

10324-162

2/28/2007

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

FEB 28 2007

Ms. Elizabeth Tannehill
Regulatory Manager
Mason Chemical Company
721 W. Algonquin Rd.
Arlington Heights, Il 60005

Subject: Maquat 2420-Citrus
EPA Registration no. 10324-162
Application Date: 10/09/06
Receipt Date: 10/11/06

Dear Ms. Tannehill:

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

- Adding additional organisms and marketing statements

EFFICACY

- The proposed label claims that the product, Maquat 2420-Citrus, is an effective disinfectant at a dilution of 1/2 ounce of product per gallon of water with a contact time of 10 minutes on hard, non-porous surfaces in the presence of 5% serum contamination and water up to 250 ppm hardness at room temperature against the following organisms:

Trychophyton mentagrophytes
Swine Influenza A virus
Pseudorabies virus
Porcine Respiratory & Reproductive Syndrome virus
Vesicular Stomatitis virus
Porcine Rotavirus
Transmissible Gastroenteritis virus

*Note: The word "virus" must appear after these claims; it is misleading to claim that a product is effective against diseases or conditions rather than their causative agents.

- Correct page 4 of the label which lists as "Procine Rotavirus". You must change this to read "Porcine Rotavirus".

CONCURRENCES							
SYMBOL	15100						
SURNAME	Stine						
DATE	2/28/07						

3. On page 4 of the label (right panel), list a 10 minute contact time for fungicidal performance of *T. mentagrophytes*.
4. On page 4 of the label (right panel) revise the dilution guide need to be amended. The dilution for "Virucidal claims" and "Animal virucidal claims" must be changed to read ½ oz/gal. Water, instead of 1/4 oz/gal. Of water.
5. On page 5 of the label are instructions for general disinfection and it is indicated the use solution be prepared by adding 1/4 ounce of product to one gallon of water. Directions specific to use against viruses and *T. mentagrophytes* indicate that a ½ ounce per gallon dilution should be used. In a future submission to the Agency, you may want to consider changing the general disinfection dilution to ½ ounce per gallon so that the label is less confusing to the consumer. In the interim, revise the label to specify that the general disinfection directions are for bacteria only.
6. On page 9 of the label (right column) under 2000-5 "Entryway Sanitizing Systems", you must revise the directions to read "...The (spray) (foam) must cover the entire path of the doorway.... " to be in accordance with PR Notice .
7. The nomenclature of *Salmonella choleraesuis* (ATCC 10708) has been changed to *Salmonella enterica* by the ATCC. Revise your label to reflect this change.
8. Revise the 6th claim/bullet in the right column on page 4 to end as follows: "...coils and drain pans of air conditioning, refrigeration equipment and heat pumps." By deleting the word "and" following air conditioning.
9. Revise the 12th claim/bullet in the right column on page 4 to include the following: "...latrine buckets, *glazed* porcelain tile and restroom..."
10. Delete the heading "Organism Guide" on page 4 and replace with the heading "Directions for Use" along with the statement: "It is a violation of Federal Law to use this product in a manner inconsistent with its labeling." Delete this heading and statement as they appear in the right column on the same page. The directions for the use of this product begin where you have proposed the heading "Organism Guide".
11. Since the animal viruses listed under "Animal Premise Virucidal Performance" are not indicative of the other use sites on this label, these directions and this list of animal viral pathogens must be deleted from page 4 and placed "Veterinary Practice" section on page 6. and place page 7 with the poultry and farm applications directions.
12. Revise page 9, directions for automated tray, rack, buggy washers, egg receiving and egg holding areas to include: "Treat hard non-porous, non food contact surfaces of automated

trays, racks..." and "saturate hard non porous, non food contact surfaces with the solutions..."

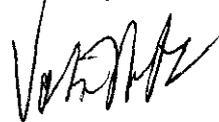
- 13. Revise page 9, directions for automated tray, rack, buggy washers, egg receiving and egg holding areas such that the last line indicate: "change the disinfecting solution..."
- 14. In accordance with current Agency policy on Avian Influenza label claims, featured statement/phrases emphasized/enlarged lettering, special graphics, or any product name that employs the terms "Avian influenza A" or "Bird Flu" are unacceptable. Featured statements/phrases, emphasized/enlarged lettering or special graphics that are employed for the primary purpose of especially promoting or drawing attention to product efficacy against avian influenza A, are also unacceptable.
- 15. Revise the "Shoe Bath Sanitizer Directions" on page 9 to include mandatory language (PR Notice 2000-5) as follows: "...shoe baths containing one inch of freshly made sanitizing solution *must* be placed at all..."
- 16. Revise the "Entryway Sanitizing Systems" directions on page 9 to include mandatory language (PR Notice 2000-5) as follows: "...The (spray) (foam) *must* cover the entire path of the doorway..."

GENERAL COMMENTS

A stamped copy of the accepted labeling is enclosed. Submit three (3) copies of your final printed labeling before distributing or selling the product bearing the revised labeling.

Should you have any questions or comments concerning this letter, please contact Zenobia Jones at 703-308-6198.

Sincerely,



Velma Noble
Product Manager 31
Regulatory management Branch 1
Antimicrobial Division (7510C)



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. 10324-162

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

MAQUAT 2420-CITRUS

Net Contents:

Batch No:

Key Label

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

DANGER. Keep Out of Reach of Children. Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed, if absorbed through the skin, or inhaled. Do not get in eyes, on skin or on clothing. Avoid breathing vapor or spray mist. Wear goggles, face shield or shielded safety glasses, protective clothing, and chemical-resistant gloves. Wash thoroughly with soap and water after handling and before eating, drinking, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

(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 - Cleaner - Mildewstat - Fungicide - Sanitizer (nonfood contact surfaces) - Virucide* - Deodorizer for Home, Industrial, School, Dairy, Equine and Poultry/Turkey Farm, Veterinary, Restaurant, Food Handling and Process Areas, Federally Inspected Meat and Poultry Plants, Bar and Institutional Kitchen Use and for Harvesting & Handling Equipment. Effective in hard water up to 250 ppm hardness (Calculated as CaCO₃) in the presence of 5% serum contamination.

Formulated for effective (Poultry) Chicken, Turkey, Duck, Quail, Ostrich, Emu and other Avian hatchery sanitation.

Formulated for effective Swine Premise Sanitation

Formulated for effective Mushroom Farm Sanitation

ACCEPTED
 with COMMENTS
 FEB 28 2007
 Under the Federal Insecticide,
 Fungicide, and Rodenticide Act as
 amended for the pesticide
 registered under EPA Reg. No.
 10324-162

ACTIVE INGREDIENTS:

Didecyl Dimethyl Ammonium Chloride 13.0%
 Alkyl (C₁₄, 50%; C₁₂, 40%; C₁₆, 10%)
 dimethyl benzyl ammonium chloride 8.68%

INERT INGREDIENTS:

TOTAL 100.00%

**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.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

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

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

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 in schools, institutions and industry.

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

This product is a concentrated 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.

This product is a versatile disinfectant/sanitizer for Veterinarian, Veterinarian 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 for use in California.)

This product is for use in household and commercial humidifiers. Use of this product will control a build-up of slime and unpleasant (malodors) odors. (Not for use in California.)

This product is for use as a disinfectant*virucide on hard, non-porous surfaces. A potable water rinse is required after application on food contact surfaces.

This product is an effective fungicide against Trichophyton mentagrophytes (athlete's foot fungus) (a cause of Ringworm) when used on surfaces in areas such as locker rooms, dressing rooms, shower and bath areas, exercise facilities. (10324-141)

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

This product is a one-step disinfectant that is effective against a broad spectrum of bacteria, is virucidal* and inhibits the growth of mold and mildew and their odors when used as directed.

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

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 caused 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 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 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 for non-scratch cleaning of showers and tubs, shower doors and curtains, fixtures and toilet bowls.

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

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

Use this product to clean, sanitize and disinfectant non-porous personal protective safety equipment, protective headgear, 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 120°F temperature will avoid overheating and distortion of the personal safety equipment that would necessitate replacement.)

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

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 for use in California.)

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

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 for use in California.)

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 for use in California.)

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.

This product is an effective one-step sanitizer-cleaner for use on non-food contact surfaces.

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Floor cleaner.

One-step cleaner.

Cleans everyday kitchen messes.

Cleans non-food contact 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.

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 grime.

Salmonella choleraesuis (*Salmonella*), and *Staphylococcus aureus* (*Staph*) are common germs found where food is prepared and stored. This product kills these harmful germs 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. This product is not for use on dishes, glassware, eating utensils, or interior surfaces of appliances.

Disinfects (and Sanitizes) kitchen surfaces (bathroom surfaces and floors). Sanitizes kitchen surfaces (bathroom surfaces and floors). Kills germs. Kills household bacteria. A potable water rinse is required after application on food contact surfaces.

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

This product is effective in hard water and in the presence of moderate soil loads, as part of a total sanitation program.

Minimizes spread of contamination on treated surfaces during clean up as it both cleans and disinfects.

Pathogenic fungicide.

Quaternaries are not volatile and do not evaporate from surfaces like iodine, chlorine and formaldehyde.

Contains sequestering agents to prevent the precipitation of mineral and metals from hard water.

This product destroys many odors as it sanitizes and disinfects.

Effective sanitizer in the presence of 5% serum contamination.

Effective sanitizer in the presence of soils.

Maquat 2420-Citrus for use in:

- 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.
- Central supply, housekeeping & janitorial rooms.
- EMS & fire facilities, fire stations, emergency vehicles, police cars.
- Day care centers and nurseries.

- 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, photocopy centers, bicycle shops, auto repair centers.
- Computer manufacturing sites, toy factories.
- Food establishments, coffee shops, donut shops, bagel stores, pizza stores, liquor stores.
- Crime scenes and funeral homes, mortuaries, burial vaults, mausoleums, autopsy rooms.
- Police stations, courthouses, correctional facilities, jails, prisons, municipal government buildings, bus stations, train stations.
- 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)
- 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.
- Heath clubs, spas, tanning spas/beds, footbath surfaces, 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.
- Processing facilities for Fish, Milk, Citrus, Fruits, Vegetables, Ice Cream, and Potatoes and beverage plants.
- Tobacco plant premises 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, shipping terminals, public transportation.
- Commercial florist and flower shops. (Not for use in California.)
- Basements, cellars, bedrooms, attics, living rooms and porches.

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

- Countertops (counter surfaces), stovetops (stove surfaces), sink surfaces (bathroom, kitchen), tub surfaces, and exterior surfaces of Slurppy® machines, appliances, outer surfaces of refrigerators and ice machines.
- Glass, metal, stainless steel, glazed porcelain, galvanized metal, glazed ceramic, sealed fiberglass, granite, marble, plastic (such as polystyrene or polypropylene), sealed limestone, sealed slate, sealed stone, sealed terra cotta, sealed terrazzo, chrome and vinyl, artificial grass and Astroturf®.
- Enameled surfaces, painted (finished) woodwork, Formica®, linoleum tile, 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 fans, refrigerated storage and display equipment, coils and drain pans of air conditioning, refrigeration equipment and heat pumps.
- Large, inflatable, non-porous plastic and rubber structure: animals, promotional items, moonwalk, slides, obstacle course play and exercise equipment.
- Non-wooden picnic tables and outdoor (patio) furniture, except cushions and wood frames.
- Telephones and telephone booths.
- Highchairs.
- 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.
- Kennels, kennel runs, kennel/cages floors, conductive flooring.

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

ORGANISM GUIDE *Directions for Use*

Disinfectant Performance: Add ¼ ounce of this product to one (1) gallon of water (425 ppm active) OR mix a ¼ ounce packet with one (1) gallon of water. Treated surfaces must remain wet for 10 minutes. 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:

- Staphylococcus aureus* ATCC 6538
- Salmonella choleraesuis* ATCC 10708

Animal Premise Virucidal Performance: At ½ ounce per gallon of water use level (850 ppm active quat) (1:256) (or equivalent use dilution), this product was evaluated in the presence of 5% serum and up to 250 ppm hard water with a 10 minute contact time and found to be effective against the following viruses on hard, non-porous environmental surfaces:

- Avian Influenza A Virus* ATCC VR2072
- Newcastle disease virus* ATCC VR108
- Avian Adenovirus* ATCC VR280
- Infectious Bursal Disease Virus*

- Avian Reovirus* ATCC VR2449
- Infectious Laryngotracheitis Virus* LT-IVAX
- Procine Rotavirus*
- Swine Influenza A*
- Transmissible Gastroenteritis*

- Infectious Bronchitis Virus* Beaudette IB42
- Pseudorabies*
- Porcine Respiratory & Reproductive Syndrome Virus*
- Vesicular Stomatitis*

Non-Food Contact Sanitizing Performance: At ¼ ounce per gallon 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 organisms on hard, non-porous environmental surfaces:

- Staphylococcus aureus* (ATCC 6538)
- Enterobacter aerogenes* (ATCC 13048)

Fungicidal Performance: At ¼ ounce per gallon of water use level (425 ppm active quat) (1:512) (or equivalent use dilution), this product was evaluated in the presence of 5% serum and up to 250-ppm hard water with a 10-minute contact time and found to be effective against the following fungi on hard, non-porous environmental surfaces:

- Aspergillus niger* ATCC 16404
- Candida albicans* ATCC 10231
- Aspergillus fumigatus* ATCC 36607

At ½ ounce per gallon of water use level (847 ppm active quat) (or equivalent use dilution), this product was evaluated in the presence of 5% blood serum and 250-ppm hard water and found to be effective against the following on hard, non-po environmental surfaces:

- Trichophyton mentagrophytes* ATCC 9533

Dilution Guide:

- For General or Broad Spectrum claims
- For Virucidal claims
- For Animal Virucidal claims
- For Non-Food Contact Sanitizing claims

- ¼ oz/gal. water
- ½ oz/gal. water
- 1 oz/gal. water
- 2 oz/gal. water

General Disinfection Use Dilution Guide

Ounces of Product	Amount of Water
0.0625 ounces	1 quart
0.125 ounces	½ gallon
0.250 ounces	1 gallon
0.625 ounces	2 ½ gallons
1.250 ounces	5 gallons
2.500 ounces	10 gallons

Virucidal Use Dilution Guide

Ounces of Product	Amount of Water
0.125 ounces	1 quart
¼ ounce	½ gallon
½ ounce	1 gallon
1¼ ounces	2 ½ gallons
2½ ounces	5 gallons
5.0 ounces	10 gallons

DIRECTIONS FOR USE

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

This product is not for use on Medical device surfaces.

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DISINFECTION

PREPARATION OF USE SOLUTION: For water hardness up to 250 ppm add a ¼ ounce per gallon (2 milliliters per liter) of water (1:512) (or equivalent use dilution) to disinfect hard, non-porous surfaces OR mix a one (1) ounce packet with 4 gallons of water. Treated surfaces must remain wet for 10 minutes.

Apply use solution to hard, inanimate, non-porous surfaces, thoroughly wetting surfaces as recommended and required, with a cloth, mop, sponge or sprayer. For heavily soiled areas, a preliminary cleaning is required. For sprayer applications, use a coarse spray device. Spray 6-8 inches from surface. Rub with brush, sponge or cloth. Do not breathe spray.

Before using this product, food products and packaging materials must be removed from the room or carefully protected. After use, all surfaces in the area must be thoroughly rinsed with potable water.

Prepare a fresh solution at least daily or when use dilution becomes diluted or soiled.

For Schools, Industry and Non-Medical Institutional Uses: At ¼ ounce per gallon of water (or equivalent use dilution), this product delivers cleaning and germicidal effectiveness. Treated surfaces must remain wet for 10 minutes, then allow to air dry or wipe. For heavily soiled areas, a preliminary cleaning is required. Prepare a fresh solution at least daily or more often if solution becomes diluted or soiled.

General Deodorization: To deodorize, add ¼ ounce of this product to 1 gallon of water (or equivalent use dilution) (425 ppm active quat). Excess material must be wiped up or allowed to air dry.

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. Use a ¼ ounce per gallon of water of this product or other suitable detergent system for pre cleaning step. Then, apply a wetting concentration of 1½ 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, mats, litter boxes, floor coverings, artificial grass, Astroturf®, or any surface soiled by a pet. Test a small inconspicuous area first. Blot problem area. Then follow directions for "General Deodorization".

Fungicidal Activity: At ¼ ounce per gallon of water use-level, (or equivalent use dilution) (425 ppm active quat) this product is effective when used in areas such as locker rooms, dressing rooms, shower and bath areas, and exercise facilities on inanimate hard, non-porous surfaces in the presence of 5% blood serum and 250 ppm water hardness as CaCO₃. Treated surface must remain wet for 10 minutes. Allow to air dry.

At ½ ounce per gallon of water use level (847 ppm active quat) (or equivalent use dilution), this product is effective against Trichophyton mentagrophytes (athlete's foot fungus) (a cause of Ringworm) when used in areas such as locker rooms, dressing rooms, shower and bath areas, and exercise facilities on inanimate hard, on-porous surfaces in the presence of 5% blood serum and 250 ppm hard water.

Mold and Mildew Control Directions: Add ¼ ounce per gallon (2 milliliters per liter) (or equivalent use dilution) of water to control the growth of mold and mildew and their odors on hard, non-porous surfaces. Thoroughly wet all treated surfaces completely. Let surfaces air dry. Repeat application weekly or when growth or odor reappears.

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, and to remove and reduce surface contamination, apply a ¼ ounce of this product to 1 gallon of water (425 ppm active) (or equivalent use dilution) to the surfaces and body openings, natural or artificial. Allow a 10 minute contact time for optimal results. Bathe 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, moonwalk, 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 a ¼ ounce per 1 gallon (425 ppm active quat) (or equivalent use dilution) 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/Fungicide/Virucide for Barber/Salon Tools Directions: Immerse pre-cleaned barber/salon tools (such as combs, brushes, razors manicure/pedicure tools, clippers and scissors) in a ¼ ounce per gallon of water solution (or equivalent use dilution) (425 ppm active quat) of the product for disinfection/fungicide use. For Virucidal use, immerse in a ½ ounce per gallon of water solution (850 ppm active quat) (or equivalent use dilution). 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.

NON-ACID TOILET BOWL (AND URINAL) DISINFECTION/CLEANER DIRECTIONS

Remove gross filth prior to disinfection.

From Concentrate: Add a ¼ ounce (2 milliliters per liter) to the toilet bowl and mix. Brush thoroughly over exposed surfaces and under the rim with a cloth, mop, or sponge. Allow to stand for 10 minutes and flush.

From Use Solution: Empty toilet bowl or urinal and apply a ¼ ounce per gallon of water (2 milliliters per liter) 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 sprayer application, use a coarse spray device.

For Heavy Duty Cleaning: Empty toilet bowl or urinal and apply 1 ounce per gallon of water (8 milliliters per liter) use solution to exposed surfaces including under the rim with a cloth, mop, sponge or sprayer, brush or swab thoroughly and allow to stand 10 minutes and flush. For sprayer application, use a coarse spray device.

Cleaning/Deodorizing Directions: Add 0.25 – 1 ounce per gallon (2-8 milliliters per liter) of water to clean and deodorize windows, mirrors and non-food contact glass surfaces. Excess material must be wiped up or allowed to air dry.

Ultrasonic Bath Disinfectant Directions: Use this product to disinfectant hard, non-porous, non-critical objects compatible with Ultrasonic cleaning units. Pour fresh solution at ¼ ounce of this product per gallon of water (1:512) (or equivalent use dilution) directly into bath chamber. Pre-clean heavily soiled objects. Place objects into unit and operate for a minimum of 10 minutes, according to the manufacturers directions. Remove objects and wash with sterile water (sterile water for injection) or allow to air dry. Prepare fresh solution for each use.

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 a ¼

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ounce of this product for each gallon of fresh water added (or equivalent use dilution). 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.

For Disinfecting Hard, Non-porous (Sealed) Fiberglass Bath 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 1¼ ounces of this product for each 5 gallons of water (¼ ounce per one gallon) (425 ppm active quat) (or equivalent use dilution) 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. Product to surface contact time must be at least 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.

To Disinfect Food-Processing and Tobacco Premise: For floors, walls and storage areas, add ¼ ounce of this product to 1 gallon of water (or equivalent use dilution) (425 ppm active quat) (or equivalent use dilution). 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. Allow surfaces to remain wet for 10 minutes. Then remove excess liquid.

Before using this product, food products and packaging materials must be removed from area or carefully protected. After use, all surfaces in the area must be thoroughly rinsed with potable water

To Disinfect Food Service Establishment Food Contact Surfaces: For use on countertops, appliances, and tables. Before using this product food products and packaging materials must be removed from area or carefully protected. Add ¼ ounce of this product to 1 gallon of water (or equivalent use dilution) (425 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. Allow surfaces to remain wet for 10 minutes, then remove excess liquid and rinse the surface with potable water. For sprayer applications, use a coarse spray.

For Use on Non-food Contact Surfaces as a General Disinfectant in the Brewery Industry: Use a ¼ ounce of this product per 1 gallon of water (or equivalent use dilution) (425 ppm active quat). Follow the general disinfectant directions above.

Veterinary Practice (Clinics)/Animal Care Animal Laboratory/Animal Life Science Laboratory/Zoos/Pet Shop/Kennels/Breeding and Grooming Establishment/Tack Shops Disinfection: For cleaning and disinfecting the following hard, non-porous surfaces: equipment not used for animal food or water, utensils, instruments, cages, kennels, stables, stalls and catteries, etc. Remove all animals and feeds from premises, animal transportation vehicles, crates, etc. Remove all litter, droppings and manure from floors, walls and surfaces occupied or traversed by animals. Thoroughly clean all surfaces with this product, soap or detergent and rinse with water. Saturate surfaces with a use solution of a ½ ounce of this product per gallon of water (or equivalent dilution) 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 which dispenses food or water with soap or detergent, and rinse with potable water before reuse.

COMMERCIAL FLORIST USE DIRECTIONS (Not for use in California.): To clean, disinfect and deodorize hard non-porous surfaces in one step, prepare use solution by adding (mixing) ¼ ounce per gallon of water (1:512) (or equivalent use dilution). For heavy-duty use, add (mix) 1 ounce per gallon of water (1:256) (or equivalent use dilution).

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 pump or trigger sprayer. Spray 6-8 inches from surface. Rub with brush, sponge or cloth. Do not breathe spray.

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

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

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

SANITIZER DIRECTIONS FOR NON-FOOD CONTACT SURFACES

Preparation of sanitizer use solution: Add ¼ ounce of this product to 1 gallon of water (or equivalent use dilution) (425 ppm active) to sanitize hard, non-porous surfaces. Treated surfaces must remain wet for at least 2 minutes. Allow surfaces to air dry. This product is an effective one-step sanitizer against *Staphylococcus aureus* (ATCC 6538) and *Enterococcus aerogenes* (ATCC 13048).

Apply sanitizer use solution to pre-cleaned, 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.

To Sanitize (and Deodorize): Apply use solution to hard, inanimate, non-porous surfaces thoroughly wetting surfaces as recommended and required, with a cloth, mop, sponge or sprayer. For heavily soiled areas, a preliminary cleaning using this product is required. For sprayer applications, use a coarse spray device. Spray 6-8 inches from surface. Treated surfaces must remain wet for at least 2 minutes. Rub with brush, sponge or cloth. Do not breathe spray. Let stand for two minutes. Then wipe.

SALON/BARBER INSTRUMENTS AND TOOLS SANITIZER DIRECTIONS: Pre-cle soiled instruments and tools. Completely immerse water safe non-porous instruments and tools in a solution of a ¼ ounce per 1 gallon (or equivalent use dilution) of water for at least two 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 2 minutes, rinsed, dried, and kept in a clean non-contaminated receptacle. Prolonged soaking may cause damage to metal instruments.

Humidifier Directions (Not for use in California.): Thoroughly clean water tank and filters. Add ¼ ounce of this product per 1 gallon of refill water.

Not for use in heat or atomizing type humidifiers.

WATER/SMOKE DAMAGE RESTORATION

 (Not for use in California.)

Effective against odor causing bacteria and fungi. For home, institutional and industrial use. This product is particularly suitable for use in water damage restoration situations

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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. Using solutions recommended, saturate affected materials with enough product to remain wet for at least 2 minutes. Use proper ventilation.

Sewer backup & river flooding: During mitigation procedures, dilute ¼ to ½ 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 ¼ to ½ ounce of the product per gallon of water, 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 2 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, and schools. 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 a ¼ ounce of this product per gallon of water.

For truck mounted extraction machines: Mix 3 ounces of the product per gallon of water and meter at 2 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/SANITIZES AGAINST ODOR-CAUSING BACTERIA, FOR HOME, INSTITUTIONAL, AND INDUSTRIAL USE

(Use as a sanitizer is not allowed in California)

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

Vacuum carpet thoroughly prior to application. Mix a ½ ounce of product per gallon of water (or equivalent use dilution). 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 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 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 for use in California.): Effective against odor causing bacteria and fungi for home, institutional, and industrial 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 2 minutes. Use proper ventilation.

FOOD PROCESSING PLANTS USING FOGGING DEVICES

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 ounce 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.

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 a ¼ ounce of this product per gallon of water (or equivalent use dilution). Wet all surfaces thoroughly. Treated surfaces must 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 ½ ounce of this product per gallon of water (or equivalent use 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.

POULTRY and FARM APPLICATIONS

This product is an effective disinfectant/sanitizer/virucide to be used in hatchery cleaning, effectively removing (removes) hatchery soils from surfaces, even in hard water up to 250 ppm hardness as CaCO₃. Soil emulsifiers, wetting agents, citrus solvent dispersing agents, detergent builders and sequestrants assure good cleaning functions.

This product may be used on any environmental, hard, non-porous surface in the hatchery not harmed by water itself.

This product deodorizes by killing microorganisms causing odors.

This product is for use in the Poultry industry.

Deodorizes by killing most microorganisms that cause offensive odors.

Kills Gram-negative and Gram-positive bacteria, fungi and viruses associated with the avian hatchery industry, poultry, swine and livestock premises, laboratory animal facilities and kennels.

This product is a complete, chemically balanced deodorizer, and disinfectant providing clear use solutions. It kills bacteria, molds and viruses that cause disease and economic losses. It disinfects in 5% organic soil loads and 250 ppm hard water.

This product can be applied by cloth, mop, sponge or sprayer. At ¼ oz/gal, it kills bacteria and Aspergillus Fumigatus. It is a potent blend of quaternary ammonium compounds and citrus terpene.

This product is for Poultry Premise Sanitation (Hatcheries and Breeder/Growout Houses):

Egg Receiving Area	Tray Dumping Area	Chick Processing Area
Egg Holding Area	Chick Holding Area	Chick Loading Area
Setter Room	Hatchery Room	Poultry Buildings
Broiler Houses	Growout Houses	Incubators

This product is for Swine Premise Sanitation:

Farrowing Barns and Areas	Dressing Plants	Blocks
Waterers and Feeders	Loading Equipment	Creep Area
Hauling Equipment	Nursery	Chutes

This product is an effective disinfectant on hard, non-porous surfaces against a broad range of Gram-negative bacteria, Gram-positive bacteria and viruses that are poultry pathogens or that can affect chick quality and hatchability.

This product is an effective, disinfectant/cleaner/sanitizer that helps to limit the spread of contamination from treated area to treated area in the hatchery during the actual cleaning process.

DISINFECTION

PREPARATION OF USE SOLUTION: For water hardness up to 250 ppm add a ¼ ounce per gallon of water (2 milliliters per liter) of water (1:512) (or equivalent use dilution) to disinfect hard, non-porous surfaces OR mix a one (1) ounce packet with 4 gallons of water. Treated surfaces must remain wet for 10 minutes.

Apply use solution to hard, inanimate, non-porous surfaces, thoroughly wetting surfaces as recommended and required, with a cloth, mop, sponge or sprayer. For heavily soiled areas, a preliminary cleaning is required. For sprayer applications, use a coarse spray device. Spray 6-8 inches from surface. Rub with brush, sponge or cloth. Do not breathe spray.

Before using this product, food products and packaging materials must be removed from the room or carefully protected. After use, all surfaces in the area must be thoroughly rinsed with potable water.

Prepare a fresh solution at least daily or when use dilution becomes diluted or soiled.

General Deodorization: To deodorize, add ¼ ounce of this product to 1 gallon of water (or equivalent use dilution) (425 ppm active quat). Excess material must be wiped up or allowed to air dry.

FARM PREMISE DISINFECTANT USE (Poultry, Veal, Calving, Hog, Cattle And Horse Operations): Do not use in milking stalls, milking parlors or milk houses. Remove all animals and feed from premises, vehicles and enclosures. Remove all litter 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 this product, soap or detergent and rinse with water. Saturate all surfaces with a use solution of a ¼ ounce of this product per gallon of water (or equivalent use dilution) 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 in removing litter and manure. Ventilate buildings, cars, trucks, boats and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed, set or dried. Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains and waterers with soap or detergent and rinse with potable water before reuse.

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 this product, soap or detergent and rinse with water.

APPLICATIONS AND USE DILUTION POULTRY (and SWINE) PREMISE: Remove all animals and feeds from premises, trucks, cars, coops and crates, and incubator. Remove all litter, droppings and manure from floors, walls and surfaces of facilities occupied or traversed by animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with this product, soap or detergent and rinse with water. For use as a disinfectant, mix ¼ ounce of this product per gallon of water (1:512) (425 ppm active quat) (or equivalent use dilution). For use as a virucide, mix ½ ounce of this product per gallon of water (1:256) (850 ppm active quat) (or equivalent use dilution). Saturate surfaces with the recommended disinfecting solution for a period of 10 minutes. Ventilate buildings, coops 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, troughs, automatic feeders, fountains and waterers and other equipment which may contact food or water with soap or detergent, and rinse with potable water before reuse. 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.

RENDERING PLANT/DRESSING PLANT DISINFECTANT/FUNGICIDE/VIRUCIDE DIRECTIONS (DRESSING PLANT AND RENDERING PLANT DISINFECTANT/FUNGICIDE/VIRUCIDE DIRECTIONS): Cover or remove all food and packaging material before disinfection. Remove all gross soils. Apply to walls and floors in poultry and animal dressing plants. For disinfecting/fungicidal applications, use solution of ¼ ounce of this product per gallon of water (or equivalent use dilution) (425 ppm active quat). For virucidal applications, use a solution of ½ ounce of this product per gallon of water (or equivalent use dilution) (850 ppm active quat). Saturate all surfaces with the recommended use solution. Scrub to loosen all soils. Allow to soak for 10 minutes and thoroughly rinse all wetted and cleaned surfaces with potable water before operations are resumed. Disinfect all rooms, exterior walls and loading platforms of dressing plants.

HATCHERIES: For disinfectant applications, use a ¼ ounce of this product per gallon of water (or equivalent use dilution) solution to treat the following hard non-porous surfaces: hatcher, setters, (plastic) trays, (plastic) racks, carts, sexing tables, delivery trucks and other hard surfaces. For virucidal applications, use a ½ ounce of this product of water (or equivalent use dilution) solution. Leave all treated surfaces exposed to disinfectant solution wet for 10 minutes or more. Rinse with potable water before reuse.

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Then allow surfaces to air dry. Discard use solution that becomes visible soiled. When cleaning setters and hatchers, use a fresh bucket of solution for each machine.

DISINFECTANT DIRECTIONS FOR CHICK VANS, EGG TRUCKS HATCHERY and FARM VEHICLES SERVICEMAN VEHICLES (VEHICLES): Clean all vehicles including mats, crates, cabs, and wheels with high-pressure water and this product. Use a ¼ ounce per gallon of water (or equivalent use dilution) to treat all vehicles. Leave all treated surfaces exposed to disinfectant solution wet for 10 minutes or more. For sprayer applications, use a coarse spray device.

DISINFECTANT/VIRUCIDAL DIRECTIONS FOR AUTOMATED TRAY, RACK AND BUGGY WASHERS: For disinfectant use, mix a solution containing ¼ oz. of this product per gallon (1:512) of water (or equivalent use dilution). For virucidal use, mix a solution containing ½ oz. of this product per gallon (1:256) of water (or equivalent use dilution). Remove all litter and manure from surfaces to be treated. Dip automated trays, racks and buggy washers into solution for 10 minutes. Thoroughly clean all surfaces with soap or detergent and rinse with water before reuse. Change the sanitizing solution at least daily or when solution appears dirty.

DISINFECTANT/VIRUCIDAL DIRECTIONS FOR EGG RECEIVING AND EGG HOLDING AREAS: For disinfectant use, mix a solution containing ¼ oz. of this product per gallon (1:512) of water (or equivalent use dilution). For virucidal use, mix a solution containing ½ oz. of this product per gallon (1:256) of water (or equivalent use dilution). Remove all litter and manure from surfaces to be treated. Saturate all surfaces with the solution for a period of 10 minutes. Apply by mop, brush or sprayer. Thoroughly clean all surfaces with soap or detergent and rinse with water before reuse. Change the sanitizing solution at least daily or when solution appears dirty.

POULTRY and FARM SANITIZING DIRECTIONS

Preparation of sanitizer use solution: Add ¼ ounce of this product to 1 gallon of water (or equivalent use dilution) (425 ppm active) to sanitize hard, non-porous surfaces. Treated surfaces must remain wet for at least 2 minutes. Allow surfaces to air dry. This product is an effective one-step sanitizer against *Staphylococcus aureus* (ATCC 6538) and *Enterobacter aerogenes* (ATCC 13048).

Apply sanitizer use solution to pre-cleaned, 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.

To Sanitize (and Deodorize): Apply use solution to hard, inanimate, non-porous surfaces thoroughly wetting surfaces as recommended and required, with a cloth, mop, sponge or sprayer. For heavily soiled areas, a preliminary cleaning using this product is required. For sprayer applications, use a coarse spray device. Spray 6-8 inches from surface. Treated surfaces must remain wet for at least 2 minutes. Rub with brush, sponge or cloth. Do not breathe spray. Let stand for two minutes. Then wipe.

SHOE BATH SANITIZER: Shoe baths containing one inch of freshly made 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 ½ ounce of this product per gallon of water solution (or equivalent use dilution) for 2 minutes prior to entering area. Outer shoe surfaces must remain wet for 2 minutes. Change the sanitizing solution in the bath at least daily or sooner if solution appears dirty.

SHOE FOAM DIRECTIONS: To prevent tracking harmful organisms into 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 ½ to ¾ ounces per gallon of water (or

equivalent use dilution) (850 to 1270 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 manufacturer of the foam generator/aerator. Scrape waterproof shoes. Stand and/or walk through foamed area for 60 seconds prior to entering area. Outer shoe surfaces must remain wet for 2 minutes. Foam area must be washed and replaced at least daily or when it appears dirty.

ENTRYWAY SANITIZING SYSTEMS: To prevent cross contamination of harmful organisms from area to area, set the system to deliver (¼ – ½ oz. per gallon of water) (425 – 825 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.

GLOVE DIP SANITIZER DIRECTIONS: To prevent the spreading of harmful organisms into animals areas and the packaging and storage areas of food plants, dip pre-washed (plastic, latex or other synthetic rubber) gloved hands into a suitable clean container that contains enough freshly made sanitizing solution to cover the glove area. Do not let sanitizing solution come into contact with the exposed skin. Make the sanitizing solution by adding ¼ ounce of this product per gallon of water (or equivalent use dilution) (425 ppm active). Dip (Soak) in solution for 60 seconds and then allow glove to remain wet for 2 minutes. NO POTABLE WATER RINSE IS ALLOWED. Change the sanitizing solution in the bath at least daily or when solution appears dirty.

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 one part this product to five parts water (¼ gallon this product to 1¼ gallons 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 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 ounces of this product to 122 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. It is acceptable to fog setters and hatchers with a ½ ounce per gallon of water solution of this product 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 has been absorbed or dried. Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains and waterers with soap or detergent, and rinse with potable water before reuse.

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

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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.

ONE OUNCE PACKET TO BE USED WITH MASTER CONTAINER LABEL

FOR DISINFECTION/FUNGICIDE/SANITIZING USE
MIX EACH PACKET WITH 4 GALLONS OF WATER

MAQUAT 2420-Citrus

E.P.A. Reg. No. 10324-162 E.P.A. Est. No. 10324-IL-1

NET CONTENTS: 1.0 FLUID OZ.

ACTIVE INGREDIENTS:

Didecyl Dimethyl Ammonium Chloride 13.02%
Alkyl (C₁₄, 50%; C₁₂, 40%; C₁₆, 10%)
dimethyl benzyl ammonium chloride 8.68%

INERT INGREDIENTS: 78.30%
TOTAL 100.00%

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.

MASON CHEMICAL COMPANY

"THE QUATERNARY SPECIALISTS"

721 W. Algonquin Road
Arlington Heights, IL 60005

847-290-1621

Toll Free:
1-800-362-1855



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