks, bottling or pre-mix dispensing equipment.
- Wine processing equipment and holding tanks.
- Citrus processing equipment and holding tanks.
- Hard, non-porous surfaces of picnic tables and outdoor furniture or Non-wooden Picnic tables and outdoor furniture except cushions and wood frames. (Note: Only one statement will be used on label.)
- Telephones and telephone booths.
- Highchairs, baby cribs, diaper changing stations, infant bassinets/cribs/warmers/incubators/care equipment, folding tables.
- Bed railings, bedpans, cervical collars, CPR training mannequins, curing lights, neck braces, oxygen hoods, slit lamps, spine backboards, stretchers and unit stools.
- External lenses vision correction (not for use on contact lenses), light lens covers, optical instruments/implements.
- Drinking fountains.
- Shower stalls, shower doors and curtains, bathtubs and glazed tiles, chrome plated intakes, toilets, toilet bowls, toilet bowl surfaces, urinals, empty diaper pails, portable and chemical toilets and latrine buckets, porcelain tile and restroom fixtures.
- Ultrasonic baths, whirlpools, whirlpool bathtubs.
- Kennels, kennel runs, cages, kennel/cage floors, conductive flooring.
- Dishes, silverware, glasses, cooking utensils, eating utensils and other similar size food processing equipment can be sanitized by immersion. NO POTABLE WATER RINSE ALLOWED.
- Wrestling and gymnastic mats, athletic training tables, physical therapy tables.

Escherichia coli (E. coli) and Staphylococcus aureus (Staph) are common bacteria found where food is prepared and stored. This product kills these bacteria and helps prevent the spread of food borne contamination on treated kitchen surfaces listed on this label. A potable water rinse is required after application on food contact surfaces.

Use this product to clean, sanitize and disinfectant non-porous personal protective safety equipment, protective headgear, athletic helmets, wrestling/boxing headgear, athletic shoe soles, hard hats, half mask respirators, full face breathing apparatus, gas masks, goggles, spectacles, face shields, hearing protectors and ear muffs. Rinse all equipment that comes in prolonged contact with skin before reuse with clean warm water (about 120°F), and allow to air dry. (Precaution: Cleaning at the recommended 120°F temperature will avoid overheating and distortion of the personal safety equipment that would necessitate replacement.)

Use this product to clean, sanitize and disinfectant non-porous ambulance equipment and surfaces by rinsing all equipment that comes in prolonged contact with skin before reuse with clean warm water (about 120°F), and allow to air dry. (Precaution: Cleaning at the recommended 120°F temperature will avoid overheating and distortion of the ambulance equipment and surfaces that would necessitate replacement.)

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This product is recommended for Poultry Premise Sanitation (Hatcheries), Egg Receiving Area, Egg Holding Area, Setter Room, Tray Dumping Area, Trays, Buggies, Racks, Egg Flats, Chick Holding Room, Hatchery Room, Chick Processing Area, Chick Loading Area, Poultry Buildings, Ceilings, Side walls and Floors, Drinkers, and all other hard non-porous Poultry House related equipment, and surfaces in the Hatchery environment.

This product is recommended for Swine Premise Sanitation, Waterers and Feeders, Hauling Equipment, Dressing Plants, Loading Equipment, Farrowing Barns and Areas, Nursery, Blocks, Creep Area, Chutes.

This product has been cleared in 40CFR180.940 for use on food processing equipment and utensils at a concentration of 200-400 ppm active.

This product meets AOAC Use – Dilution Test Standards for hospital disinfectants.

This product meets AOAC Germicidal and Detergent Test Standards for food contact surfaces.

This product meets AOAC efficacy standards for hard, non-porous surface sanitizers.

This product has passed the Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces Utilizing (Duck) Hepatitis B Virus.

This product has passed the Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces Utilizing Hepatitis C Virus. (Not for use in California)

OR

This product has passed the Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces Utilizing Bovine Viral Diarrhea Virus BVDV (surrogate for human Hepatitis C virus).

This product has passed the Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces Utilizing Human and Canine Coronavirus.

This product is an effective disinfectant/sanitizer in the presence of 5% serum contamination.

This product is effective against the control of small flies on floors, walls, drains, countertops, metal surfaces, painted surfaces, glazed porcelain, glazed tile, glass, chrome, rubber, and plastic in restaurants, kitchens, dishwashing areas, and bar and wait station areas.

This product is an effective sanitizer in the presence of soils on non-food contact surfaces.

This product meets AOAC efficacy standards for hard surface non-food contact sanitizers.

For larger areas, such as operating rooms and patient care facilities, this product is designed to provide both general cleaning and disinfection.

Regular, effective cleaning and sanitizing of equipment utensils and work or dining surfaces which could harbor hazardous microorganisms minimizes the probability of contaminating food during preparation, storage or service. Effective cleaning will remove soil and prevent the accumulation of food residues, which may decompose or support the rapid development of food poisoning organisms or toxins. Application of effective sanitizing procedures reduces the number of these microorganisms, which may be present on equipment and utensils after cleaning, and reduces the potential for the transfer, either directly through tableware such as glasses, cups and flatware or indirectly through food.

To prevent cross contamination, kitchenware and food contact surfaces of equipment should be washed, rinsed with potable water and sanitized after each use and following any interruption of operation during which time contamination may have occurred.

Where equipment and utensils are used for preparation of foods on a continuous or production line basis, utensils and the food contact surfaces of equipment shall be washed, rinsed and sanitized at intervals throughout the day on a schedule based on food temperature, type of food and amount of food particle accumulation.

ORGANISM GUIDE

Disinfectant Performance: Add 2 ounces of this product to 5 gallons of water (or equivalent use dilution) (625 ppm active quat) OR mix a 2 ounce packet with 5 gallons of water. Treated surfaces must remain wet for 10 minutes. At this use level, this product is bactericidal according to the AOAC Use Dilution Test method on hard inanimate surfaces modified in the presence of 5% organic serum against:

<i>Botrytis cinerea</i> (ATCC 12481)	<i>Pseudomonas aeruginosa</i> (ATCC 15442)
<i>Burkholderia cepacia</i> (ATCC 25416)	<i>Salmonella choleraesuis</i> (ATCC 10708)
<i>Campylobacter jejuni</i> (ATCC 29428)	<i>Salmonella typhi</i> (ATCC 6539)
<i>Corynebacterium ammoniagenes</i> (ATCC 6871)	<i>Shigella sonnei</i> (ATCC 9290)
<i>Escherichia coli</i> 0157:H7 (ATCC 31250)	<i>Staphylococcus aureus</i> (ATCC 6538)
<i>Enterococcus faecium</i> (Vancomycin Resistant) (VRE)	<i>Staphylococcus aureus</i> (Methicillin resistant) (ATCC 33591)
<i>Klebsiella pneumoniae</i> (ATCC 13883)	<i>Yersinia enterocolitica</i> (ATCC 23715)
<i>Listeria monocytogenes</i> (ATCC 984)	
<i>Proteus mirabilis</i>	

Add 1.5 ounces of this product to 5 gallons of water (or equivalent use dilution) (469 ppm active quat). Treated surfaces must remain wet for 10 minutes. At this use level, this product is bactericidal according to the AOAC Use Dilution Test method on hard inanimate surfaces modified in the presence of 5% organic serum against:

<i>Campylobacter jejuni</i> (ATCC 29428)	<i>Staphylococcus aureus</i> (ATCC 6538)
<i>Escherichia coli</i> 0157:H7 (ATCC 31250)	<i>Staphylococcus aureus</i> (Methicillin resistant) (ATCC 33591)
<i>Listeria monocytogenes</i> (ATCC 984)	<i>Yersinia enterocolitica</i> (ATCC 23715)
<i>Proteus mirabilis</i>	
<i>Salmonella choleraesuis</i> (ATCC 10708)	

Virucidal Performance: At 2 ounces per 5 gallons use level (or equivalent use dilution) (625 ppm active quat), this product was evaluated in the presence of 5% serum with a 10 minute contact time and found to be effective against the following viruses on hard, non-porous environmental surfaces:

Hepatitis B Virus	Human Coronavirus (ATCC VR-740)
Hepatitis C Virus	Infectious Bronchitis Virus
Herpes Simplex Type 1 (ATCC VR-260)	Influenza A2/Japan Virus (ATCC VR-100)
Herpes Simplex Type 2 (ATCC VR-734)	Vaccinia virus

At 2.5 ounces per 5 gallons (703 ppm quat active) (or equivalent use dilution) use level, this product was evaluated in the presence of 5% serum with a 2-minute contact time and found to be effective against the following virus on hard, non-porous environmental surface:

HIV-1

Animal Premise Virucidal Performance: At 2 ounces per 5 gallons use level (or equivalent use dilution) (625 ppm active quat), this product was evaluated in the presence of 5% serum with a 10 minute contact time and found to be effective against the following viruses on hard, non-porous environmental surfaces:

Avian influenza H9N2/Turkey/Wisconsin virus (ATCC VR-178)	Newcastle disease virus
Avian Reovirus (ATCC VR-2449)	Porcine Respiratory & Reproductive Virus (PRRSV)
Bovine Viral Diarrhea Virus (ATCC VR-534)	Porcine Rotavirus (ATCC VR-893)
Canine Coronavirus (ATCC VR-809)	Pseudorabies virus (ATCC VR-135)
Canine Distemper Virus	Transmissible Gastroenteritis (TGE) Virus (ATCC VR-742)
Equine Arteritis virus (ATCC VR-796)	
Infectious Bovine Rhinotracheitis virus (IBR)	
Infectious Laryngotracheitis Virus (ATCC VR-188)	

Non-Food Contact Sanitizing Performance: Add ½ ounce of this product to 4 gallons of water (or equivalent use dilution) (200 ppm active) to sanitize hard, non-porous surfaces. At 200 ppm active, this product is an effective one-step sanitizer against the following:

Staphylococcus aureus (ATCC 6538)	Enterococcus aerogenes (ATCC 13048)
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Food Contact Sanitizing Performance: At ½ ounce per 4 gallons this product (or equivalent use dilution) (200 ppm active) eliminates 99.999% of the following bacteria in 60 seconds in 500 ppm hard water (calculated as CaCO₃) according to the AOAC Germicidal and Detergent Sanitizing Action of Disinfectants test:

<i>Campylobacter jejuni</i> (ATCC 29428)	<i>Listeria monocytogenes</i> (ATCC 984)
<i>Clostridium perfringens</i> (ATCC 13124)	<i>Shigella dysenteriae</i> (ATCC 9361)
<i>Escherichia coli</i> (ATCC 11229)	<i>Staphylococcus aureus</i> (ATCC 6538)
<i>Escherichia coli</i> O157:H7 (ATCC 43888)	<i>Yersinia enterocolitica</i> (ATCC 23715)

Fungicidal Activity: At 2 ounces per 5 gallons use-level (or equivalent use dilution) (625 ppm active quat) this product is effective against Trichophyton mentagrophytes (athlete's foot fungus) (a cause of Ringworm) on inanimate surfaces in the presence of 5% blood serum in locker rooms, dressing rooms, shower and bath areas and exercise facilities.

Dilution Guide:

For Hospital or Medical Environment claims	2oz/5 gal. water
For General or Broad Spectrum claims	1.5oz/5 gal. water
For Virucidal claims	2oz/5 gal. water
For Animal Virucidal claims	2oz/5 gal. water
For Non-Food Contact Sanitizing claims	0.5oz/4 gal. water
For Food Contact Sanitizing claims at 200 ppm	0.5oz/4 gal. water
For Food Contact Sanitizing claims at 400 ppm	1oz./4 gal. water
For Fungicide claims	2 oz/5 gal. water

DIRECTIONS FOR USE

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

(Note for reviewer: For labels that list medical premises and metal and/or stainless steel surfaces, one of the following statements must be used:)

This product is not to be used as a terminal sterilant/high level disinfectant on any surface or instrument that (1) is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body, or (2) contacts intact mucous membranes but which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body. This product may be used to pre-clean or decontaminate critical or semi-critical medical devices prior to sterilization or high level disinfection.

Or

This product is not for use on Medical device surfaces

Before use in arally inspected meat and poultry food processing plants and dairies, food products and packaging materials must be removed from room or carefully protected. A potable water rinse is not allowed following use of the product as a sanitizer on previously cleaned hard food contact surfaces provided that the surfaces are adequately drained before contact with food so that little or no residue remains.

Apply this product with a cloth, mop or mechanical spray device. When applied with a mechanical spray device, surfaces must be sprayed until thoroughly wetted. Treated surfaces must remain wet for 10 minutes. For sprayer applications, use a coarse (mist) pump or trigger sprayer. Spray 6-8 inches from surface and rub with brush, sponge or cloth. Do not breathe spray (mist). (Use of "mist" is not allowed in California.)

NOTE: With spray applications, cover or remove all food products. Prepare a fresh solution at least daily or when use solution becomes visibly dirty. For heavily soiled areas, a preliminary cleaning is required.

DISINFECTION

General Disinfectant-Non-medical Dilution Guide

Ounces of Product	Amount of Water
0.075 ounces	1 quart
0.15 ounces	½ Gallon
0.3 ounces	1 gallon
0.75 ounces	2 ½ gallons
1.5 ounces	5 gallons
3.0 ounces	10 gallons

Hospitals, Dental Offices, Nursing Homes and other Health Care Institutions Disinfection and Virucidal Dilution Guide

Ounces of Product	Amount of Water
0.1 ounces	1 quart
0.2 ounces	½ Gallon
0.4 ounces	1 gallon
1.0 ounces	2 ½ gallons
2.0 ounces	5 gallons
4.0 ounces	10 gallons

Hospitals, Dental Offices, Nursing Homes and other Health Care Institutions: For disinfecting floors, walls, countertops, bathing areas, lavatories, bed frames, tables, chairs, garbage pails and other hard non-porous surfaces.

At 2 ounces per 5 gallons (or equivalent use dilution) (625 ppm active quat) in the presence of 200 ppm hard water (CaCO₃) and 100% serum this product was proven to be effective against (Duck) Hepatitis B Virus with a contact time of 10 minutes.

At 2 ounces per 5 gallons (or equivalent use dilution) (625 ppm active quat) in the presence of 5% organic load this product was proven to be effective against Bovine Viral Diarrhea Virus (BVDV (surrogate for human Hepatitis C virus) with a contact time of 10 minutes

At 2¼ ounces per 5 gallons (or equivalent use dilution) in the presence of 5% serum for a two-minute contact time this product was found to be effective against HIV-1 (AIDS Virus).

***KILLS HIV, HCV AND HBV ON PRECLEANED ENVIRONMENTAL SURFACES/OBJECTS PREVIOUSLY SOILED WITH BLOOD/BODY FLUIDS** in health care setting or other settings in which there is an expected likelihood of soiling of inanimate surfaces/objects with body fluids and in which the surfaces/objects likely to be soiled with blood or body fluids can be associated with the potential for transmission of

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Human Immunodeficiency Virus Type 1 (HIV-1) (associated with AIDS), Hepatitis C Virus (HCV) and Hepatitis B Virus (HBV).

"SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATION AGAINST HIV-1, HCV AND HBV ON SURFACES/OBJECTS SOILED WITH BLOOD/BODY FLUIDS."

Personal Protection: Specific barrier protection items to be used when handling items soiled with blood or body fluids are disposable latex gloves, gowns, masks, or eye coverings.

Cleaning Procedure: Blood and other body fluids must be thoroughly cleaned from surfaces and objects before application of the disinfectant.

Disposal of Infectious Materials: Blood and other body fluids should be autoclaved and disposed of according to federal, state and local regulations for infectious waste disposal.

Contact Time: For HIV, leave surfaces wet for two minutes with 2¼ ounces per 5 gallons (or equivalent use dilution) (703 ppm active quat) use solution. This contact time will not control other common types of viruses and bacteria. For HBV and HCV, leave surfaces wet for 10 minutes with 2 ounces per 5 gallons (or equivalent use dilution) (625 ppm active quat).

Efficacy tests have demonstrated that this product is an effective bactericide, virucide and fungicide in the presence of organic soil (5% blood serum).

General Disinfectant-Non-medical (schools, restaurants, food services, beverage and food processing plants): Add 1.5 ounces of this product to 5 gallons of water (or equivalent use dilution) (469 ppm active quat).

For Use on Finished Floors: To limit gloss reduction, use 4 ounces of this product per 5 gallons of water (or equivalent use dilution). Apply with a damp mop or auto scrubber. Allow to air dry.

General Deodorization: To deodorize, add 1½ ounces of this product to 5 gallons of water (or equivalent use dilution) (469 ppm active quat). Excess material should be wiped up or allowed to air dry.

Mold and Mildew Control: At 2 ounces per 5 gallons, (or equivalent use dilution) (625 ppm active quat) this product will effectively inhibit the growth of mold and mildew and the odors caused by them when applied to hard non-porous surfaces (as indicated in general instructions above). Allow to dry on surface and repeat treatment every seven days or when new growth appears.

For Deodorizing Garbage Cans, Garbage Trucks, Industrial Waste Receptacles and Garbage Handling Equipment: It is especially important to pre-clean for the product to perform properly. Then, apply a wetting concentration of 1.625 ounces of this product per gallon of water (or equivalent use dilution) (2,500 ppm quat active).

For Odors Caused by Dogs, Cats and Other Domestic Animals: Use on rugs, floors, walls, tile, cages, crates, litter boxes, mats, floor coverings, or any surface soiled by a pet. Test a small inconspicuous area first. Blot problem area. Then follow directions for "General Deodorization".

Cleansing of Body Surfaces and Body Orifices of Human Remains: To cleanse away skin secretions and accompanying malodor, to insure the removal of all soil and bloodstains, apply 1.5 ounces of this product to 5 gallons of water (or equivalent use dilution) (429 ppm active) to the entire body. Allow a 10 minute contact time for optimal results. Bath the entire body using sponge or washcloth. A soft brush may be employed

on surfaces other than the face. Prepare a fresh solution for application of each remains.

To control the growth of mold and mildew on large inflatable non-porous plastic and rubber structures (animals, promotional items, moonwalks, slides, obstacle course play and exercise equipment): Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with a use solution of 2 ounces per 5 gallons (625 ppm active quat) of water (or equivalent dilution) for a period of 10 minutes. Ventilate buildings and other closed spaces. Do not use equipment until treatment has been absorbed, set or dried.

To Control the Growth of Mold and Mildew on Non-Porous Athletic Equipment (wrestling and gymnastic mats, athletic training tables, physical therapy tables, athletic helmets, wrestling/boxing headgear, athletic shoe soles): Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with a use solution of 1.5 ounces per 5 gallons (469 ppm active quat) of water (or equivalent dilution) for a period of 10 minutes. Ventilate buildings and other closed spaces. Do not use equipment until treatment has been absorbed, set or dried.

Disinfection of Barber/Salon Tools Directions: Pre-cleaned barber/salon tools, such as combs, brushes, razors, clipper and trimmer blades, tweezers, manicure/pedicure tools and scissors, can be disinfected by immersing in 0.3 ounces per gallon solution of this product (or equivalent use dilution) (469 ppm active quat). Completely immerse instruments and tools for at least 10 minutes. Rinse thoroughly and dry before use. Fresh solution should be prepared at least daily or more often if solution becomes cloudy or soiled.

Disinfection/Fungicide/Virucide for Barber/Salon Tools Directions: Immerse pre-cleaned barber/salon tools, such as combs, brushes, razors, clipper and trimmer blades, tweezers, manicure/pedicure tools and scissors, in a 0.4 ounce per gallon solution of the product (or equivalent use dilution) (625 ppm active quat). Completely immerse instruments and tools for at least 10 minutes. Rinse thoroughly and dry before use. Prepare a fresh solution at least daily, or more often if solution becomes cloudy or soiled.

NOTE: Plastics may remain immersed until ready to use. Stainless steel shears and instruments must be removed after 10 minutes, rinsed, dried, and kept in a clean non-contaminated receptacle. Prolonged soaking may cause damage to metal instruments.

Disinfection of Hard, Non-Porous Surfaces in Footbaths: To remove body oils, dead tissue, soil and all other buildups or organic matter on inanimate surfaces after using the footbath, drain the water and thoroughly clean all hard, non-porous surfaces with soap or detergent, then rinse with water. Saturate surfaces with a use solution of 0.3 ounce per gallon of water (or equivalent use dilution) (469 ppm active quat) to exposed surfaces with a cloth, mop, sponge or sprayer. Brush or swab thoroughly and allow solution to stand for 10 minutes. For spray applications, use a coarse spray device. Do not breathe spray. After the unit has been thoroughly disinfected, rinse all cleaned surfaces with fresh water. Do not use equipment until treatment has been absorbed, set or dried.

NON-ACID TOILET BOWL (AND URINAL) DISINFECTANT DIRECTIONS

Remove gross filth prior to disinfection.

From Concentrate: Add ½ oz. to the toilet bowl and mix. Brush thoroughly over exposed surfaces and under the rim with a cloth, mop, or sponge. Repeat and allow to stand for 10 minutes and flush.

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From use-solution: Empty toilet bowl or urinal and use a 0.3 oz per gallon use solution to exposed surfaces including under the rim with a cloth, mop, sponge or sprayer; brush or swab thoroughly and allow to stand for 10 minutes and flush. For spray application, use a coarse spray device.

For Heavy Duty Cleaning: Empty toilet bowl or urinal and apply 9 ounces per 5 gallons (or equivalent dilution) use solution to exposed surfaces including under the rim with a cloth, mop, sponge or sprayer, brush or swab thoroughly and allow to stand for 10 minutes and flush.

Cleaning/Deodorizing Directions: Add 1 1/8 to 4.5 ounces per gallon (or equivalent dilution) of water to clean and deodorize windows, mirrors and glass surfaces. Use a coarse spray device. Spray 6-8 inches from surface. Rub with sponge or cloth. Do not breathe spray (mist). *(Use of "mist" is not allowed in California.)*

Ultrasonic Bath Disinfectant Directions: Use this product to disinfect hard (inanimate) non-porous non-critical objects compatible with Ultrasonic cleaning units. Pour (a) fresh solution of 0.4 ounces per gallon of water (or equivalent use dilution) (625 ppm active quat) directly into bath chamber. Pre-clean soiled objects. Place objects into unit and operate for a minimum of 10 minutes, according to manufacturers' use directions. Remove objects and rinse with sterile water (sterile water for injection), or allow to air dry. Replace solution at least daily or when solution becomes visibly dirty or discolored.

For Disinfecting Hard, Non-porous Bath (Fiberglass) and Therapy Equipment: To remove body oils, dead tissue, soil and all other buildups or organic matter on inanimate surfaces after using the whirlpool unit, drain the water and refill with fresh water to just cover the intake valve. Add 2 ounces of this product for each 5 gallons of water (0.40 ounces per one gallon) (or equivalent use dilution) (625 ppm active quat) in the unit at this point. Briefly start the pump to circulate the solutions. Turn off pump. Wash down the unit sides, seat of the chair lift, and any/all related equipment with a clean swab, brush or sponge. Treated surfaces must remain wet for 10 minutes for proper disinfection. After the unit has been thoroughly disinfected, drain solutions from the unit and rinse any/all (cleaned) surfaces with fresh water. The unit is ready for reuse.

Disinfection of Hard Non-Porous Surfaces in Whirlpool Units: After using the whirlpool unit, drain and refill with fresh water to just cover the intake valve. Add 2 ounces of this product for each 5 gallons of (0.40 ounces to one gallon) (or equivalent use dilution) (625 ppm active quat) water at this point. Briefly start the pump to circulate the solution. Turn off the pump. Wash down the unit sides, seat of the chair, lift and any/all related equipment with a clean swab, brush or sponge. Treated surfaces must remain wet for 10 minutes. After the unit has been thoroughly disinfected, drain the solution from the unit and rinse any/all cleaned surfaces with fresh water. Repeat for heavy soiled units.

To Disinfect Food-Processing and Tobacco Premises: Before using this product, food products and packaging materials must be removed from area or carefully protected. Use on floors, walls and storage areas, mix 1 1/2 ounces of product to 5 gallons of water (or equivalent use dilution) (469 ppm active quat). For heavily soiled areas, a pre-cleaning step is required. Apply solution with a mop, cloth, sponge or hand pump trigger sprayer so as to wet all surfaces thoroughly. For sprayer applications, use a coarse spray device. Allow to remain wet for 10 minutes. Then remove excess liquid. After use, all surfaces in the area must be thoroughly rinsed with potable water.

To Disinfect Food Service Establishment Food Contact Surfaces: (For) countertops, exterior surfaces of appliances, (and) tables add 1 1/2 ounces of this product to 5 gallons of water (or equivalent use dilution) (469 ppm active quat). Before using this

product, food products and packaging materials must be removed from area or carefully protected. For heavily soiled areas, a pre-cleaning step is required. Apply solution with a mop, cloth, sponge or hand pump trigger sprayer so as to wet all surfaces thoroughly. For sprayer applications, use a coarse spray device. Allow to remain wet for 10 minutes. Then remove excess liquid and rinse the surface with potable water.

For use on non-food contact surfaces as a general disinfectant in the brewery industry: Use 1 1/2 ounces of this product per 5 gallons of water (or equivalent use dilution) (469 ppm active quat). Follow the general disinfectant directions above.

Directions for Fogging: (For use in) dairies, beverage and food processing plants. Prior to fogging, food products and packaging material must be removed from the room or carefully protected. After cleaning, fog desired areas using one quart per 1000 cubic feet of room area with a product solution containing 3/4 ounce product to 1 gallon of water (or equivalent use dilution) (1,200 ppm). Vacate the area of all personnel during fogging and for a minimum of 2 hours after fogging. All food contact surfaces must be sanitized with an EPA approved food contact sanitizer solution of 200 ppm active quaternary (1/2 ounce per 4 gallons) prior to use. Allow food contact surfaces to drain thoroughly before operations are resumed.

NOTE: The fog generated is irritating to the eyes, skin and mucous membranes. Under no circumstances should a room or building be entered by anyone within two hours of the actual fogging. If the building must be entered, then the individuals entering the building must wear a self-contained respirator approved by NIOSH/MSHA, goggles, long sleeves and long pants.

FOGGING IS TO BE USED AS AN ADJUNCT TO ACCEPTABLE MANUAL CLEANING AND DISINFECTING OF ROOM AND MACHINE SURFACES.

POULTRY (AND SWINE) PREMISE SANITATION SITE PREPARATION

The first step in any on-going sanitation program should be the removal of gross contamination and debris. This may be accomplished using a shovel, broom, or vacuum depending on the area to be disinfected. The efficacy of even the most efficient germicidal cleaner is reduced in the presence of heavy organic matter. Once the heavy debris is eliminated thoroughly clean all surfaces with soap or detergent and rinse with water.

Disinfection/Fungicide/Virucide of Poultry/Turkey Equipment, Swine Quarters, Equine Quarters, Animal Quarters and Kennels Directions: Remove all animals and feeds from premises, vehicles (trucks and cars), and enclosures (coops and crates, kennels, stables) Remove all litter, droppings and manure from floors, walls and surfaces of barns, pens, stalls, chutes and other facilities and fixtures occupied or traversed by animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Use 2 ounces of this product per 5 gallons of water (or equivalent use dilution) (625 ppm active quat). Saturate surfaces with the recommended disinfecting solution for a period of 10 minutes. Immerse all halters, ropes and other types of equipment used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and manure.

After application, ventilate buildings, coops and other closed spaces. Do not house poultry or other animals or employ equipment until treatment has been absorbed, set or dried.

All treated equipment that will contact feed or drinking water (racks, troughs, automatic feeders, fountains and waterers) must be thoroughly scrubbed with soap or detergent, then rinsed with potable water before reuse.

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HATCHERIES: For disinfection/fungicide/virucide, use 2 ounces of this product per 5 gallons of water (or equivalent use dilution). Apply to hatching, setters, trays, racks, carts, sexing tables, delivery trucks and other hard surfaces. Leave all treated surfaces exposed to solution (wet) for 10 minutes or more. Rinse surfaces with potable water. Allow to air dry.

VEHICLES: Clean all vehicles including mats, crates, cabs, and wheels with high-pressure water and this product. For sprayer applications, use a coarse (mist or) spray. Use 1½ ounces of this product per 5 gallons of water (or equivalent use dilution) for general disinfection. Use 2 ounces of this product per 5 gallons of water (or equivalent use dilution) for disinfection/fungicide/virucide. Leave all treated surfaces exposed to solution for 10 minutes or more and allow to air dry. (*Use of "mist" is not allowed in California.*)

DRESSING PLANT AND RENDERING PLANT DISINFECTANT DIRECTIONS (RENDERING PLANT/DRESSING PLANT DISINFECTANT DIRECTIONS): Cover or remove all food and packaging material before disinfection. Remove gross soils. Disinfect walls and floors in poultry and animal dressing plants with a solution of 1½ ounces of this product per 5 gallons of water (or equivalent use dilution) (469 ppm active quat). Surfaces must remain wet for 10 minutes then thoroughly rinsed with potable water before operations are resumed. Disinfect all rooms, exterior walls and loading platforms of dressing plants. Rinse all surfaces which contact food with potable water before reuse.

DRESSING PLANT AND RENDERING PLANT DISINFECTANT - FUNGICIDE - VIRUCIDE DIRECTIONS (RENDERING PLANT/DRESSING PLANT DISINFECTANT /FUNGICIDE/VIRUCIDE DIRECTIONS): Cover or remove all food packaging material before disinfection. Remove gross soils. Apply to walls and floors in poultry and animal dressing plants with a solution of 2 ounces of this product per 5 gallons of water (or equivalent use dilution) (625 ppm active quat). Surfaces must remain wet for 10 minutes then thoroughly rinsed with potable water before operations are resumed. Disinfect all rooms, exterior walls and loading platforms of dressing plants. Rinse all surfaces which contact food with potable water before reuse.

FARM PREMISE DISINFECTION DIRECTIONS

For use in Equine, Dairy and Hog Farms:

1. Remove all animals and feed from premises, vehicles and enclosures.
2. Remove all litter and manure from floors, walls and surfaces of barn, pens, stalls, stables, chutes and other facilities and fixtures occupied or transversed by animals.
3. Empty all troughs, racks and other feeding and watering appliances.
4. Thoroughly clean all surfaces with soap or detergent and rinse with water.
5. Saturate all surfaces with the recommended disinfecting or virucidal solution for a period of 10 minutes.
6. Immerse all halters, ropes and other types of equipment used in handling and restraining animals as well as forks, shovels, scrappers used in removing litter and manure.
7. Ventilate buildings, cars, trucks, boats and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed, set and dried.
8. Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains and waterers with soap or detergent and rinse with potable water before reuse.

For Use For Treatment of Animal Housing Facilities:

1. Remove all animals and feed from premises, vehicles and enclosures.

2. Remove all litter and manure from floors, walls and surfaces of barn, pens, stalls, stables, chutes and other facilities and fixtures occupied or transversed by animals.
3. Empty all troughs, racks and other feeding and watering appliances.
4. Thoroughly clean all surfaces with soap or detergent and rinse with water.
5. Saturate all surfaces (floors, walls, cages and other washable hard, non-porous environmental surfaces) with the recommended disinfecting and virucidal solution (2 ounces per 5 gallons of water) (or equivalent use dilution) (625 ppm active quat) for a period of 10 minutes. For smaller surfaces, use a trigger spray bottle to spray all surfaces with solution until wet.
6. Immerse all halters, ropes and other types of equipment used in handling and restraining animals as well as forks, shovels, scrappers used in removing litter and manure.
7. Ventilate buildings, cars, trucks, boats and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed, set and dried.
8. Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains and waterers with soap or detergent and rinse with potable water before reuse.

Terrarium and Small Animal Cage and Cage Furniture Disinfection: Animals frequently defecate on hot rocks and other cage furniture items inside your terrarium. This can result in high bacteria and ammonia levels that can lead to possible infection/disease in your animals. When used regularly this product can eliminate these high bacteria/ammonia levels in your cage and on your cage furniture items.

1. Remove all animals.
2. Thoroughly clean all surfaces and objects (hot rocks, caves, cage furniture, feeding and watering dishes, and appliances) including the substrate in the terrarium or cage with soap or detergent and rinse with water.
3. Saturate all surfaces (floors, walls, cages and other washable hard, non-porous environmental surfaces) with the recommended disinfecting and virucidal solution (2 ounces per 5 gallons of water) (or equivalent use dilution) (625 ppm active quat) for a period of 10 minutes. For smaller surfaces, use a trigger spray bottle to spray all surfaces with solution until wet. Then wipe surfaces dry.
4. Saturate gravel as above and let stand for 10 minutes. Place in bucket of clean water and swirl for 15-30 seconds. Thoroughly air dry before returning to terrarium.
5. Do not return animals to the habitat until it is dry and ventilated.
6. Thoroughly scrub all treated surfaces with soap or detergent and rinse with potable water before reuse.
7. Clean terrarium at least once weekly or more as needed.

Note: Substrates for desert terrariums (i.e. gravel) must be completely dry before returning to terrarium to avoid high humidity levels. Always replace substrate if a foul odor persists.

Disinfecting Potato Storage Area and Equipment: Remove all potatoes prior to disinfection of potato storage area and equipment. Pre-clean hard surfaces by removing heavy soils or gross filth. Follow general disinfecting directions as outlined in that section. All treated surfaces must be thoroughly rinsed with potable water prior to reuse.

Veterinary Clinics/Animal Life Science Laboratory/Zoos//Pet Shop/Kennels/Breeding and Grooming Establishment/Tack Shops Disinfection Directions: For cleaning and disinfecting the following hard non-porous surfaces:

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equipment, utensils, instruments, cages, kennels, stable: alls and catteries. Remove all animals and feeds from premises, animal transportation vehicles, crates etc. Remove all litter, droppings and manure from floors, walls and surfaces of facilities occupied or transversed by animals. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with a use solution of 2 ounces per 5 gallons of water (or equivalent dilution) (625 ppm active quat) for a period of 10 minutes. Ventilate buildings and other closed spaces. Do not house animals or employ equipment until treatment has been absorbed, set or dried. Thoroughly scrub all treated feed racks, automatic feeders, waterers and other equipment (that) which dispenses food or water with soap or detergent, and rinse with potable water before reuse. (10324-81)

FOR CONTROL OF SMALL FLIES ON NON-FOOD CONTACT SURFACES: For control of small flies: *Drosophila* spp. and the *Phoridae* family. To control flies on non-food contact surfaces such as floors, walls, countertops, metal surfaces, painted surfaces, glazed porcelain, glazed tile, glass, chrome, rubber, and plastic in restaurants, kitchens, dishwashing areas, and bar and wait station areas. Remove food and food packaging prior to use. Cover exposed food-handling surfaces. After removing gross filth, apply a solution of 2 ounces of this product per 5 gallons of water (or equivalent use dilution) (625 ppm active quat) to surfaces and locations where flies may breed. Spray surfaces thoroughly or apply by pouring, mopping or sponging onto the surface. Repeat application 1-2 times per week or as needed. Do not contaminate food and food packaging.

FOR CONTROL OF SMALL FLIES IN DRAINS: For control of small flies: *Drosophila* spp. and the *Phoridae* family. Spray or pour solution of 2 ounces per 5 gallons of water (or equivalent use dilution) (625 ppm active quat) into drain during time of lowest level of drain use. Add 14 ounces of solution daily to each drain to maintain fly control. Apply around the edge of the drain and coat all sides of inside of drain.

Waterbed Conditioner: When used as a waterbed conditioner, controls the growth of odor-causing and slime-forming bacteria. Prevents bubbles, preserves plasticizers, conditions vinyl interior, sequesters minerals.

If bed has not been treated properly, drain bed completely. Add 15 gallons of water, mix vigorously, drain bed again. Fill bed with water and follow dosage directions.

Dosage: To control growth of odor-causing and slime-forming bacteria, add 4 1/8 fluid ounces in a free flow waterbed of 90 to 180 gallon capacity. Add 8 1/4 fluid ounces in a waveless/fiber waterbed mattress of 90 to 180 gallon capacity. Repeat application every 4 to 6 months.

SANITIZER DIRECTIONS FOR NON-FOOD CONTACT SURFACES

Preparation of sanitizer use solution: Add 1/2 ounce of this product to 4 gallons of water (or equivalent use dilution) (200 ppm active) to sanitize hard, non-porous surfaces. At 200 ppm active, this product is an effective one-step sanitizer against *Staphylococcus aureus* and *Enterococcus aerogenes*.

Apply sanitizer use solution to precleaned, hard non-porous surfaces with a cloth, mop, sponge, sprayer or by immersion.

For sprayer applications, use a coarse pump or trigger sprayer. Spray 6-8 inches from surface and rub with brush, sponge or cloth. Do not breathe spray.

Treated surfaces must remain wet for 3 minutes, then wipe with sponge, mop or cloth or allow to air dry.

LAUNDRY DEODORIZER (AGAINST ODOR CAUSING BACTERIA): Use 1.75 ounces per 100 pounds of dry weight fabric. Dilute the appropriate amount of this

product in on two gallons of water, then add to the wash wheel in the final rinse. Re-treat fabric after each washing. For activity against odor causing bacteria, conditions of high relative humidity or wet contamination are required. Laundered fabric may also be treated by soaking.

SHOE BATH SANITIZER DIRECTIONS: To prevent cross contamination from area to area in animal areas, and the packaging and storage areas of food plants, shoe baths containing one inch of freshly made sanitizing solution should be placed at all entrances to buildings, hatcheries and at all the entrances to the production and packaging rooms. Scrape waterproof shoes and place in a 1/4 ounce of this product per 2 gallons of water (or equivalent use dilution) (200 ppm active) solution for 3 minutes prior to entering area. Change the sanitizing solution in the bath at least daily or when solution appears dirty.

SHOE FOAM DIRECTIONS: To prevent cross contamination from area to area in animal areas, and the packaging and storage areas of food plants. Apply a foam layer approximately 0.5 to 2 inches thick made from a solution of 1/2 to 3/4 ounce per gallon of water (or equivalent use dilution) (781 to 1172 ppm active) at all entrances to buildings, hatcheries, production and packaging rooms by using a foam generating machine or aerator to apply foam layer. Follow the foaming directions as specified by the manufacture of the foam generator/aerator. Scrape waterproof shoes. Stand and/or walk through foamed area for 3 minutes prior to entering area. Foam area should be washed and replaced at least daily or when it appears dirty.

(For food processing or other facilities that have installed entryway sanitizing systems)

ENTRYWAY SANITIZING SYSTEMS: To prevent cross contamination from area to area, set the system to deliver (0.255 - 0.51 oz. per gallon of water) (0.75 - 1.5 oz. per 2 7/8 oz per gallon of water) (400 - 800 ppm active) of sanitizing solution. The (spray) (foam) should cover the entire path of the doorway. Set the system so that a continuous wet blanket of sanitizer solution is delivered to the floor.

Do not mix other foam additives to the sanitizing solution.

SALON/BARBER INSTRUMENTS AND TOOLS SANITIZER DIRECTIONS: Pre-clean soiled instruments and tools. Completely immerse water safe non-porous instruments and tools in a solution of 1/4 ounce per 2 gallons (or equivalent use dilution) (200 ppm active) of water for at least 3 minutes. Rinse thoroughly and dry before use. Fresh solution should be prepared at least daily or more often if solution becomes cloudy or soiled.

NOTE: Plastics may remain immersed until ready to use. Stainless steel shears and instruments must be removed after 10 minutes, rinsed, dried, and kept in a clean non-contaminated receptacle. Prolonged soaking may cause damage to metal instruments.

Ultrasonic Bath Sanitizer Directions: Use this product to sanitize hard, (inanimate) non-porous, non-critical objects compatible with Ultrasonic cleaning units. Pour a fresh solution of 1/4 ounce per 2 gallons of water (or equivalent use dilution) (200 ppm active quat) directly into bath chamber. Pre-clean soiled objects. Place objects into unit and operate for a minimum of 3 minutes, according to manufacturers' use directions. Remove objects and rinse with sterile water (sterile water for injection), or allow to air dry. Replace solution at least daily or when solution becomes visible dirty or discolored.

Sanitization of Hard, Non-Porous Surfaces in Whirlpool Units: After using the whirlpool unit, drain and refill with fresh water to just cover the intake valve. Add 1/4 ounce of this product for each 2 gallons of (or equivalent use dilution) (200 ppm active quat) water at this point. Briefly start the pump to circulate the solution. Turn off the pump. Wash down the unit sides, seat of the chair, lift and any/all related equipment with a clean swab, brush or sponge. Treated surfaces must remain wet for 3 minutes.

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After the unit has been thoroughly sanitized, drain the solution from the unit and rinse any/all cleaned surfaces with fresh water. Repeat for heavy soiled units.

Dairy Cow Application Directions: The udders, flanks and teats of dairy cows can be washed with a solution of ½ ounce of this product in 4 gallons of warm water. Use a fresh towel for each cow. Avoid contamination of wash solution by dirt and soil. Do not dip used towel back into wash solution. When solution becomes visibly dirty, discard and provide fresh solution.

Humidifier Directions (Not applicable in CA): Thoroughly clean water tank and filters. Add 0.05 ounces of this product per gallon of refill water. Not for use in heat or atomizing type humidifiers.

OR

Humidifier Bacteria/Algae Treatment (Not applicable in CA): Formulated for use in portable humidifiers. Thoroughly clean water tank and filters before each heating season, or sooner if necessary. For every gallon of water in the humidifier tank add 0.05 ounces of this product. When you refill the tank, add 0.05 ounce of this product for every gallon of water added.

Not for use in heat vaporizing or atomizing type humidifiers.

WATER/SMOKE DAMAGE RESTORATION (Not applicable in CA)

Effective against odor causing bacteria and fungi for home, institutional, industrial and hospital use. This product is particularly suitable for use in water damage restoration situations against odor causing bacteria on the following porous and semi-porous materials: carpets, carpet cushion, sub floors, drywall, trim, frame lumber, tackless strip and paneling. Using solutions recommended, saturate affected materials with enough product to remain wet for at least 10 minutes. Use proper ventilation.

Sewer backup & river flooding: During mitigation procedures, dilute ½ to 1 ounce of this product per gallon of water allowing for the diluting effect of absorbed water within saturated materials. Remove gross filth or heavy soil along with non-salvageable materials. Saturate all affected areas with a sprayer using a coarse spray tip before and after cleaning and extraction.

Carpets, carpet cushions and other porous materials such as sub floors, drywall, trim and frame lumber, tackless strip and paneling: For water damage from a clean water source, extract excess water. Test hidden area for colorfastness. Dilute ½ to 1 ounce of the product per gallon of water (781-1562 ppm active quat), allowing for the diluting effect of absorbed water within saturated materials. Remove gross filth or heavy soil. Apply directly with a sprayer using a coarse spray tip, to fully saturate affected materials. Roll, brush or agitate into materials and allow the materials to remain damp for 10 minutes. Follow with a through extraction. Dry rapidly and thoroughly.

Special Instructions for Cleaning Carpet Against Odor Causing Bacteria: This product may be used in industrial and institutional areas such as homes, motels & hotel chains, nursing homes, schools and hospital(s). For use on wet, cleanable synthetic fibers. Do not use on wool. Vacuum carpet thoroughly prior to cleaning. Test fabric for color fastness.

For portable extraction units: Mix ½ ounce of this product per 2 gallons of water.

For truck mounted extraction machines: Mix 6 ounces of this product per gallon of water and meter at 4 gallons per hour.

For rotary floor machines: Mix ½ ounce of this product per gallon of water and apply at the rate of 300-500 sq. ft. per gallon.

Do not mix this product with other cleaning products. Follow the cleaning procedures specified by the manufacturer of the cleaning equipment. After using this product, set

the carpet pile and protect the carpet from furniture legs and bases while drying. Do not over wet. If applied to stain resistant nylon carpet, apply a fabric protector according to the carpet manufacturer's directions.

CARPET DEODORIZATION AGAINST ODOR-CAUSING BACTERIA, FOR HOME, INSTITUTIONAL, INDUSTRIAL AND HOSPITAL USE (Not applicable in CA)

This product cleans and deodorizes the carpet by controlling/reducing the growth of odor-causing bacteria. It can be used in industrial and institutional areas such as homes, motels, hotel chains, nursing homes and hospitals.

Vacuum carpet thoroughly prior to application. Mix ½ ounce of this product per 2 gallons of water. Follow the Injection and/or extraction procedures as specified for any conventional steam cleaning equipment you are using. For rotary floor machines, mix ½ ounce per gallon of water and spray on carpet at a rate of 300-500 sq. ft. per gallon.

For use (Use this product) on washable synthetic fibers. Do not use on wool. Test color fastness of carpet before use. Apply diluted product to a small, concealed spot, then rub with a clean white cloth. If color changes or transfers to (the) cloth, a water-based product should not be used.

After using the product, set carpet pile in one direction with a stiff brush. Place aluminum foil under the legs of furniture while carpet is drying. Over-wetting can cause carpet to shrink. Manufacturer assumes no responsibility for over-wetting misuse.

Note: This product should not be mixed with other cleaning products.

Smoke Damage Restoration (Not applicable in CA): Effective against odor causing bacteria and fungi for home, institutional, industrial and hospital use. This product is particularly suitable for use in smoke damage restoration situations against odor causing bacteria on the following porous and semi-porous materials: carpets, carpet cushion, sub floors, drywall, trim and frame lumber, tackless strip and paneling. Follow directions as outlined in the Water Damage Restoration section. Using solutions recommended, saturate affected materials with enough product to remain wet for at least 10 minutes. Use proper ventilation.

SANITIZING HATCHERY ROOMS USING FOGGING DEVICES

Remove all animals and feed from premises, vehicles and enclosures. Remove all litter and manure from floors, walls and surfaces of the room to be treated. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Close room off so fog is confined to room to be treated. Mix 48 ounces of this product to 320 ounces of water (or equivalent use dilution). Insert the nozzle of the fogger through a suitable opening into the room. With the setting in maximum output, fog for one minute for each 4000 cubic feet of space in the room. When fogging is completed ventilate buildings and other closed spaces. Do not allow people to contact or breath this fog and do not enter until 2 hours after fogging is complete. Do not house livestock or employ equipment until treatment has been absorbed or dried. Thoroughly clean all surfaces with soap or detergent and rinse with water.

SANITIZING INCUBATORS AND HATCHERS USING FOGGING DEVICES

Mix 10 ounces of this product to 125 ounces of water. Fog 3-8 ounces of this into setters and hatchers immediately after transfer. Repeat daily in setters and every 12 hours in hatchers. Discontinue hatcher treatments at least 24 hours prior to pulling the hatch. Do not allow people to contact or breathe this fog. It is acceptable to fog setters and hatchers with a 1 ounce per gallon solution of this product (or equivalent use dilution) on an hourly or every other hour basis. If this is done, fog for 30-90 seconds once per hour or once every two hours. When fogging is complete, ventilate buildings and other closed spaces. Do not house livestock or employ equipment until treatment

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has been absorbed or dried. Thoroughly scrub all treated racks, mangers, troughs, automatic feeders, fountains and waterers with soap or detergent, and rinse with potable water before reuse.

FOOD PROCESSING PLANTS USING FOGGING DEVICES

For use in dairies, beverage and food processing plants. Prior to fogging, food products and packaging material must be removed from the room or carefully protected. After cleaning, fog desired areas using 1 quart per 1000 cubic feet of room area with a solution containing ¾ ounces of product to 1 gallon of water (1,200 ppm). Vacate the area of all personnel for a minimum of 2 hours after fogging. All food contact surfaces must be thoroughly rinsed prior to reuse with potable water.

NOTE: The fog generated is irritating to the eyes, skin and mucous membranes. Under no circumstances should a room or building be entered by anyone within two hours of the actual fogging. If the building must be entered, then the individuals entering the building must wear a self-contained respirator approved by NIOSH/MSHA, goggles, long sleeves and long pants.

FOGGING IS TO BE USED AS AN ADJUNCT TO ACCEPTABLE MANUAL CLEANING AND DISINFECTING OF ROOM AND MACHINE SURFACES.

FOOD CONTACT AND TOBACCO PROCESSING EQUIPMENT SANITIZING DIRECTIONS

Sanitizing of Food Processing Equipment and Other Hard Surfaces in Food Processing Locations, Dairies, Restaurants and Bars Directions: For sanitizing food processing equipment, dairy equipment, food utensils, dishes, silverware, eating utensils, glasses, sink tops, countertops, refrigerated storage and display equipment and other hard non-porous surfaces. **NO POTABLE WATER RINSE IS ALLOWED.**

Prior to application, remove gross food particles and soil by a pre-flush or pre-scrape and when necessary, presoak. Then thoroughly wash or flush objects with a good detergent or compatible cleaner, followed by a potable water rinse before applications of the sanitizing solution.

Before use as a sanitizer in federally inspected meat and poultry plants and dairies, food products and packaging materials must be removed from the room or carefully protected. A potable water rinse is not allowed (Do not rinse) following the use of this product as a sanitizer on previously cleaned hard non-porous surfaces provided that the surfaces are adequately drained before contact with food so that little or no residue remains.

Apply to sink tops, countertops, refrigerated storage and display equipment, and other stationary hard surfaces by cloth or brush or mechanical spray device. **NO POTABLE WATER RINSE IS ALLOWED** (after use as a sanitizer).

Dishes, silverware, glasses, cooking utensils, eating utensils and other similar size food processing equipment can be sanitized by immersion in a ½ ounce per 4 gallons solution of this product (200 ppm active). **NO POTABLE WATER RINSE IS ALLOWED.**

Prepare a fresh solution daily or when use solution becomes visibly dirty. For mechanical application use solution may not be reused for sanitizing applications.

Sanitizing Dilution Guide

To prepare a 200, 300 or 400 ppm active quaternary solution use the following dilution table. Prepare correct dilution rate based upon the appropriate use site.

Active quat solution	1 gallon	4 gallons	10 gallons	20 gallons
200 ppm	1/8 ounce	½ ounce	1 ¼ ounces	2.5 ounces
300 ppm	0.1875 ounces	0.75 ounces	1.875 ounces	3.75 ounces
400 ppm	¼ ounce	1.0 ounces	2.5 ounces	5.0 ounces

For Public Eating Places, Dairy Processing Equipment and Food Processing Equipment and Utensils: Apply a solution of ½ ounce of this product in 4 gallons of water (or equivalent use dilution) (200 ppm active) OR mix a ½ ounce packet with 4 gallons of water to pre-cleaned, hard surfaces, thoroughly wetting surfaces with a cloth, mop, sponge, sprayer or by immersion. For spray applications, use a coarse () pump or trigger sprayer. Spray 6 to 8 inches from surface. Rub with brush, sponge, or cloth. Do not breathe spray (mist). With spray applications cover or remove all food products. From a Closed Loop Dilution Center, apply 200 ppm active solution to the surface to be sanitized. Surfaces should remain wet for at least 1 minute followed by adequate draining and air drying. A fresh solution should be prepared at least daily or when use solution becomes visibly dirty. For mechanical application Use solution may not be reused for sanitizing applications. **NO POTABLE WATER RINSE IS ALLOWED** (after use as a sanitizer) (after application of the sanitizing solution). *(Use of "mist" is not allowed in California.)*

For Food Processing Equipment and Utensils: Apply a solution of ½ to 1 ounce of this product in 4 gallons of water (or equivalent use dilution) (200-400 ppm active) to pre-cleaned, hard, non-porous surfaces thoroughly wetting surfaces with a cloth, mop, sponge, sprayer or by immersion. For spray applications, use a coarse pump or trigger sprayer. Spray 6 to 8 inches from surface. Rub with brush, sponge, or cloth. Do not breathe spray. With spray applications cover or remove all food products. From a Closed Loop Dilution Center, apply 200-400 ppm active solution to the surface to be sanitized. Surfaces should remain wet for at least 1 minute followed by adequate draining (and air drying). (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food). Prepare a fresh solution at least daily or when use solution becomes visibly dirty. For mechanical application use solution may not be reused for sanitizing applications. **NO POTABLE WATER RINSE IS ALLOWED (DO NOT RINSE) AFTER APPLICATION OF THE SANITIZING SOLUTION** (after use as a sanitizer).

DIRECTIONS FOR SANITIZING FOOD CONTACT SURFACES IN PUBLIC EATING PLACES, DAIRY PROCESSING EQUIPMENT AND FOOD PROCESSING EQUIPMENT, UTENSILS REGULATED BY 40CFR sec 180.940(a):

1. Scrape, flush or presoak articles (whether mobile or stationary) to remove gross food particles and soil.
2. Thoroughly wash articles with an appropriate detergent or cleaner.
3. Rinse articles thoroughly with potable water.
4. Sanitize articles using a solution of 1/8 ounce of this product per gallon of water (or equivalent use dilution) (200 ppm active). Articles that can be immersed in solution should remain in solution for 60 seconds. Articles too large for immersing should be thoroughly wetted by rinsing, spraying or swabbing.
5. Remove immersed items from solution to drain and then air dry. Non-immersed item should be allowed to air dry also.

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**U.S. PUBLIC HEALTH SERVICE
FOOD SERVICE SANITIZATION RECOMMENDATIONS
CLEANING AND SANITIZING**

Equipment and utensils shall be thoroughly preflushed or prescraped, and when necessary, presoaked to remove gross food particles and soil.

1. Thoroughly wash equipment and utensils in a hot detergent solution. Rinse utensils and equipment thoroughly with potable water.
2. Sanitize equipment and utensils by immersion in a ½ ounce of this product per 4 gallons of water (solution) (or equivalent use dilution) for at least 60 seconds at a temperature of 75°F. This dilution is equivalent to a solution containing 50 ppm available chlorine.
3. For equipment and utensils too large to sanitize by immersion, apply ¼ ounce of this product per 2 gallons of water (200 ppm active) (or equivalent use dilution) by rinsing, spraying or swabbing until thoroughly wetted.
4. Allow sanitized surfaces to drain and air dry. Do not rinse.

WISCONSIN STATE DIVISION OF HEALTH

DIRECTIONS FOR EATING ESTABLISHMENTS *(Not applicable in CA)*

1. Scrape and pre-wash utensils and glasses whenever possible.
2. Wash with a good detergent or compatible cleaner.
3. Rinse with potable water.
4. Sanitize in a solution of ½ ounce of this product per 4 gallons of water (200 ppm active quaternary) (or equivalent use dilution). Immerse all utensils for at least two minutes or for contact time specified by governing sanitary code.
5. Place sanitized utensils on a rack or drain board to air-dry.
6. Prepare fresh sanitizing solution at least daily or more often when visibly soiled or diluted.

NOTE: A clean potable water rinse following sanitization is not permitted under Section HSS 196.13 of the Wisconsin Administrative Code.

(Alternative language for clean in place, closed loop dilution centers.)

WISCONSIN STATE DIVISION OF HEALTH

DIRECTIONS FOR EATING ESTABLISHMENTS *(Not applicable in CA)*

1. Scrape and pre-wash utensils and glasses whenever possible.
2. Wash with a good detergent or compatible cleaner.
3. Rinse with potable water.
4. Sanitize in a solution from the Closed Loop Dilution Center (200 ppm active quaternary) (or equivalent use dilution). Immerse all utensils for at least two minutes or for contact time specified by governing sanitary code.
5. Place sanitized utensils on a rack or drain board to air-dry.
6. Prepare fresh sanitizing solution at least daily or more often when visibly soiled or diluted.

NOTE: A clean potable water rinse following sanitization is not permitted under Section HSS 196.13 of the Wisconsin Administrative Code.

Sanitizing of Food Processing Equipment (Ice Machines) and Other Hard Surfaces in Food Contact Locations: For sanitizing food processing equipment, dairy equipment, refrigerated storage and display equipment, and other hard, non-porous surfaces. Equipment and utensils must be thoroughly preflushed or prescraped and, when necessary, presoaked to remove gross food particles. No potable water rinse is allowed.

1. Turn off refrigeration.
2. Wash and rinse all surfaces thoroughly.

3. Apply a solution of ½ ounce this product in 4 gallons of water (or equivalent use dilution) (200 ppm active) by mechanical spray, direct pouring or by recirculating through the system. Surfaces must remain wet for at least one minute followed by complete draining and drying. Fresh solution should be prepared for each cleaning. No potable water rinse is allowed when product is used as directed.
4. Return machine to service.

**SANITIZATION OF INTERIOR HARD NON-POROUS SURFACES OF WATER
SOFTENERS AND REVERSE OSMOSIS (RO) UNITS**

Water Softeners – Sanitization should occur after initial installation, after the system is serviced and periodically during its use.

1. Tank must be washed with a compatible detergent and rinsed with potable water before sanitizing. Backwash the softener and add 1 ounce of sanitizer per 8 gallons of water (or equivalent use dilution) (200 ppm active) to the brine tank well. (The brine tank should have water in it to permit the solution to be carried into the softener. (NOTE: Standard system capacity is 48 gallons).
2. Unit must be washed with a compatible detergent and rinsed with potable water before sanitizing.
3. Proceed with the normal regeneration or interrupt the cycle after the brining step and let the softener soak for a minimum of 60 seconds.
4. Backwash the softener with potable water to make sure all sanitizing solution is thoroughly rinsed from the unit before returning the system to service. Return system to service. **NO POTABLE WATER RINSE IS ALLOWED.**

Reverse Osmosis (RO) Units – Sanitization should occur after initial installation, after the system is serviced and periodically during its use.

1. Turn off RO system, drain storage tank and remove membrane element and pre-filters. Put membrane element in a plastic bag so it remains wet. Do not use this product to sanitize the membrane element. Membrane element must be sterilized separately.
2. Unit must be washed with a compatible detergent and rinsed with potable water before sanitizing.
3. Fill empty pre-filter housing with 1 ounce of sanitizer per 8 gallons of water (or equivalent use dilution) (200 ppm active) and turn on raw water. (NOTE: Standard system capacity is 1 to 2 gallons).
4. After holding tank is full, let system stand idle for a minimum of 60 seconds. Turn off water. Drain holding tank.
5. Before the system is put back into service, flush system with potable water to assure sanitizing solution is rinsed thoroughly from system. Follow the manufacturer's directions for re-installation of new pre-filters, membrane element and post filter.

**SANITIZATION OF INTERIOR HARD NON-POROUS SURFACES OF ICE
MACHINES, WATER COOLERS, WATER HOLDING TANKS
AND PRESSURE TANKS**

Ice Machines – Sanitizations should occur after initial installation, after the machine is serviced and periodically during its use.

1. Shut off incoming water line to machine.
2. Unit must be washed with a compatible detergent and rinsed with potable water before sanitizing.
3. Prepare a solution of 1 ounce of sanitizer per 8 gallons of water (or equivalent use dilution) (200 ppm active).
4. Circulate solution through machine making sure to wet all surfaces and allow a minimum contact of 60 seconds.
5. Drain and complete flush machine twice with potable water.

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6. Return machine to normal operation.

Water Coolers, Water Holding Tanks and Pressure Tanks – Sanitization should occur after initial installation, after the system is serviced and periodically during its use.

1. Shut off incoming water line.
2. Units/tanks must be washed with a compatible detergent and rinsed with potable water before sanitizing.
3. Prepare a solution of 1 ounce of sanitizer per 8 gallons of water (or equivalent use dilution) (200 ppm active).
4. Apply or circulate (if possible) to wet all surfaces and allow a minimum contact of 60 seconds.
5. Drain and completely flush system twice with potable water.
6. Return to service by opening incoming water lines.

DIRECTIONS FOR RESTAURANT AND BAR SANITIZER

Equipment and utensils should be thoroughly preflushed or prescraped and, when necessary, presoaked to remove gross food particles and soil. Then thoroughly wash or flush objects with a good detergent or compatible cleaner followed by a potable water rinse before application of the sanitizing solution.

For precleaned dishes, glassware, silverware, eating utensils, (and) cooking utensils, immerse in a solution containing ½ ounce of this product per 4 gallons of water (or equivalent use dilution) (200 ppm active quaternary). Allow surface to remain wet for at least 60 seconds. Drain thoroughly before reuse. No (potable water) rinse is allowed.

(Alternative language for clean in place, closed loop dilution centers)

For use as a sanitizer on dishes, glassware, silverware, eating utensils, cooking utensils: For heavily soiled areas, remove gross food particles by preflush, prescrape, and presoak when necessary. Wash thoroughly with detergent or compatible cleaner then rinse with potable water prior to application of this product. Then immerse in a sanitizing solution from Closed Loop Dilution Center (200 ppm active quaternary). Allow surface to remain wet for at least 60 seconds. Drain thoroughly and air dry before reuse. No (potable water) rinse is allowed.

DIRECTIONS FOR FOOD PROCESSING EQUIPMENT AND DAIRIES

Equipment and utensils must be thoroughly preflushed or prescraped and, when necessary, presoaked to remove gross food particles. Clean and rinse equipment thoroughly. Then apply sanitizing solution containing ½ ounce of this product per 4 gallons of water (or equivalent use dilution) (200 ppm active quaternary). No (potable water) rinse is allowed.

At ½ ounce per 4 gallons this sanitizer fulfills the criteria of Appendix F of the Grade A Pasteurized Milk, Ordinance 1978 Recommendations of the U.S. Public Health Services in waters up to 500 ppm of hardness calculated as CaCO₃ when evaluated by the AOAC Germicidal and Detergent Sanitizer Method against Escherichia coli and Staphylococcus aureus.

BEVERAGE DISPENSING EQUIPMENT SANITIZER DIRECTIONS

For sanitizing of bottling or pre-mix dispensing equipment, after cleaning thoroughly rinse equipment with a potable water rinse. Fill equipment with a solution of ½ to 1 ounce of this product per 4 gallons of water (or equivalent use dilution) (200 – 400 ppm active). Allow solution to remain in equipment for at least 60 seconds, or until operations resume at which time the sanitizing solution should be drained from the system. To insure the removal of flavors, it is suggested that during changeover between products the system should be cleaned, rinsed and flushed with the sanitizing solution for at least 1 minute. Drain thoroughly and allow to air dry before reuse. No (potable water) rinse is

allowed. (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food).

SANITARY FILLING EQUIPMENT SANITIZER DIRECTIONS

Recommended for use in sanitizing bottles or cans in the final rinse application. The product is to be proportioned into the final rinse water line of the container washer or rinser in the concentration of 200 – 400 ppm active quat. Prepare a solution of ½ to 1 ounce of this product per 4 gallons of water (or equivalent use dilution) (200– 400 ppm active) for the exterior application for the filler and closing machine. Allow surfaces to remain wet for at least 60 seconds. Drain thoroughly before reuse. No (potable water) rinse is allowed. (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food).

(Note: The following directions are for use in food processing areas only)

DIRECTIONS FOR FOOD PROCESSING EQUIPMENT AND UTENSILS (AS REGULATED BY) (40CFR sec 180.940(c))

Equipment and utensils must be thoroughly preflushed or prescraped and, when necessary, presoaked to remove gross food particles. Clean and rinse equipment thoroughly. Then apply sanitizing solution containing ½ to 1 ounce of this product per 4 gallons of water (or equivalent use dilution) (200-400 ppm active quaternary). No potable water rinse is allowed (Do not rinse). (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food).

(Alternate Directions for Sanitizing Food Processing Equipment and Utensils.)

DIRECTIONS FOR SANITIZING FOOD CONTACT SURFACES IN FOOD PROCESSING EQUIPMENT AND UTENSILS, AS REGULATED BY 40CFR sec 180.940(c):

1. Scrape, flush or presoak articles (whether mobile or stationary) to remove gross food particles and soil.
2. Thoroughly wash articles with an appropriate detergent or cleaner.
4. Rinse articles thoroughly with potable water.
5. Rinse articles thoroughly with potable water.
6. Sanitize articles using a solution of 1/8 to ¼ ounce of this product per gallon of water (or equivalent use dilution) (200 to 400 ppm active). Articles that can be immersed in solution should remain in solution for 60 seconds. Articles too large for immersing should be thoroughly wetted by rinsing, spraying or swabbing.
7. Remove immersed and non-immersed items from solution to (and) make certain all surfaces are adequately drained before contact with food. No potable water rinse is allowed. (Do not rinse) (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food).

STORAGE TANK SANITIZER DIRECTIONS

Recommended for sanitizing beer fermentation and holding tanks, citrus and food processing storage, and holding tanks. Remove gross filth and soil by pre-flush or prescrape and when necessary presoak. Then wash surfaces with a compatible detergent and rinse with potable water prior to sanitizing. Prepare a solution of ½ to 1 ounce of this product per 4 gallons of water (or equivalent use dilution) (200 – 400 ppm active) for mechanical or automated systems. Allow surfaces to remain wet for at least 60 seconds. Drain thoroughly before reuse. No (potable water) rinse is allowed.

For mechanical operations or automated systems, the used sanitizing solution may not be used for sanitizing, but may be reused for other purposes such as cleaning.

GLOVE DIP SANITIZER DIRECTIONS: To prevent cross contamination from area to area in animals areas and the packaging and storage areas of food plants, dip pre-washed (plastic, latex or other synthetic rubber) non-porous gloved hands into a

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suitable clean container that contains enough freshly made sanitizing solution to cover the gloved area. Do not let sanitizing solution come into contact with the exposed skin. Make up the sanitizing solution by adding a 1/8 ounce of this product per gallon of water (or equivalent use dilution) (200 ppm active). Dip (Soak) in solution for 3 minutes. **POTABLE WATER RINSE IS ALLOWED.** Change the sanitizing solution in the bath at least daily or when solution appears dirty. Do not let sanitizing solution come into contact with exposed skin.

SANITIZING EGG SHELLS INTENDED FOR FOOD DIRECTIONS

To sanitize previously cleaned food-grade eggs in shell egg and egg product processing plants, spray with a solution of 1/2 ounce of this product per 4 gallons of warm water (or equivalent use dilution) (200 ppm active). The solution should be warmer than the eggs, but not to exceed 130°F. Wet eggs thoroughly and allow to drain. Eggs sanitized with this product shall be subjected to a potable water rinse only if they are to be broken immediately for use in the manufacture of egg products. Eggs should be reasonably dry before casing or breaking. The solution should not be re-used for sanitizing eggs.

NOTE: Only clean, whole eggs can be sanitized. Dirty, cracked or punctured eggs cannot be sanitized.

MUSHROOM FARM INDUSTRY USE DIRECTIONS

Site Preparation: The first step in any on-going sanitation program should be the removal of gross contamination and debris. This may be accomplished by using a shovel, broom, or vacuum, depending on the area to be disinfected.

Disinfection: Use 1.5 ounces of this product per 5 gallons of water (0.30 ounces per gallon of water) (or equivalent dilution). Wet all surfaces thoroughly. Treated surfaces should be allowed to remain wet for 10 minutes. Let air-dry. For heavily soiled areas, pre-clean first. Prepare a fresh solution for each use.

For Heavy Duty Cleaning: When greater cleaning is desired, use 3 ounces of this product per 5 gallons of water. (0.6 ounces of this product per gallon of water) (or equivalent dilution). Heavily soiled areas may require repeated cleaning before treatment.

DO NOT APPLY TO THE MUSHROOM CROP, COMPOST OR CASING. Rinse treated surfaces with potable water before they contact the crop, compost or casing.

FOR CONTINUOUS TREATMENT OF MEAT AND POULTRY OR FRUIT AND VEGETABLE CONVEYORS: Remove gross food particles and excess soil by a pre-flush or pre-scrape. Wash with a good detergent or compatible cleaner. Rinse equipment thoroughly with potable water. Then rinse equipment with a sanitizing solution. To sanitize the belt apply this product at a 200-400 ppm quat level (1/2 to 1 ounce per 4 gallons) (or equivalent use dilution) to conveyors with suitable feeding equipment. Controlled volumes of sanitizer are applied to return portion of conveyor through nozzles so located as to permit maximum drainage of sanitizer from equipment and to prevent puddles on top of belt. During interruptions in operation, coarse spray equipment, peelers, collators, slicers and saws with this product at a dilution of 200-400 ppm active quat. Conveyor equipment must be free of product when applying this coarse spray. Do not allow this solution to be sprayed directly on food.

FOR SANITIZING IN FISHERIES, MILK, CITRUS, WINE, POTATO & ICE CREAM and BEVERAGE PROCESSING PLANTS: For use as a sanitizer on conveyor belts and equipment to reduce or eliminate odors in the processing area. Also, for use on filling equipment to reduce bacteria associated with condensation on equipment and pipes. Follow directions for sanitizing food contact surfaces.

(Alternative language for bag in the box dispensing equipment.)

DIRECTIONS FOR BAG-IN BOX CONTAINERS

How to use this package: This package is designed to be used with dilution control systems only. Open package and connect to dispense according to directions on the box.

Trigger sprayers: Fill bottle from dispenser. Apply to surfaces according to directions above.

Mop Buckets: Fill bucket from dispenser. Set up "Wet Floor" signs. Mop floor surfaces as specified in directions above.

For Commercial use HORTICULTURAL AND ORNAMENTAL PLANT

It is a violation of Federal Law to use this product in a manner inconsistent with its label. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

COMMERCIAL FLORIST USE DIRECTIONS *(Not applicable in CA):* To clean, disinfect and deodorize hard, non-porous surfaces in one step, prepare use solution by adding (mixing) 1 1/2 ounces per 5 gallons of water (469 ppm active). For heavy-duty use, add (mix) 6 ounces per 5 gallons of water (1,875 ppm active).

Remove all leaves, petals, garbage and refuse. Pre-clean surfaces using pressurized water where possible. Apply Use solution to hard (inanimate) non-porous surfaces, thoroughly wetting surfaces as recommended and required, with a cloth, mop, brush, sponge or sprayer.

For heavily soiled areas, a preliminary cleaning is required.

For sprayer applications, use a coarse (mist) pump or trigger sprayer. Spray 6-8 inches from surface. Rub with brush, sponge or cloth. Do not breathe spray (mist). *(Use of "mist" is not allowed in California.)*

Treated surfaces must remain wet for 10 minutes. Allow to air dry.

Prepare a fresh solution at least daily or sooner if use solution becomes visibly dirty.

Agriculture Use Requirements: *(Note to reviewer: This section might be surrounded by a box on label.)* Use this product only in accordance with its labeling and with the Worker Protection Standard, 40CFR170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE). The requirements in this section (box) only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls worn over long sleeved shirt and long pants, waterproof gloves, chemical-resistant shoes plus socks, and protective eyewear.

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Non-Agricultural Use Requirements: (Note to reviewer: this section might be surrounded by a box on label.) The requirements in this section (box) apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40CFR170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep unprotected persons, children, pets and others out of treated areas until sprays have dried.

CHEMIGATION: Do not apply this product through any type of irrigation system except when used to control algae in nozzles as directed on this label.

GENERAL INFORMATION: This product is a general disinfectant. It will help in the control of fungal, bacterial and viral plant pathogens, bacterial and fungal leaf rots, slime forming fungi, and odor causing bacteria and algae. It is designed specifically for greenhouse use where cross contamination may occur between plants. Pre-clean all surfaces prior to application of the disinfectant solution. All inanimate surfaces must be thoroughly wetted and remain wet for 10 minutes for disinfection. The wipe up excess or allow to air dry. Fresh solution must be prepared daily and when use solution becomes visibly dirty. To apply solutions for sprayer applications, use as a coarse spray only.

DISINFECTING

Work Areas and Benches: Spray or swab working surface with a solution of 1.5 oz. of this product per 5 gallons of water for 10 minutes before each work period and again after each plant is completed to help control transfer of diseases such as *Botrytis*, crown rot, downy mildew, *Erwinia*, *Phalaenopsis* and root rot. To apply solutions for sprayer applications, use as a coarse spray only.

Pots, Flats and Flower Buckets: Brush or wash used pots and flats, then soak in a solution of 1.5 oz. of this product per 5 gallons of water for 10 minutes to help control transfer of diseases such as anthracnose, blight, *Botrytis*, crown rot, *Erwinia*, mildew, *Phalaenopsis*, root rot, and rust.

Cutting Tools: Soak cutting edge of tool for 10 minutes in a solution of 1.5 oz. of this product per 5 gallons of water (or equivalent use dilution) before use to help control transfer of diseases such as *Botrytis*, *Erwinia*, *Phalaenopsis*, root and stem rots, and Tobacco Mosaic Virus (TMV). Dry and oil tools at the end of each workday.

ALGAE CONTROL

When used as directed, this product is effective against algae. With a little experience, you will quickly recognize algae contamination as it starts. Algae should be killed immediately! Remember – algae can double or quadruple in growth every day. Algae are generally dead when it does not feel slick to the touch and the color has changed. However, algae do not always change color when killed.

Greenhouse Glass: Spray or swab surface with a solutions of 0.166 oz. (1 tsp.) of this product per gallon of water. Allow to air dry. Wash off dead algae with water. Spray clean surface again with the solution. Do not rinse. To apply solutions for sprayer applications, use as a coarse spray only.

House Plants: To control algae and cross contamination in terrariums, bubbles, etc., wipe inside of glass with a solution of 0.042 oz. (1/4 tsp.) of this product per quart of water. Lightly spray plants with same solution.

Walkways: For heavy infestations, spray or swab surface with a solution of 0.5 oz. (1 tbsp. 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. This product will inhibit the growth of algae on walkways. Allow to dry on the surface and repeat

application when algae growth returns. To apply solutions for sprayer applications, use as a coarse spray only.

Bird Baths: DO NOT use when fish are present. Clean to remove algae growth prior to filling birdbath and spray the exposed surface with a solution of 0.5 oz. (1 tbsp.) of this product per gallon of water. Allow to air dry and brush off dead algae.

Fountains, Water Displays, Decorative and Swimming Pools/Ponds and Standing Water (in such places as puddles at golf courses, recreational parks, amusement parks, universities and cemeteries): DO NOT use when fish are present. Remove floating type algae by raking, dragging with cable or chain, skimming, or any other suitable method. It is more economical to remove floating type algae before the water is treated. Treat water by "dribbling" this product (1 part of this product to 4 parts water) around the edges where visible algae growth is evident. Apply 12 ounces of use solution per 1000 gallons of water. The use solution is often dribbled liberally along the windward side to float across the water and along the leeward side where contamination gathers. Where a spray rig is available, it may be used to apply the use solution instead of the hand "dribbling" method.

Note: Algae does not usually grow in water that is 5 feet or more in depth. However, floating type algae may grow on pond weeds that grow on the surface of the water.

Decorative Pool Applications

Initial Dosage: 0.166 oz. (1 tsp.) per 52 gallons of water (5ppm*)
1 oz. per 312 gallons of water (5ppm)
1 pint per 5,000 gallons of water (5ppm)
1 quart per 10,000 gallons of water (5ppm)

Weekly Maintenance: Add not more than one-half the initial dosage. When pool is to remain empty for several weeks or longer, spray exposed surfaces with a solution of 0.5 oz. (1 tbsp.) of this product per gallon of water.

Operating Fountains Applications

Initial Dosage: Add a 0.08 oz. (0.5 tsp) of this product per 52 gallons of water at a time. Repeat until slight patches of foam appear. Then discontinue. Overdose reduces lighting efficiency.

Weekly Maintenance: Add not more than 1/2 the initial dosage until slight foam reappears.

Monthly Maintenance: Drain and clean bowl. Refill with fresh water and repeat initial treatment. Draining also removes airborne dirt, dust, contamination and alkali buildup.

Swimming pool Applications

Initial Dose when algae is present: Apply 2 quarts of product per 50,000 gallons water (or 13 ounces per 10,000 gallons of water) followed by cleaning out settled algae next day and retreatment at the same dosage. This is repeated until the pool is clear of visible algae. Then 1 pint of product per 50,000 gallons of water (or 3 1/5 ounces per 10,000 gallons of water) is used every 5 – 7 days to maintain control.

Initial Dose when no signs of algae: Apply 1 pint of product per 50,000 gallons of water (or 3 1/5 ounces per 10,000 gallons of water) every 5 – 7 days.

Apply product along edges of pool. Keep the filter running to facilitate one change over of water in the pool after treatment. Back flush the filter if it becomes clogged or if the pressure drops. After adding the product wait 30 minutes before using the pool to allow the product to be distributed evenly throughout the pool. At the beginning of the swimming season or after a storm, remove branches, leaves and other foreign material before treating pool with product.

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TREATMENT OF LAWNS, GOLF COURSES AND COMMERCIAL TURF

To control fungal diseases [including dollar spot (*Scierotinia*), fusarium blight (*Fusarium*), leaf spot (*Helminthosporium*), brown patch (*Rhizoctonia*), fading out (*Curvularia*), Southern blight (*Scierotium rolfsii*), pythium blight, rust, toad stools and fairy rings] and algal build-up in turf grasses, including lawns of GRASS or DISHONDRA, spray a solution of one tablespoon (1/2 oz) of this product per gallon of water. Treat at the rate of one gallon of solution to 40 square feet (4 ft. x 10 ft.) of lawn. Treat entire lawn to prevent spread of infection or at least one foot beyond the edges of isolated diseased areas. Saturate the entire treatment area, wetting all plant and soil surfaces. Repeat spray applications every 10 to 14 days, as needed to control new or established disease conditions. Treatment is required during the warm growing season and must be made when the lawn is dry or damp, but not during wet rainy weather.

For golf courses, greens, tees and fairways, and commercial turf applications, follow the use directions above. If commercial power sprays are used, reduce spray concentration to one teaspoon per gallon of water (or one pint to 50 to 100 gallons of spray mixture to treat 10,000 square feet or ¼ acre) (1.6 oz. per 1,000 square feet or ½ gallon per acre).

Do not graze treated areas or feed clippings to livestock.

MOSQUITO CONTROL

When used as directed, this product is effective as an ovicidal, larvacidal, pupacidal control of aedes aegypti (Yellow fever carrier) and Culex nigripalpus (carrier of various diseases of man and animal, such as heartworm and Hepatitis) mosquitos. This product will also reduce larval populations of Anopheles quadrimaculatus (Malaria carrier) mosquitoes.

This product controls mosquitoes where they breed (fountains, water displays, decorative pools, decorative ponds, sewage treatment systems, spas, hot tubs, swimming pools and standing water in such places as old tires, empty tire cans, barrels, puddles, and water drains around buildings). NOTE: Only out-of-season, not-in-service, or inactive spas, hot tubs, swimming pools require treatment for mosquito control. Do not treat during the swimming season.

Spray from fountains treated with this product will not harm poolside plantings. DO NOT use when fish are present.

Metric	US	Metric	US
3.8 cc	0.13 oz.	3.78 L	1 gal.
38.0 cc	1.28 oz.	37.85 L	10 gal.
380 cc	12.8 oz.	378.5 L	100 gal.
3785.0 cc	1.0 gal.	3.75 KL	1,000 gal.

Treat Water by "dribbling" this product solution around the edges of the site to be treated. Where a spray rig is available – it may be used to apply the use solution – instead of the hand dribbling method.

*ppm – parts per million active ingredient

Metric	US	Metric	US
1.9 cc	0.065 oz.	3.78 L	1 gal.
19.0 cc	0.64 oz.	37.85 L	10 gal.
190 cc	6.4 oz.	378.5 L	100 gal.
1892.5 cc	64 oz.	3.75 KL	1,000 gal.

Each week repeat maintenance dosage or add this product using a test kit to maintain the proper concentration.

*ppm – parts per million active ingredient

OTHER USES

Overhead Watering Systems: During the last 2-3 minutes of watering use 1 oz. (2 tablespoons) of this product per 20 gallons of water as a control program. Due to variations of growing conditions, use every second to fourth watering. Will control algae in nozzles.

Evaporative Cooler: Controls algae, slime forming fungi on cooler pads and certain fungal plant pathogens that may carry over in the cooler as well as bacterial odors. Use 1 teaspoon of this product per 15 gallons of water every other week.

NOTE: Unintentional consequences such as crop injury or ineffectiveness may result because of certain environmental or growing conditions, manner of use or applications, and insect resistance. Therefore, before treating a large number of plants, spray a few plants and observe for plant damage and for performance prior to full-scale application. All risks shall be assumed by the user.

For Residential use

HORTICULTURAL AND ORNAMENTAL PLANT

It is a violation of Federal Law to use this product in a manner inconsistent with its label. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

This product is a general disinfectant. It will help in the control of fungal, bacterial and viral plant pathogens, bacterial and fungal leaf rots, slime forming fungi, and odor causing bacteria and algae. It is designed specifically for use where disease cross contamination may occur between plants. Pre-clean all surfaces prior to application of the disinfectant solution. All inanimate surfaces must be thoroughly wetted and remain wet for 10 minutes for disinfection. Then wipe up excess or allow to air dry. Fresh solution must be prepared daily and when use solution becomes visibly dirty. To apply solution for sprayer applications, use as a coarse spray only.

Work Areas and Benches: Spray or swab working surface with a solution of 0.5 oz. (1 tbsp.) of this product per gallon of water (or equivalent use dilution) for 10 minutes before each work period and again after each plant is completed to help control transfer of diseases such as *Botrytis*, crown rot, downy mildew, *Erwinia*, *Phalaenopsis* and root rot. To apply solutions for sprayer applications, use as a coarse spray only.

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Pots, Flats and Flower Buckets: Brush or wash used pots and flats, then soak in a solution of 0.5 oz. (1 tbsp.) of this product per gallon of water (or equivalent use dilution) for 10 minutes to help control transfer of diseases such as anthracnose, blight, *Botrytis*, crown rot, *Erwinia*, mildew, *Phalaenopsis*, root rot, and rust.

Cutting Tools: Soak cutting edge of tool for 10 minutes in a solution of 0.5 oz. (1 tbsp.) of this product per gallon of water (or equivalent use dilution) before use to help control transfer of diseases such as *Botrytis*, *Erwinia*, *Phalaenopsis*, root and stem rots, and Tobacco Mosaic Virus (TMV). Dry and oil tools at the end of each workday.

ALGAE CONTROL

When used as directed, this product is effective against algae. With a little experience, you will quickly recognize algae contamination as it starts. Algae should be killed immediately! Remember – algae can double or quadruple in growth every day. Algae are generally dead when it does not feel slick to the touch and the color has changed. However, algae do not always change color when killed.

Greenhouse Glass: Spray or swab surface with a solution of 0.166 oz. (1 tsp.) of this product per gallon of water. Allow to air dry. Wash off dead algae with water. Spray clean surface again with the solution. Do not rinse. To apply solution for sprayer applications, use as a coarse spray only.

House Plants: To control algae and cross contamination in terrariums, bubbles, etc., wipe inside of glass with a solution of 0.042 oz. (¼ tsp.) of this product per quart of water. Lightly spray plants with same solution.

Walkways: For heavy infestations, spray or swab surface with a solution of 0.5 oz. (1 tbsp.) 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. This product will inhibit the growth of algae on walkways. Allow to dry on the surface and repeat application when algae growth returns. To apply solutions for sprayer applications, use as a coarse spray only.

Bird Baths: DO NOT use when fish are present. Clean to remove algae growth prior to filling birdbath and spray the exposed surface with a solution of 0.5 oz. (1 tbsp.) of this product per gallon of water. Allow to air dry and brush off dead algae.

Fountains, Water Displays, Decorative and Swimming Pools/Ponds and Standing Water (in such places as puddles at golf courses, recreational parks, amusement parks, universities and cemeteries): DO NOT use when fish are present. Remove floating type algae by raking, dragging with cable or chain, skimming, or any other suitable method. It is more economical to remove floating type algae before the water is treated. Treat water by "dribbling" this product (1 part of this product to 4 parts water) around the edges where visible algae growth is evident. Apply 12 ounces of use solution per 1000 gallons of water. The use solution is often dribbled liberally along the windward side to float across the water and along the leeward side where contamination gathers. Where a spray rig is available, it may be used to apply the use solution instead of the hand "dribbling" method.

Note: Algae does not usually grow in water that is 5 feet or more in depth. However, floating type algae may grow on pond weeds that grow on the surface of the water.

Decorative Pool Applications

Initial Dosage: 0.166 oz. (1 tsp.) per 52 gallons of water (5ppm*)
1 oz. per 312 gallons of water (5ppm)
1 pint per 5,000 gallons of water (5ppm)

Weekly Maintenance: Add not more than one-half the initial dosage. When pool is to remain empty for several weeks or longer, spray exposed surfaces with a solution of 0.5 oz. (1 tbsp.) of this product per gallon of water.

Operating Fountains Applications

Initial Dosage: Add a 0.08 oz. (0.5 tsp) of this product per 52 gallons of water at a time. Repeat until slight patches of foam appear. Then discontinue. Overdose reduces lighting efficiency.

Weekly Maintenance: Add not more than ½ the initial dosage until slight foam reappears.

Monthly Maintenance: Drain and clean bowl. Refill with fresh water and repeat initial treatment. Draining also removes airborne dirt, dust, contamination and alkali buildup.

TREATMENT OF LAWNS

To control fungal diseases [including dollar spot (*Scierotinia*), fusarium blight (*Fusarium*), leaf spot (*Helminthosporium*), brown patch (*Rhizoctonia*), fading-out (*Curvularia*), Southern blight (*Scierotium rolfsii*), pythium blight, rust, toad stools and fairy rings] and algal build-up in turf grasses, including lawns of GRASS or DISHONDRA, spray a solution of one tablespoon (1/2 oz) of this product per gallon of water. Treat at the rate of one gallon of solution to 40 square feet (4 ft. x 10 ft.) of lawn. Treat entire lawn to prevent spread of infection or at least one foot beyond the edges of isolated diseased areas. Saturate the entire treatment area, wetting all plant and soil surfaces. Repeat spray applications every 10 to 14 days, as needed to control new or established disease conditions. Treatment is required during the warm growing season and must be made when the lawn is dry or damp, but not during wet rainy weather.

MOSQUITO CONTROL

When used as directed, this product is effective as an ovicidal, larvicidal, pupacidal control of aedes aegypti (Yellow fever carrier) and Culex nigripalpus (carrier of various diseases of man and animal, such as heartworm and Hepatitis) mosquitos. This product will also reduce larval populations of Anopheles quadrimaculatus (Malaria carrier) mosquitoes.

This product controls mosquitoes where they breed (fountains, water displays, decorative pools, decorative ponds, sewage treatment systems, spas, hot tubs, swimming pools and standing water in such places as old tires, empty tin cans, barrels, puddles, and water drains around buildings). NOTE: Only out-of-season, not-in-service, or inactive spas, hot tubs, swimming pools require treatment for mosquito control. Do not treat during the swimming season.

Spray from fountains treated with this product will not harm poolside plantings. DO NOT use when fish are present.

INITIAL DOSAGE				
Metric		Parts per million (ppm)		
ml	US	ppm	Metric	US
3.8 cc	0.13 oz.	5	3.78 L	1 gal.
38.0 cc	1.28 oz.	50	37.85 L	10 gal.
380 cc	12.8 oz.	500	378.5 L	100 gal.
Treat Water by "dribbling" this product solution around the edges of the site to be treated.				

*ppm – parts per million active ingredient

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WEEKLY MAINTENANCE			
This product		Water	
Metric	US	Metric	US
1.9 cc	0.065 oz.	3.78 L	1 gal.
19.0 cc	0.64 oz.	37.85 L	10 gal.
190 cc	6.4 oz.	378.5 L	100 gal.

Each week repeat maintenance dosage or add this product using a test kit to maintain the proper concentration.

*ppm – parts per million active ingredient

OTHER USES

Evaporative Cooler: Controls algae, slime forming fungi on cooler pads and certain fungal plant pathogens that may carry over in the cooler as well as bacterial odors. Use 1 teaspoon of this product per 15 gallons of water every other week.

NOTE: Unintentional consequences such as crop injury or ineffectiveness may result because of certain environmental or growing conditions, manner of use or applications, and insect resistance. Therefore, before treating a large number of plants, spray a few plants and observe for plant damage and for performance prior to full-scale application. All risks shall be assumed by the user.

ORCHIDS

Species	Disease	Concentration	Application
Seedlings	Damping-off (caused by Pythium, Fusarium, or Rhizopus)	0.25 oz. (1.5 tsp.)	From flask, soak seedling in solution for 2-5 minutes before potting to remove agar. Spray seedlings once a month as preventative maintenance. Spray any time disease is evident with solution.
Dividing plants		0.5 oz. (1 tbsp.)	Remove compost then soak plant for 2-5 minutes in solution. Operate with wet hands and cutting tools (see <i>Disinfecting</i>). After division and root trim, soak divisions in solution for 2 to 5 minutes. Pot in compost drenched with solution.
Adult Plants		0.333 (2 tsp.)	Spray any time disease, other than rot (see <i>Adult Orchid Rots</i>), is evident with solution. Spray once per month as preventative maintenance. Drench compost when fungus is evident.
	Botrytis petal blight	0.055 oz. (1/3 tsp.)	During cool weather, spray plants, flowers and under benches at first sign of spotting on flowers. Normally, weekly sprayings will greatly reduce or eliminate the botrytis spotting.
	Rots (such as <i>Erwiniam</i> , et al)	0.5 oz. (1 tbsp.)	Remove compost from plant, then soak entire plant 10 minutes or more in solution. Cut away all rot with treated tool (see <i>Disinfecting</i>). Soak plant wounds again for 10 minutes in solution, Report in drenched compost.
	Crown rot	0.333 (2 tsp.)	Spray plants weekly with solution, assuring coverage around and in base of leaves.

HORTICULTURAL USAGES

Species	Disease	Concentration	Application
Bulbs such as Daffodils, Easter lilies, Gladioli, Hyacinth, Iris, Narcissus, Tulips	Fusarium basal rot	0.5 oz. (1 tbsp.)	Prestorage: Treat the combs and bulbs immediately after they are "cleaned" by soaking them for 10 minutes in the solution. Preplant: Treat again immediately before planting.
Cut Flowers in containers, tubes and decorative vases	Bacterial stem plugging (restricts water uptake) Fungi (can create ethylene gas, a case of petal drop)	0.166 oz. (1 tsp.)	Flower spikes should be hardened in solution during harvesting, storage and shipping to help control the transfer of diseases.
Plant Cuttings such as Begonias, Carnations, Chrysanthemums, Fuschias, Geraniums	Carnation rust, Crown gall, Gray mold leaf spots and Powdery mildew	0.333 (2 tsp.)	Soak cuttings 2-5 minutes in the solution. Plant in compost drenched with the solution.
Seedlings	Damping off	0.333 (2 tsp.)	Treat seeds and cuttings before planting by spraying with solution to completely wet all surfaces. Use inert material for planting seeds and cuttings, such as sphagnum moss, vermiculite, perlite, pumice, sterilized commercial mix rather than garden soil. If garden soil must be used, thoroughly saturate with the solution. After planting, water with solution (unless using soil saturated as above) and again after seedlings emerge. Spray weekly as needed.
	Downy mildew	0.333 (2 tsp.)	Spray with solution at 5 day intervals as needed.

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ORNAMENTAL USAGES

Species	Disease	Concentration	Usage
Aucuba, Dahlia, Fuschia, Geranium, Gladiolus, Peony, Piersis	Botrytis	0.333 (2 tsp.)	Spray buds and blooms lightly at first sign of disease, and repeat 2-3 times per week as needed. Before shipping, dip spikes in solution.
	Downy mildew, Gray mold	0.333 (2 tsp.)	Spray at first sign of disease repeating at 7-14 day intervals. Before shipping, dip spikes in solution.
	Rust	0.333 (2 tsp.)	Spray at 7-14 day intervals during the wet periods starting in early Summer. Before shipping, dip spikes in solution.
Begonias, Ferns, Gesneria	Bud rot, Leaf spots, Gray mold, Shoot rot	0.166 oz. (1 tsp.)	Spray solution before buds open, when blossoms show pink, at ¾ blossom fall, and 2 weeks after petal fall.
Cactus	Bacterial leaf spot, Root rot, Top rot	0.333 (2 tsp.)	Sterilize seeds and disease free cuttings by dipping cuttings in the solution for 5 minutes before planting. Then spray at 10-14 day intervals.
	Slimy collar rot	0.333 (2 tsp.)	Just before planting, dip entire plant in the solution.
Calendulas, China Asters, Chrysanthemum, Dahlias, Lilac, etc.	Powdery mildew	0.333 (2 tsp.)	Spray upper and lower surface of leaves and branches with solution until thoroughly wet. Spray when buds burst in Spring and repeat in 2 weeks. Spray every 2 weeks during the mildew season.
Carnations	Canker rot, Carnation rust, Crown rot, Leaf spot, Root rots, Stem rot	0.333 (2 tsp.)	Spray at first sign of disease and repeat at 7-10 day intervals.
	Gray mold rot	0.333 (2 tsp.)	Spray 1-2 times just before bloom and again as flowers are opening.
Crassula, Kalanchoe, Sedum	Crown gall, Crown rot, Root rot	0.333 (2 tsp.)	Destroy infected plant parts and drench the remainder. Spray plants weekly as needed.
Dogwood	Anthracnose, Leaf blight, Leaf spots	0.333 (2 tsp.)	Spray 4 times: when flower buds begin to open, as soon as flower bracts have fallen, 4 weeks later, and in late summer after flower buds are well formed. If possible, spray just before rainy period.
Fuschia, Gardenia, Geranium, Heliotrope	Bud rot, Gray mold, Stem rot	0.333 (2 tsp.)	Spray at first sign of disease and repeat weekly as needed.
Hawthorn	Rust	0.333 (2 tsp.)	Begin protective spraying with new leaf formation after winter dormancy but before onset of rainy season. Thoroughly spray undersides of infected leaves.
Hawthorn (Crataegus)	Leaf blights	0.333 (2 tsp.)	Make 3 applications: begin when leaves emerge from buds, when leaves are half grown, and again when fully grown.
Hollyhock	Rust	0.333 (2 tsp.)	Apply at weekly intervals as soon as growth begins. Repeat applications in late Summer.
Iris	Botrytis, Crown rot, Gray mold rot	0.333 (2 tsp.)	Treat all new rhizomes before planting. Submerge rhizomes and 3-4" of leaves in the solution for 30 minutes. Plant at once while still wet with solution.
	Leaf spots	0.333 (2 tsp.)	Spray weekly with solution while leaves are growing.
Ornamental trees (such as Sycamore, Ash, Crape Myrtle, Live Oak, etc.)	Anthracnose	0.333 (2 tsp.)	Spray upper and under sides of leaves and twigs until thoroughly wet. A large tree requires 50-60 gallons of spray per treatment for adequate coverage. Make 3 applications: when buds start to swell in the spring, as leaves start to expand, and when leaves are about ¾ grown.
	Powdery Mildew	0.333 (2 tsp.)	Spray upper and lower surface of leaves and branches with solution until thoroughly wet at bud break and again in April. Apply 50-60 gallons of spray per tree for adequate coverage.

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Palms	Heart rot, Penicillium, leaf base rot	0.333 (2 tsp.)	At first sign of rot, completely fill cup or "heart" formed by the palm branches at top center of the plant. Repeat every 7 days as needed.
Roses	Black spots, Powdery mildew, Rusts, Stem gall	0.333 (2 tsp.)	When symptoms appear, spray upper and lower surface of leaves and branches with solution until thoroughly wet. Apply at 7-10 day intervals as needed.
	Brown canker	0.333 (2 tsp.)	Begin spray applications in early spring when new growth starts and repeat weekly until plant is dormant.
Rubber Plant	Anthraxnose, Crown gall	0.166 oz. (1 tsp.)	Spray plant at first sign of disease and repeat weekly as needed.
Saintpaulias (African Violets)	Bud rot, Crown rot, Downy mildew, Gray mold rot (Botrytis), Powdery mildew, Root rot	0.125 oz. (3/4 tsp.)	Dip entire plant and pot in the solution for 5 minutes. Thereafter, spray every 10 days as needed.
Snapdragons	Anthraxnose, Downy mildew, <i>Phyllosticta</i> blight, Powdery mildew, Stem rot, Wilt	0.333 (2 tsp.)	When symptoms appear, spray upper and lower sides of leaves until thoroughly wet. Repeat every 7-10 days as needed. Collect and burn tops in the fall.
	Rust	0.333 (2 tsp.)	Apply at 7-10 day intervals as soon as plants are set out. Collect and burn tops in the Fall.

258829

**TWO OUNCE PACKET LABEL TO BE USED WITH MASTER
CONTAINER LABEL FOR DISINFECTION**

FOR DISINFECTION

MIX EACH PACKET WITH 5 GALLONS OF WATER

MAQUAT 20-M

E.P.A. Reg. No. 10324-94 E.P.A. Est. No. 10324-IL-1

NET CONTENTS: 2.0 FLUID OZ.

ACTIVE INGREDIENTS:

Alkyl (C₁₄ 60%, C₁₆ 30%, C₁₂ 5%, C₁₈ 5%)
dimethyl benzyl ammonium chloride..... 10.0%
Alkyl (C₁₂ 68%, C₁₄ 32%)
dimethyl ethylbenzyl ammonium chloride 10.0%

INERT INGREDIENTS: 80.0%

TOTAL: 100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER

SEE OUTER CONTAINER FOR PRECAUTIONARY STATEMENTS AND USE
DIRECTIONS.

DISPOSAL: Do not reuse container. Wrap and put in trash collection.

MASON CHEMICAL COMPANY

"THE QUATERNARY SPECIALISTS"

721 W. Algonquin Road
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847-290-1621

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**ONE-HALF (1/2) OUNCE PACKET LABEL TO BE USED
WITH MASTER CONTAINER LABEL FOR FOOD
CONTACT SANITIZER**

FOR FOOD CONTACT SANITIZER

MIX EACH PACKET WITH 4 GALLONS OF WATER

MAQUAT 20-M

E.P.A. Reg. No. 10324-94 E.P.A. Est. No. 10324-IL-1

NET CONTENTS: 0.5 FLUID OZ.

ACTIVE INGREDIENTS:

Alkyl (C₁₄ 60%, C₁₆ 30%, C₁₂ 5%, C₁₈ 5%)
dimethyl benzyl ammonium chloride..... 10.0%
Alkyl (C₁₂ 68%, C₁₄ 32%)
dimethyl ethylbenzyl ammonium chloride 10.0%

INERT INGREDIENTS: 80.0%

TOTAL: 100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER

SEE OUTER CONTAINER FOR PRECAUTIONARY STATEMENTS AND USE
DIRECTIONS.

DISPOSAL: Do not reuse container. Wrap and put in trash collection.

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