

10324-81

01/15/2008

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

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Elizabeth Tannehill  
Mason Chemical Company  
721 W. Algonquin Rd.  
Arlington Heights, IL 60005

JAN 15 2008

Subject: Maquat 7.5-M  
EPA Registration No.10324-81  
Amendment Dated: Oct 15, 2007  
EPA Received Date: Oct 17, 2007

Dear Elizabeth Tannehill

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

**Proposed Amendment**

- Revise Label to change the ppm's to be used on surfaces in public eating places and dairy processing areas.

**Conditions**

Revise the label as follows:

1. Delete the claim for *Clostridium perfringens-vegetative* as the Agency is no longer accepting this claim. In order to claim effectiveness against this organism testing must be conducted on the spore form of *Clostridium-perfringens*. Delete this claim from the pages two, eight, and fifteen.
2. Revise the 11<sup>th</sup> section in the left column on page six to include the following "...Methicillin-resistant *Staphylococcus aureus* (MSRA), and the *HIV virus*. This product is effective..."
3. Revise the 14<sup>th</sup> section in the left column on page six to include the following "...sanitizer against bacteria and the *HIV virus*."
4. Revise the surgical instrument presoak section on page eight by correcting the Note to read: "...Metal instruments must be removed after 10 minutes..."

**CONCURRENCES**

|         |         |  |  |  |  |  |  |  |
|---------|---------|--|--|--|--|--|--|--|
| SYMBOL  | 7570c   |  |  |  |  |  |  |  |
| SURNAME |         |  |  |  |  |  |  |  |
| DATE    | 1-10-08 |  |  |  |  |  |  |  |

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5. PR Notice 2000-5 requires mandatory language in the directions for use section of the label. Revise the following section in the Animal Premises directions on pages eleven through thirteen by deleting the word "recommended". Delete "recommended" from the Veal, Calving, Hog, Cattle and Horse Operations," "Farm Premise Use," "For Use in Equine, Dairy and Hog Farms," "For use For Treatment of Animal Housing Facilities," "Terrarium and Small Animal Cage and Cage Furniture," and Special Instructions For Inactivating Avian Influenza A" sections.
6. On page thirteen, revise the section of the directions titled: "Special Instructions for Inactivating Avian Influenza A" by deleting the parenthesis surrounding the rate, 3.5 oz. per 4.5 gallons of water. The parenthesis make it appear that this section if the text is optional, which is not the case.
7. Revise the "Special Instructions for Inactivating Avian Influenza A" on page fourteen by adding the following statement to the section: *"Immerse all halters, ropes, and other types of equipment used in handling and restraining animals as well as forks, shovels, scrapers used in removing litter and manure."*
8. Revise the "U.S. Public Health Services Food Services Sanitation Recommendations Cleaning and Sanitizing" section on page seventeen to comply with PR Notice 2000-5 by correcting the first statement to read: "Equipment and utensils *must* be thoroughly preflushed..."
9. Revise the "Storage Tank Sanitizer Directions" on page eighteen to comply with PR Notice 2000-5 by correcting the first statement to read: *"For sanitizing beer fermentation and holding tanks, wine, citrus, and food..."*

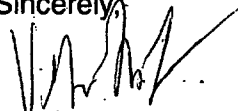
**General Comments**

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

If the above conditions are not complied with the registration will be subject to cancellation in accordance with FIFRA section 6(c). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions

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

Sincerely,



**CONCURRENCES**

|         |  |  |  |  |                                |  |  |
|---------|--|--|--|--|--------------------------------|--|--|
| SYMBOL  |  |  |  |  | Velma Noble                    |  |  |
| SURNAME |  |  |  |  | Product Manager (31)           |  |  |
| DATE    |  |  |  |  | Regulatory Management Branch   |  |  |
|         |  |  |  |  | Antimicrobial Division (7510C) |  |  |
|         |  |  |  |  | Enclosure: Stamped Label       |  |  |



**MASON CHEMICAL COMPANY**

**"The Quaternary Specialists"**

7721 W. Algonquin Road | Arlington Heights, IL 60005 | 847-290-1621 or 800-362-1855

E.P.A. Reg. No. 10324-81

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

**MAQUAT® 7.5-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. Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing spray mist. Do not get in 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 and before eating, drinking, chewing gum, or using tobacco. Remove contaminated clothing and wash 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.

**TOTE CONTAINER DISPOSAL:** Verify that the tote is empty. Do not rinse or clean. Seal tote and contact supplier for return.

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

**STORAGE AND DISPOSAL**

Store in original container in area 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).

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

Disinfectant - Sanitizer - Food Contact Sanitizer - Deodorizer - Mildewstat - Virucide\* - With Organic Soil Tolerance For Hospitals, Nursing Homes, Whirlpool, Home, Hotels & Motels, Waterbed Conditioner, Institutional, Industrial, School, Dairy, Equine, Poultry/Turkey, Farm, Veterinary, Restaurant, Food Handling and Process Areas, Wineries, Federally Inspected Meat and Poultry Plants, Bar and Institutional Kitchen Use and for Sanitizing Ice Machines.

Small Fly Ovicidal Treatment.

Non-Acid Bathroom Cleaner

Laundry Sanitizer

Fabric mildew inhibitor & sanitizer

Residual Bacteriostat and Self-Sanitizing Agent under Humid or Wet Contaminated Conditions

Formulated for effective Poultry Sanitation

Formulated for effective Swine Premise Sanitation

Formulated for effective Mushroom Farm Sanitation

**ACTIVE INGREDIENTS:**

Octyl Decyl Dimethyl Ammonium Chloride ..... 2.250%

Didecyl Dimethyl Ammonium Chloride ..... 1.125%

Diocetyl Dimethyl Ammonium Chloride ..... 1.125%

Alky (C<sub>14</sub>, 50%; C<sub>12</sub>, 40%; C<sub>10</sub>, 10%) ..... 3.000%

dimethyl benzyl ammonium chloride ..... 92.500%

**INERT INGREDIENTS:** ..... 92.500%

**TOTAL** ..... 100.000%

ACCEPTED with COMMENTS in EPA Letter dated: JAN 15 2008

U.S. Federal Insecticide, Fungicide and Rodenticide Act as a pesticide, registered under EPA Reg. No. 10324-81

**KEEP OUT OF REACH OF CHILDREN  
DANGER PELIGRO**  
See left (back) (side) (right) panel (of label) (below) for additional precautionary statements and first aid statements.

**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.

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

**Transportation Information**

DOT Hazard Class: 8 Corrosive

DOT Proper Shipping Name: Disinfectant Liquid Corrosive (Quaternary Ammonium Compound), 8, UN1903, PGI

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(Note to reviewer: The Table of Contents will not be on any label. This is for our customer's reference only. The page numbers will change as the label changes.)

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**ORGANISM LIST**

(Note: For reference use only. This is a list of all organisms covered by this label. Please see appropriate Directions for Use for proper use dilution.)

**General Disinfection in Non-Medical (schools, restaurants, food services, dairies, beverage and food processing plants):** 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:

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

**Disinfection in Hospitals, Dental Offices, Nursing Homes, and Other Health Care Institutions:** 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:

- Burkholderia cepacia* (ATCC 25416)
- Campylobacter jejuni* (ATCC 29428)
- ~~*Campylobacter jejuni* (ATCC 29428)~~
- Corynebacterium ammoniaegenes* (ATCC 6871)
- Escherichia coli* 0157:H7 (ATCC 35150)
- Enterococcus faecium* (Vancomycin Resistant) (VRE)
- Enterococcus faecium* (Ciprofloxacin Resistant)
- Enterococcus faecium* (Penicillin-G Resistant)
- Klebsiella pneumoniae* (ATCC 13883)
- Listeria monocytogenes* (ATCC 984)
- Pseudomonas aeruginosa* (ATCC 15442)
- Rhodococcus equi* (ATCC 7699)
- Salmonella enterica* (ATCC 10708)
- Salmonella enterica serovar agona* (ATCC 51957)
- Salmonella enterica serovar anatum* (ATCC 9270)
- Salmonella enterica serovar Newport* (ATCC 27869)

- Salmonella enterica serovar typhimurium* (ATCC 23564)
- Salmonella typhi* (ATCC 6539)
- Shigella sonnei* (ATCC 9290)
- Staphylococcus aureus* (ATCC 6538)
- Staphylococcus aureus* (Methicillin Resistant) (ATCC 33591)
- Streptococcus equi* (ATCC 33398)

**Virucidal Performance:** This product was evaluated and found to be effective in the presence of 5% blood serum against the following viruses on hard, non-porous surfaces:

- Avian influenza/Turkey/Wisconsin
- Human Coronavirus (ATCC VR-740)
- Hepatitis B Virus
- Hepatitis C Virus
- Herpes Simplex Type1 (ATCC VR-260)
- Herpes Simplex Type 2 (ATCC VR-734)
- HIV-1
- Influenza A2/Hong Kong (ATCC VR-544)
- Influenza A<sub>2</sub>/J305 (ATCC VR-100)
- Vaccinia virus (ATCC VR-119)

**Animal Premise Virucidal Performance:** This product was evaluated and found to be effective in the presence of 5% blood serum against the following viruses on hard, non-porous surfaces:

- Avian influenza/Turkey/Wisconsin
- Canine Distemper (ATCC VR-128)
- Canine Coronavirus (ATCC VR-809)
- Equine Influenza A (H3N8) virus
- Equine Herpes Virus Type 1 (ATCC VR-2229)
- Infectious Bovine Rhinotracheitis virus (IBR) (ATCC VR-188)
- Infectious Laryngotracheitis virus
- Newcastle disease virus (ATCC VR-109)
- Porcine Respiratory & Reproductive Virus (PRRSV)
- Porcine Rotavirus (ATCC VR-893)
- Pseudorabies virus (ATCC VR-135)
- Transmissible Gastroenteritis (TGE)

**Non-Food Contact Sanitizing Performance:** This product is an effective one-step sanitizer in the presence of 5% serum on hard, non-porous environmental surfaces against:

- Staphylococcus aureus* (ATCC 6538)
- Klebsiella pneumoniae* (ATCC 4352)

**Food Contact Sanitizing Performance:** This product is an effective food-contact surface sanitizer against:

- Aeromonas hydrophila* (ATCC 23213)
- Campylobacter jejuni* (ATCC 29248)
- Clostridium perfringens-vegetative* (ATCC 13124)
- Escherichia coli* (ATCC 11229)
- Escherichia coli* O157:H7 (ATCC 35150)
- Enterococcus faecalis* Vancomycin resistant (ATCC 51299)
- Enterobacter sakazakii* (ATCC 29544)
- Listeria monocytogenes* (ATCC 984)
- Klebsiella pneumoniae* (ATCC 4352)

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*Salmonella enterica* (ATCC 10708)  
*Salmonella enteritidis* (ATCC 4931)  
*Salmonella typhi* (ATCC 6539)  
*Shigella dysenteriae* (ATCC 9361)  
*Shigella sonnei* (ATCC 25931)  
*Staphylococcus aureus* (ATCC 6538)  
*Staphylococcus aureus* Methicillin Resistant (ATCC 33592)  
*Yersinia enterocolitica* (ATCC 23715)

**Laundry Bacteriostatic Performance:** This product was evaluated against the following on hard, non-porous environmental surfaces:

*Corynebacterium ammoniagenes* (ATCC 6872)  
*Klebsiella pneumoniae* (ATCC 4352)  
*Staphylococcus aureus* (ATCC 6538)

**Laundry Sanitizer Performance:** This product was evaluated against the following on hard, non-porous environmental surfaces:

HIV-1  
*Pseudomonas aeruginosa* (ATCC 15442)  
*Klebsiella pneumoniae* (ATCC 4352)  
*Staphylococcus aureus* (ATCC 6538)  
Methicillin-resistant *Staphylococcus aureus* (MRSA) (ATCC 33592)

**Fungistatic Performance:** This product was evaluated in the presence of 5% serum and found to be effective against the following on hard, non-porous environmental surfaces:

*Aspergillus niger*

### MARKETING CLAIMS

Maquat® 7.5-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, whirlpools 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, photocopy 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, municipal government buildings, prisons, jails, 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.
- Health clubs, spas, tanning spas, tanning 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.
- 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.
- Fishery, Milk, Citrus, Wine, Fruit, Vegetable, Ice Cream and Potato Processing Plants and beverage plants.
- Tobacco plant premise and equipment.
- Veterinary clinics, animal life science laboratories, animal research centers, animal quarantine areas, animal breeding facilities, 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. *(Not for use in California)*
- Basements, cellars, bedrooms, attics, living rooms, and porches.
- Laundry, laundry facilities, washing machines, clothes washing machines, commercial laundries, coin-operated laundries, laundry cleaning facilities.

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

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- 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 eggs, Tupperware®.
- Kitchen equipment such as food processors, blenders, cutlery, trash compactors and other utensils.
- Countertops (counters), Slurppy® machines, stovetops (stoves), sinks (bathroom, kitchen), tub surfaces, appliances, refrigerators, ice machines.
- 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 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 structures: animals, promotional items, moonwalks, slides, obstacle course play and exercise equipment.
- Beer fermentation and holding tanks, bottling or pre-mix dispensing equipment.
- Citrus processing equipment and holding tanks.
- Wine 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.
- 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, glazed porcelain, glazed tile and restroom fixtures.
- Ultrasonic baths, whirlpools, whirlpool bathtubs.
- Kennels, kennel runs, cages, kennel/cage floors, conductive flooring.
- Hatchers, setters, trays, racks, egg flats, walls, floors, ceilings, chick boxes, egg cases, vans and trash containers.
- Dishes, silverware, glasses, cooking utensils, eating utensils and other similar size food processing equipment can be sanitized by immersion. NO POTABLE WATER RINSE IS ALLOWED (DO NOT RINSE).

This product may be used as a laundry sanitizer/bacteriostatic/deodorizer on washable fabrics such as:

- Diapers.

- Napkins, tablecloths, curtains, draperies.
- Hospital and institutional linen.
- Commercial linen, hotel/motel linen.
- Athletic apparel, athletic clothing.

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 delivers non-acid, disinfection performance in an economical concentrate.

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

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

Antibacterial.

This product meets AOAC efficacy standards for hard surface sanitizers.

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

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

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.

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 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.

Great for use (on) (in) the (kitchen), (bathroom), (floors) and other household areas. Removes (eliminates) odors. Deodorizes. Will not harm most surfaces.

Will not harm most surfaces. For a cleaner, fresher household. Removes stains. Removes dirt. Non-staining. Clear formula.

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

Kills common kitchen (bathroom) bacteria (and viruses\*).

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

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

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

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

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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.

Hospital Use Disinfectant. Institutional Disinfectant (Sanitizer).

Use this product to clean, sanitize and disinfect 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 120°F temperature will avoid overheating and distortion of the ambulance equipment and surfaces that would necessitate replacement.)

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

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. (*This statement is 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.

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

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

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 unpleasant (malodors) odors.

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 bacteria and odors caused by animal waste, septic tank or sewage backup, smoke and bathroom and kitchen odors.

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.

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

Controls the growth of odor-causing and slime-forming bacteria used in waterbed uses. Controls odors caused by bacteria. Prevents bubbles, preserves plasticizers, conditions vinyl interior, sequesters minerals

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

This product will not leave a grit or soap scum.

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

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

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

This product is for use as a sanitizer on dishes, glassware and utensils (at 200-400 ppm active) and as a disinfectant on hard, non-porous surfaces (at 450 ppm active). A potable water rinse is not allowed (Do not rinse) when used as a sanitizer on food contact surfaces.

OR

This product is 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 450 ppm active). A potable water rinse is not allowed when used as a sanitizer on food contact surfaces.

This product is for use as a sanitizer on food processing equipment and utensils (at 150-400 ppm active) and as a disinfectant on hard, non-porous surfaces (at 450 ppm active). A potable water rinse is not allowed when used as a sanitizer on food contact surfaces.

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

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

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

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

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

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

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This product may be applied through immersion tanks, foaming apparatus, low-pressure sprayers, and fogging (wet misting) systems. Follow manufacturers' instructions when using this equipment.

Escherichia coli (E. coli), Salmonella enterica (Salmonella), 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 use as a disinfectant on food contact surfaces.

This product has been cleared by the EPA in 40 CFR Section 180.940(c) for use on food processing equipment, utensils, and other food contact articles at a concentration of 150-400 ppm active.

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

Regular, effective cleaning and sanitizing of equipment, utensils and work or dining surfaces which could harbor food poisoning 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 those organisms that (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 must 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 must 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.

This product is a concentrate formulation designed for use in commercial, institutional and industrial laundry operations.

This product is a laundry sanitizer designed for use in commercial, institutional and industrial laundry operations.

At 16 ounces per 100 lbs. of dry laundry, this product provides sanitization against Staphylococcus aureus, Klebsiella pneumoniae, Pseudomonas aeruginosa, Methicillin-resistant Staphylococcus aureus (MRSA), and HIV. This product is effective in rinse water up to 200 ppm hard water. For HIV, this product is effective in 400 ppm hard water when presoaked for 10 minutes before normal washing.

At 13.25 ounces per 100 lbs. of dry laundry, this product imparts to the fabric a residual self-sanitizing and residual bacteriostatic finish under humid or wet contamination conditions (ie. diapers and bed linens of incontinent persons) during normal conditions of use and storage.

When added in the final rinse cycle, this formulation provides fabric with residual self-sanitizing activity under conditions of high relative humidity or wet contamination.

This product works as a laundry sanitizer against bacteria including the HIV Virus.

This product eliminates bad odor found on wet and soiled laundry.

This product eliminates the bad odor normal detergent can't do.

This product kills the bacteria that may cause allergy to skin on the clothes.

Fabric treated with this product which has become contaminated or soiled through use will inhibit the growth of many organisms not only at the time of exposure, but also through the handling and transportation until the garments are again laundered and treated with this product.

This product is particularly effective in inhibiting the growth of ammonia producing organisms, such as Corynebacterium ammoniagenes, which acts on urine in the diapers to produce ammonia.

This product sanitizes fabrics, reducing bacterial count by 99.9%.

This product is a highly concentrated, ready to use liquid fabric sanitizer & mildewcide.

Eliminated discoloration, pinholing and tensile strength loss caused by mildew growth.

This product controls musty odors and discoloration on all fabrics due to molds, mildew and fungi.

Especially useful for colored textiles that cannot be bleached.

Perfect for table linens, aprons, towels, coats and diapers.

This product is for use on fabrics, such as: diapers, athletic apparel, table linens, bedding & towels and hospital and institutional linen.

Soiled and contaminated fabrics, such as diapers, hospital and institutional linen, and athletic apparel, is of major housekeeping concern, not only in hospitals, but in institutions, hotels, restaurants and schools.

Used as directed, this product provides effective residual bacteriostatic and self-sanitizing properties for laundered items such as diapers, hospital and institutional linens, and athletic apparel.

For residual bacteriostatic or self-sanitizing activity, conditions of high relative humidity or wet contamination are required.

Laundered fabric may also be treated by soaking in a solution of this product.

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

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

This product is an effective antimicrobial cleaner designed for use by wholesale and retail florists, shippers and green houses.

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.

This product may be relied on to deodorize coolers, buckets, garbage pails and other areas where obnoxious odors may develop.

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.

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.

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 120°F temperature will avoid overheating and distortion of the personal safety equipment that would necessitate replacement.)

This product is effective against the control of small flies on non-food contact surfaces such as 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 non-food contact sanitizer in the presence of soils.

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

### 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 federally 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 (Do not rinse) following use of the product as a sanitizer on previously cleaned hard 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. 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. A fresh solution must be prepared (Prepare a fresh solution) at least daily or when use solution becomes visibly dirty. For heavily soiled areas, a preliminary cleaning is required.

### General Disinfectant-Non-medical Dilution Chart

| Ounces of Product | Amount of Water |
|-------------------|-----------------|
| 0.11 ounces       | 1 quart         |
| ¼ ounce           | ½ Gallon        |
| 0.44 ounces       | 1 gallon        |
| 1.11 ounces       | 2 ½ gallons     |
| 2.0 ounces        | 4 ½ gallons     |
| 2 ¼ ounces        | 5 gallons       |
| 4 ½ ounces        | 10 gallons      |

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

| Ounces of Product | Amount of Water |
|-------------------|-----------------|
| 0.20 ounces       | 1 quart         |
| 0.40 ounces       | ½ Gallon        |
| 0.78 ounces       | 1 gallon        |
| 2.0 ounces        | 2½ gallons      |
| 3.5 ounces        | 4½ gallons      |
| 4.0 ounces        | 5 gallons       |
| 7.8 ounces        | 10 gallons      |

### Dilution Guide:

|                                               |                                |
|-----------------------------------------------|--------------------------------|
| For Hospital or Medical Environment claims    | 3.5oz/4.5 gal. water           |
| For General or Broad Spectrum claims          | 2oz/4.5 gal. water             |
| For Virucidal claims                          | 3.5oz/4.5 gal. water           |
| For Animal Virucidal claims                   | 3.5oz/4.5 gal. water           |
| For Non-Food Contact Sanitizing claims        | ¼ oz/4 gal. water              |
| For Food Contact Sanitizing claims at 150 ppm | 1oz/4 gal. water               |
| For Food Contact Sanitizing claims at 200 ppm | 1.36oz/4 gal. water            |
| For Food Contact Sanitizing claims at 400 ppm | 2.67oz/4 gal. water            |
| For Laundry Bacteriostatic claims             | 13.3oz./100 lbs. of dry fabric |
| For Laundry Sanitizer                         | 16oz./100 lbs. of dry fabric   |

**General Disinfectant-Non-medical (schools, restaurants, food services, dairies, farm, beverage and food processing plants):** Add 2 ounces of this product to 4.5 gallons of water (260 ppm active quat). This product is not to be used as a disinfectant on glassware, dishes and eating utensils. This product is bactericidal according to AOAC Use Dilution Test method on hard inanimate surfaces modified in the presence of 5% organic serum against:

*Salmonella choleraesuis* (ATCC 10708)

*Staphylococcus aureus* (ATCC 6538)

**Virucidal Performance:** At 3.5 ounces per 4.5 gallons use level (0.78 ounces per gallon) (450 ppm quat active), 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/Turkey/Wisconsin

Human Coronavirus

Hepatitis B Virus

Hepatitis C Virus

Herpes Simplex Type1

Herpes Simplex Type 2

Influenza A2/Hong Kong

Influenza A<sub>2</sub>/J305

Vaccinia virus

**For Disinfecting Hard, Non-Porous Surfaces Against Avian Influenza:** For hospital/medical/health facilities, the directions for use for hospital disinfection must be followed.

## HOSPITAL/HEALTH CARE

**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.

Add 3.5 ounces of this product to 4.5 gallons of water (0.78 ounces per gallon) (450 ppm active) OR mix a 3.5 ounce packet with 4.5 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>Burkholderia cepacia</i> (ATCC 25416)                          | <i>Campylobacter jejuni</i> (ATCC 29428)                              |
| <del><i>Clostridium perfringens</i> (ATCC 13124)</del>            | <i>Corynebacterium ammoniagenes</i><br>(ATCC 6871)                    |
| <i>Escherichia coli</i> 0157:H7 (ATCC 35150)                      | <i>Enterococcus faecium</i> (Ciprofloxacin<br>Resistant)              |
| <i>Enterococcus faecium</i> (Vancomycin Resistant) (VRE)          | <i>Listeria monocytogenes</i> (ATCC 984)                              |
| <i>Enterococcus faecium</i> (Penicillin-G Resistant)              | <i>Rhodococcus equi</i> (ATCC 7699)                                   |
| <i>Klebsiella pneumoniae</i> (ATCC 13883)                         | <i>Salmonella enterica</i> serovar <i>agona</i><br>(ATCC 51957)       |
| <i>Pseudomonas aeruginosa</i> (ATCC 15442)                        | <i>Salmonella enterica</i> serovar<br><i>typhimurium</i> (ATCC 23564) |
| <i>Salmonella enterica</i> (ATCC 10708)                           | <i>Staphylococcus aureus</i> (ATCC 6538)                              |
| <i>Salmonella enterica</i> serovar <i>anatum</i> (ATCC 9270)      |                                                                       |
| <i>Salmonella enterica</i> serovar <i>Newport</i> (ATCC 27869)    |                                                                       |
| <i>Salmonella typhi</i> (ATCC 6539)                               |                                                                       |
| <i>Shigella sonnei</i> (ATCC 9290)                                |                                                                       |
| <i>Staphylococcus aureus</i> (Methicillin Resistant) (ATCC 33591) |                                                                       |
| <i>Streptococcus equi</i> (ATCC 33398)                            |                                                                       |

At 3.5 ounces per 4.5 gallons (or equivalent use dilution) (450 ppm active quat) in the presence of 5% organic load this product was proven to be effective against (Duck) Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) with a contact time of 10 minutes. **(This statement is not for use in California)**

Or

At 3.5 ounces per 4.5 gallons (or equivalent use dilution) (450 ppm active quat) in the presence of 5% organic load this product was proven to be effective against (Duck) Hepatitis B Virus (HBV) and Bovine Viral Diarrhea Virus BVDV (surrogate for human Hepatitis C virus) with a contact time of 10 minutes.

At 3.5 ounces per 4.5 gallons in the presence of 5% blood serum for a two-minute contact time this product was found to be effective against HIV-1 (AIDS Virus).

**\*KILLS HIV, HBV and HCV ON PRECLEANED ENVIRONMENTAL SURFACES/OBJECTS PREVIOUSLY SOILED WITH BLOOD/BODY FLUIDS** in health care settings 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 human immunodeficiency virus Type I (HIV-1) (associated with AIDS), Hepatitis B virus (HBV) and Hepatitis C virus (HCV).

**"SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATION AGAINST HIV-1, HBV and HCV 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 must 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 3.5 ounces per 4.5 gallons 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 for 3.5 ounces per 4.5 gallons (or equivalent use dilution) (450 ppm active quat) in the presence of 5% organic load.

OR

For HIV, leave surfaces wet for two minutes with 3.5 ounces per 4.5 gallons 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 3.5 ounces per 4.5 gallons (or equivalent use dilution) (450 ppm active quat) in the presence of (CaCO<sub>3</sub>) and 5% serum.

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

**Surgical Instrument Presoak:** Add 3.5 ounces of this product to 4.5 gallons of water (or equivalent use dilution) (450 ppm active quat). Place pre-cleaned instruments in solution to presoak surgical instruments for a minimum of 10 minutes, then proceed with normal sterilization procedure.

**NOTE:** Plastics may remain immersed until ready to use. 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 Disinfectant Directions:** Use this product to disinfect hard (inanimate) non-porous, non-critical objects compatible with Ultrasonic cleaning units. Pour (a) fresh solution of 0.78 ounces per gallon of water (or equivalent use dilution) (450 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 visible dirty or discolored.

**For Disinfecting Hard, Non-porous Bath and Therapy Equipment:** To remove body oils, dead tissue, soil and all other buildups or organic matter on inanimate surfaces after using the unit, drain the water and refill with fresh water to just cover the intake valve. Add 3.5 ounces of this product for each 4.5 gallons of water (or equivalent use dilution) (450 ppm active quat) in the unit at this point. Briefly start the pump to circulate the solution. 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 solution 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 3.5 ounces of this product for each 4.5 gallons of (or equivalent use dilution) (450 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.

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## DEODORIZATION / MOLD & MILDEW

**General Deodorization:** To deodorize, add 2 ounces of this product to 4.5 gallons of water (or equivalent use dilution) (260 ppm active quat). Excess material must be wiped up or allowed to air dry.

**Mold and Mildew Control:** At 3.5 ounces per 4.5 gallons (0.78 ounces per gallon) (450 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.

**Cleaning/Deodorizing Directions:** Add 2 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.

**For Deodorizing Garbage Cans, Garbage Trucks, Industrial Waste Receptacles and Garbage Handling Equipment:** It is especially important to preclean for the product to perform properly. Then apply a wetting concentration of 4.25 ounces of this product per gallon of water (or equivalent use dilution) (2,500 ppm quat active).

**For Deodorizing Septic Storage Tanks:** When tanks are empty, pour 3.5 oz. per 4.5 gallons of water (450 ppm) (or equivalent use dilution) into septic storage tank on recreational vehicles, campers and boats to control the bacteria that can cause odors. As tank fills with sewage and the vehicle is moving, this disinfectant solution will mix and provide an adequate deodorizing solution for this use. This product is to be used on gray and black water tanks only. Check with local, state, or federal authorities before disposing of sewage in accordance to federal, state and local regulations for waste disposal.

**Air Freshener/Automotive Uses:** 3.5 ounces per 4.5 gallons of water will effectively neutralize damp musty odors caused by mildew in storage areas, basements, closets, bathrooms and A/C filters. Effective on smoking and cooking odors (garlic, fish, onions, etc.), automobile odors from tobacco, musty carpet smell, and beverage smells will be eliminated. Spray or apply onto seats, carpets, headliner and ashtray or into trunk and all vents to eliminate odors from tobacco, beverage spills and musty carpet. For sprayer applications, use a coarse spray device. Allow to air dry.

**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".

**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 3.5 ounces per 4.5 gallons (450 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 3.5 ounces per 4.5 gallons (450 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.

**Humidifier Directions (Not for use in California):** Thoroughly clean water tank and filters. Add 0.34 ounces of this product per gallon of refill water.

OR

**Humidifier Bacteria/Algae Treatment (Not for use in California):** 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 0.34 ounces of this product. When you refill the tank, add 0.34 ounces of this product for every gallon of water added.

Not for use in heat or atomizing type humidifiers.

### WATER and SMOKE DAMAGE RESTORATION (Not for use in California)

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 end product to remain wet for at least 10 minutes. Use proper ventilation.

**Sewer Backup & River Flooding:** During mitigation procedures, dilute 1½ to 3 ounces 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 affective 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 1½ to 3 ounces of the product per gallon of water, (870-1700 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 thorough 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, motel & 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 color fastness.

**For portable extraction units:** Mix 1.5 ounces of this product per gallon of water.

**For truck mounted extraction machines:** Mix 18 ounces of this product per gallon of water and meter at 4 gallons per hour.

**For rotary floor machines:** Mix 3 ounces 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

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 1.5 ounces of product per gallon 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 3 ounces 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 for use in California):** 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.

### BARBER/SALON

**Disinfection of Barber/Salon Tools Directions:** Pre-cleaned barber/salon tools, such as combs, brushes, razors, manicure/pedicure tool, clippers and trimmer blades, tweezers and scissors, can be disinfected by immersing in 0.44 ounces per gallon solution (or equivalent use dilution) (260 ppm active quat) of this product. Completely immerse instruments and tools for at least 10 minutes. Rinse thoroughly and dry before use. Fresh solution must be prepared at least daily or more often if solution becomes cloudy or soiled.

**Disinfection/Virucide for Barber/Salon Tools Directions:** Immerse pre-cleaned barber/salon tools, such as combs, brushes, razors, manicure/pedicure tools, clipper(s) and trimmer blades, tweezers and scissors, in a 0.78 ounce per gallon solution (or equivalent use dilution) (450 ppm active quat) of the product. Completely immerse instruments and tools for at least 10 minutes. Rinse thoroughly and dry before use. Fresh solution must 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.

**Disinfecting/Virucide Grooming Clippers:** Turn the clipper off occasionally during use and spray between the teeth of blades a solution of 3.5 ounces per 4.5 gallons (or equivalent use dilution) (450 ppm active quat). Allow surface to remain wet for at least 10 minutes. Remove hair, dandruff and dust particles prior disinfecting the blades.

**Cleaning Hair Clippers and Electric Shears:** While clipper/shear is running, hold in the downward position and spray 0.44 ounces per gallon of water solution (or equivalent use dilution) (260 ppm active quat) of this product directly onto the blades two or three times to thoroughly wet the blades. Do not spray on the clipper case or drip into clipper housing. Turn off clipper/shear. Allow surfaces to remain wet for at least 10 minutes. Then wipe dry with a clean soft cloth. Lubricate as per clipper/shear manufacturer's instructions.

**Cleaning Barber/Salon Shears and Other Implements:** Spray shear/implement until thoroughly wet. Wipe away visible debris using a soft bristle brush or cloth. Immerse pre-cleaned shear/implement into a container of 0.44 ounce per gallon of water solution (or equivalent use dilution) (260 ppm active quat) of this product for at least 10 minutes. Remove shear/implement and wipe dry. No rinsing is necessary. Use fresh solution at least daily or when immersion tank (bowl) (sink) solution becomes diluted or visibly soiled.

**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 2 ounces per 4.5 gallons of water (or equivalent use dilution) (260 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. After the unit has been thoroughly disinfected, rinse all cleaned surfaces with fresh water. For spray applications, use a coarse spray device. Do not breathe spray. Do not use equipment until treatment has been absorbed, set or dried.

**Disinfection/Virucide 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 0.78 ounce per gallon of water (or equivalent use dilution) (450 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. After the unit has been thoroughly disinfected, rinse all cleaned surfaces with fresh water. For spray applications, use a coarse spray device. Do not breathe spray. Do not use equipment until treatment has been absorbed, set or dried.

### RESTROOM/BATHROOM

#### NON-ACID TOILET BOWL (AND URINAL) DISINFECTANT DIRECTIONS

Remove gross filth prior to disinfection.

**From Concentrate:** Add 0.78 ounces 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.

**From Use-Solution:** Empty toilet bowl or urinal and apply a use solution of 0.78 ounces per gallon 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 applications, use a coarse spray device.

**For Heavy Duty Cleaning:** Empty toilet bowl or urinal and apply 4.33 ounces per gallon (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.

**For Use To Clean and Disinfect Shower Rooms, Locker Rooms and Other Large Open Areas with Floor Drains:**

1. Pre-clean heavily soiled areas.
2. Apply Use Solution of 3.5 ounces per 4.5 gallons of water (450 ppm quat active) to floors, walls and ceilings making sure not to over spray. To disinfect, all surfaces must remain wet for 10 minutes.
3. Scrub using deck brush or other coarse material as necessary.
4. Rinse surfaces thoroughly and let air dry.

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**RV Holding Tanks/Recreational Vehicles:** For toilet waste and holding tanks, cover bottom of holding tank with water and 2.25 to 9 ounces per 5 gallons of water to deodorize. If odors return before time to empty, add 2.25 to 4.5 ounces to the tank. For kitchen waste, add 2.25 to 4.5 ounces to gray water tank as needed to control malodors created by dirty dishwasher.

### FOOD PROCESSING PREMISES

**To Disinfect Food-Processing and Tobacco Premises:** Before using this product, food products and packaging materials must be removed from area or carefully protected. (For) floors, walls and storage areas, add 3.5 ounces of this product to 4.5 gallons (0.78 ounces per gallon) of water (or equivalent use dilution) (450 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 application, use a coarse spray. 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, appliances, and tables. Before using this product, food products and packaging materials must be removed from area or carefully protected. Add 3.5 ounces of this product to 4.5 gallons (0.78 ounces per gallon) of water (or equivalent use dilution) (450 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. 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 2.0 ounces of this product per 4.5 gallons (or equivalent use dilution) (0.44 ounces per gallon) (260 ppm active quat) of water. 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 1 quart per 1000 cubic feet of room area with a solution containing 2 ounces of product to 1 gallon of water (1,200 ppm) (or equivalent use dilution). Vacate the area of all personnel during fogging and 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.**

**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.

### ANIMAL PREMISES

**Animal Premise Virucidal Performance:** This product was evaluated and found to be effective in the presence of 5% blood serum against the following viruses on hard, non-porous surfaces:

Avian influenza/Turkey/Wisconsin  
Canine Distemper (ATCC VR-128)  
Canine Coronavirus (ATCC VR-809)  
Equine Influenza A (H3N8) virus  
Equine Herpes Virus Type 1 (ATCC VR-2229)  
Infectious Bovine Rhinotracheitis virus (IBR) (ATCC VR-188)  
Infectious Laryngotracheitis virus  
Newcastle disease virus (ATCC VR-109)  
Porcine Respiratory & Reproductive Virus (PRRSV)  
Porcine Rotavirus (ATCC VR-893)  
Pseudorabies virus (ATCC VR-135)  
Transmissible Gastroenteritis (TGE)

**Disinfection of Poultry/Turkey Equipment, Swine Quarters, Livestock Farms, Equine Quarters, Animal Quarters and Kennels:** Prior to disinfection, remove all poultry, other animals and their feed from premises, vehicles (trucks and cars), and enclosures (coops, crates, kennels, stables). Remove all litter and droppings and manure from floors, walls and surfaces of barns, pens, stalls, chutes and other surfaces of facilities and fixtures occupied or traversed by poultry or other animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Use 0.78 ounces of this product per gallon of water (or equivalent use dilution) (450 ppm active quat). Saturate surfaces with 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 disinfection, 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.

**Disinfection/Virucide of Poultry/Turkey Equipment, Swine Quarters, Livestock Farms, Equine Quarters, Animal Quarters and Kennels Directions:** Remove all animals and feeds from premises, vehicles (trucks and cars) and enclosures (coops, crates, kennels, stables). Remove all litter, droppings and manure from floors, walls, 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 3.5 ounces of this product per 4.5 gallons of water (or equivalent use dilution) (450 ppm active quat). Saturate surfaces with disinfecting solution for 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 animals 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.

**HATCHERIES:** For general disinfection, use 2 ounces of this product per 4.5 gallons of water. For disinfection/virucide, use 3.5 ounces of this product per 4.5 gallons of water. Apply to hatchers, setters, trays, racks, egg flats, walls, floors, ceilings, chickboxes, egg cases, trash containers, carts, sexing tables, delivery trucks, vans and other hard surfaces. Leave all treated surfaces exposed to solution for 10 minutes or more and allow to air dry.

**VEHICLES:** Clean all vehicles including mats, crates, cabs, and wheels with high-pressure water and this product. For spray applications, use a coarse spray device. Use 2 ounces of this product per 4.5 gallons of water for general disinfection. Use 3.5 ounces of this product per 4.5 gallons of water for disinfection/virucide. Leave all treated surfaces exposed to solution for 10 minutes or more and allow to air dry.

**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 2 ounces of this product per 4.5 gallons of water (or equivalent use dilution) (260 ppm active quat). Surfaces must remain wet for 10 minutes, then thoroughly rinse 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/VIRUCIDE DIRECTIONS (RENDERING PLANT/DRESSING PLANT DISINFECTANT/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 3.5 ounces of this product per 4.5 gallons of water (or equivalent use dilution) (450 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.

**VEAL, CALVING, HOG, CATTLE AND HORSE OPERATIONS:** Between depopulations of facilities, cleaning and disinfection of pens, hutches, aisles and other environmental surfaces may be required. Empty all troughs, racks and other feeding and watering appliances. Flush soils from these areas. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate all surfaces with ~~residual~~ disinfecting or Virucidal solution and allow to remain wet 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.

**FARM PREMISE USE:** 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, stables, chutes and other facilities and fixtures occupied or transversed by animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate all surfaces with ~~residual~~ disinfecting or virucidal solution and allow to remain wet 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.

(OR)

#### 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 ~~residual~~ 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, scrapers 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 ~~residual~~ disinfecting and virucidal solution (3.5 ounces per 4.5 gallons of water or equivalent use dilution) (450 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, scrapers 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 ~~residual~~ disinfecting and virucidal solution (3.5 ounces per 4.5 gallons of water or equivalent use dilution) (450 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.

**Veterinary Clinics/Animal Life Science Laboratory/Animal Care Facilities/Animal Research Centers/Animal Quarantine Areas/Zoos/Pet Shop/Kennels/Animal Breeding Facilities/Breeding and Grooming Establishments/Tack Shops**  
**Disinfection Directions:** For cleaning and disinfecting the following hard, non-porous surfaces: equipment, utensils, instruments, cages, kennels, stables, stalls 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 traversed by animals. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with a use solution of 3.5 ounces per 4.5 gallons (450 ppm active quat) of water (or equivalent 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, scrappers, used in removing litter and manure. 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.

**Special Instructions for Inactivating Avian influenza A:** Remove all poultry and feeds from premises, trucks, coops, and crates. Remove all litter and droppings from floors, walls, and surfaces of facilities occupied or traversed by poultry. Empty all troughs, racks, and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with the recommended disinfecting solution (3.5 oz per 4.5 gallons of water) (450 ppm active quat) (equivalent use dilution) for a period of 10 minutes. Ventilate buildings, coops, and other closed spaces. Do not house poultry or employ equipment until treatment has been absorbed, set, or dried. Thoroughly scrub treated feed racks, troughs, automatic feeders, fountains, and waterers with soap or detergent, and rinse with potable water before reuse.

**OTHER**

**For Use on Finished Floors:** To limit gloss reduction, use 3.5 ounces of this product per 4.5 gallons of water. Apply with a damp mop or auto scrubber. Allow to air dry.

**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 3.5 ounces of this product to 4.5 gallons of water (0.78 ounces per gallon) (450 ppm active) to the surfaces and body openings, natural or artificial. Bathe the entire body using sponge or washcloth. A soft brush may be employed on surfaces other than the face. Allow a 10 minute contact time for optimal results. Prepare a fresh solution for application of each remains.

**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) 3.5 ounces per 4.5 gallons of water (450 ppm active). For heavy-duty use, add (mix) 14.5 ounces per 4.5 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.

**For Control of the Drosophila spp. and Phoridae Family of Flies on Non-Food Contact Surfaces:** To control flies on non-food contact surfaces such as floors, w 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 3.5 ounces of this product per 4.5 gallons of water (or equivalent use dilution) (450 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 3.5 ounces per 4.5 gallons of water (or equivalent use dilution) (450 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 5.5 fluid ounces in a free flow waterbed of 90 to 180 gallon capacity. Add 11 fluid ounces in a waveless/fiber waterbed mattress of 90 to 180 gallon capacity. Repeat application every 4 to 6 months.

**Citrus Canker Control (Not Applicable in California):** For prevention of Citrus Canker Disease through treatment of equipment. Effective against *Xanthomonas axonopodis* pv. *citri* (Citrus Canker) at 2000 ppm active quat. Treat all trucks, vehicles, and equipment thoroughly at a dilution rate of 3.4 ounces per 1 gallon of water (2000 ppm active quat). Treatment can be applied to trucks, attached trailers, field harvesting equipment; including cargo area, wheels, tires, under carriage, hood, roof, fenders and any other part of transportation equipment that can be taken into infested areas. To prevent the spread of Citrus Canker by this artificial means of transportation, treatments are made by trigger spraying, dipping or brushing, using maximum rate 2000 ppm quat. For sprayer applications, use a coarse spray device. After use, all surfaces which come in contact with food or crop must be rinsed with potable water. Clothing must be either thoroughly rinsed or laundered before reuse. Footwear must be rinsed before reuse.

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## SANITIZER DIRECTIONS FOR NON-FOOD CONTACT SURFACES

**Preparation of sanitizer use solution:** For floors, walls, tables etc. Add ¼ ounce of this product to 1 gallon of water (or equivalent use dilution) to sanitize hard non-porous surfaces. At this dilution, this product is an effective one-step sanitizer against *Staphylococcus aureus* and *Klebsiella pneumoniae*.

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. Rub with brush, sponge or cloth. Do not breathe spray.

**NOTE:** With spray applications, cover or remove all food products.

Treated surfaces must remain wet for 5 minutes. Then wipe with sponge, mop or cloth or allow to air dry.

## LAUNDRY

### COMMERCIAL AND INSTITUTIONAL LAUNDRY USE

For residual bacteriostatic activity against gram negative and/or gram positive odor-causing bacteria, residual self-sanitizing activity against *Klebsiella pneumoniae* and *Staphylococcus aureus*, use this product as directed.

**Initial Treatment:** Use 13.3 ounces of this product (or equivalent use dilution) per 100 pounds of fabric (dry weight). Dilute the appropriate amount of this product in one to two gallons of water then add this solution to the wash wheel at the beginning of the final rinse cycle. A minimum rinse cycle time of 5 minutes is required.

**Repeat Treatment:** Follow Initial Treatment directions and re-treat fabric after each washing (or if odor persists).

**LAUNDRY BACTERIOSTAT FOR COMMERCIAL, INDUSTRIAL, AND NON-MEDICAL INSTITUTIONAL LAUNDRY APPLICATIONS:** This product provides the fabric with residual bacteriostatic activity against odor causing gram-negative and gram-positive bacteria when this product is added to the final rinse at a rate of 13.3 ounces per 100 lbs. of dry laundry.

**LAUNDRY DEODORIZER (AGAINST ODOR CAUSING BACTERIA):** Use 4 ounces per 100 pounds of dry weight fabric. Dilute the appropriate amount of this product in one to two gallons of water, then add to the washwheel 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.

**PRESERVATION AGAINST MILDEW BY SOAKING:** Use 13.3 ounces of this product per 100 pounds of fabric (dry weight). A minimum soaking time of 5 minutes if required.

**LAUNDRY SANITIZER:** For sanitizing step, fill washer to low water level with minimum temperature water of 95°F. Using an appropriate (company name) dispenser, inject (product) into the sanitizing rinse step at the rate of 1.33oz/gal water to yield 780 ppm active quat (1.33 ounces per gallons of water) (16 ounces per 100 lbs. of dry laundry) (780 ppm active quat) (or equivalent use dilution). Treat the laundry for a minimum of 5 minutes at a minimum temperature of 95°F. Other laundry additives, such as fabric softeners, laundry sour, starch and sizing can be used per manufacturer's instructions in subsequent rinse cycles after the sanitizing rinse cycle.

When added at the rate of 1.33 oz/gal water to yield 780ppm active quat (1.33 ounces per gallon of water) (16 ounces per 100 lbs. of dry laundry) (or equivalent use dilution),

this formulation provides sanitization against *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, Methicillin-resistant *Staphylococcus aureus* (MRSA). This product is effective in rinse water up to 200ppm hard water.

OR

This product is used in the final, warm rinse cycle at a low water level. Dilute the appropriate amount of this product (1.33 ounce per gallon of water) (16 ounces per 100 lbs. of dry laundry) (780 ppm active quat) (or equivalent use dilution); then add to the wash in the final rinse, or dispense directly through automatic dispensing equipment. Run for a minimum of 5 minutes. Retreat as necessary. This product will not harm fabrics. **DO NOT USE IN THE PRESENCE OF, OR MIX WITH OTHER CHEMICALS.**

**KILLS HIV-1 ON LAUNDRY IN COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL APPLICATIONS.** This product provides Virucidal activity against HIV-1 on fabrics when presoaked with a 10-minute contact time followed by normal washing in detergent and rinsing added to the final rinse at a rate of 16 ounces per 100 lbs. of dry laundry in water hardness of 400 ppm.

## FOOD PROCESSING

**SHOE (BOOT) 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 must 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 0.34 ounces of this product per gallon of water (or equivalent use dilution) (200 ppm active) solution for 60 seconds prior to entering area. Change the sanitizing solution in the bath at least daily or sooner if 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 1.36 to 2 ounces per gallon of water (or equivalent use dilution) (800 to 1200 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 60 seconds prior to entering area. Foam area must 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 (0.68 – 1.36 oz. per gallon of water) (2 – 4 oz. per 2 7/8 oz per gallon of water) (400 – 800 ppm active) of sanitizing solution. The (spray) (foam) must 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.

### 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 2 ounces of product to 1 gallon of water (1,200 ppm) (or equivalent use dilution). Vacate the area of all personnel during fogging and 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.**

**ANIMAL HOUSING**

**TO SANITIZE HOOF TRIMMING EQUIPMENT:** Prior to application, pre-clean hoof trimming equipment and utensils before and after use on each animal with detergent and warm water or compatible cleaner to remove soil using a pre-scrape, pre-flush, or when necessary, pre-soak followed by a potable water rinse. To sanitize, prepare a ¼ oz of this product per 1 gallon of water solution. Apply to pre-cleaned hard surfaces using a cloth, mop, sponge or sprayer or by immersion to thoroughly wet surfaces. Allow surfaces to remain wet for at least 5 minutes followed by adequate draining or air drying. Prepare fresh solution at least daily or when solution becomes visibly 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 187 ounces of this product to 2.5 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 16.5 ounces of this product to 115 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 breath this fog. It is acceptable to fog setters and hatchers with a 1.5 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 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. Only for treatment of setters and hatchers after poultry/chicks/eggs have been removed. Not for treatment of hatchers which contain chicks/eggs.

**OTHER**

**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 0.34 ounces per gallon (or equivalent use dilution) (200 ppm active) of water for at least 60 seconds. Rinse thoroughly and dry before use. Fresh solution must 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.

**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 0.34 ounce of this product for each gallon 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. 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.

**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 (NOT RINSE).**

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 (DO NOT RINSE) 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 1 to 1.36 ounces per 4 gallons solution of this product (150-200 ppm active) for a contact time of 1 min. Prepare a fresh sanitizing solution at least daily. **NO POTABLE WATER RINSE IS ALLOWED.**

At 0.25 ounces per gallon (1 ounce per 4 gallons) (150 ppm) this product is an effective food-contact surface sanitizer in water up to 500-ppm hardness against *Escherichia coli* and *Staphylococcus aureus*.

At 0.34 ounce per gallon of water (1.36 ounces per 4 gallons) (200 ppm) this product eliminates 99.999% of the of the following bacteria in 60 seconds in 500 ppm hard water (calculated as CaCO<sub>3</sub>) according to the AOAC Germicidal and Detergent Sanitizing Action of Disinfectants test:

OR

At 0.34 ounces per gallon of water (1.36 ounces per 4 gallons) (200 ppm), this product is an effective food-contact surface sanitizer in water up to 500-ppm hardness against:

|                                                   |                                             |
|---------------------------------------------------|---------------------------------------------|
| <i>Aeromonas hydrophila</i> (ATCC 23213)          | <i>Salmonella choleraesuis</i> (ATCC 10708) |
| <i>Campylobacter jejuni</i> (ATCC 6872)           | <i>Salmonella enteritidis</i> (ATCC 4931)   |
| <i>Escherichia coli</i> (ATCC 12229)              | <i>Salmonella typhi</i> (ATCC 6539)         |
| <i>Escherichia coli</i> O157:H7 (ATCC 35150)      | <i>Shigella dysenteriae</i> (ATCC 9361)     |
| <i>Enterococcus faecalis</i> Vancomycin resistant | <i>Shigella sonnei</i> (ATCC 25931)         |
|                                                   | <i>Staphylococcus aureus</i> (ATCC 6538)    |

(ATCC 51299)  
*Enterobacter sakazakii* (ATCC 29544)  
*Listeria monocytogenes* (ATCC 984)  
*Klebsiella pneumoniae* (ATCC 4352)

*Staphylococcus aureus* Methicillin Resistant  
(ATCC 33592)  
*Yersinia enterocolitica* (ATCC 23715)

**To sanitize immobile items** such as tanks, chopping blocks, countertops, refrigerated storage and display equipment and food processing equipment, flood the area with appropriate ppm active quaternary solution for at least 1 minute, making sure to wet all surfaces completely. Remove excess, drain the use-solution from the surface and air dry. No potable water rinse is allowed.

**To sanitize mobile items** such as drinking glasses and eating utensils, immerse in appropriate ppm active quaternary solution for at least 1 minute, making sure to immerse completely. Remove items, drain the use-solution from the surface and air dry. Prepare a fresh solution at least daily or more frequently as soil is apparent. No potable water rinse is allowed.

**Sanitizing Dilution Chart**

To prepare a 150, 200, 300 or 400 ppm active quaternary solution use the following dilution table. Prepare the correct dilution rate based upon the appropriate use site.

**Public Eating Places, Dairy Processing Equipment and Food Processing Equipment and Utensils Sanitizing Dilution Chart**

| Active quat solution | 1 gallon    | 4 gallons   | 10 gallons  | 20 gallons  |
|----------------------|-------------|-------------|-------------|-------------|
| 150 ppm              | ¼ ounce     | 1.0 ounce   | 2 ½ ounces  | 5.0 ounces  |
| 200 ppm              | 0.34 ounces | 1.36 ounces | 3.4 ounces  | 6.8 ounces  |
| 300 ppm              | ½ ounce     | 2.0 ounces  | 5.0 ounces  | 10.0 ounces |
| 400 ppm              | 0.67 ounce  | 2.67 ounces | 6.67 ounces | 13.3 ounces |

**Food Processing Equipment and Utensils Sanitizing Dilution Chart**

| Active quat solution | 1 gallon    | 4 gallons   | 10 gallons  | 20 gallons  |
|----------------------|-------------|-------------|-------------|-------------|
| 150 ppm              | ¼ ounce     | 1.0 ounce   | 2 ½ ounces  | 5.0 ounces  |
| 200 ppm              | 0.34 ounces | 1.36 ounces | 3.4 ounces  | 6.8 ounces  |
| 300 ppm              | ½ ounce     | 2.0 ounces  | 5.0 ounces  | 10.0 ounces |
| 400 ppm              | 0.67 ounce  | 2.67 ounces | 6.67 ounces | 13.3 ounces |

**PUBLIC EATING PLACES, DAIRY PROCESSING**

**For Public Eating Places, Dairy Processing Equipment and Food Processing Equipment and Utensils:** Prior to application, remove gross food particles and soil by pre-flush, or pre-scrape, and when necessary, pre-soak. Then thoroughly wash or flush objects with a compatible detergent followed by a potable water rinse before applications of sanitizing solutions. Apply a solution of 1 to 2.67 ounce(s) of this product in 4 gallons of water (or equivalent use dilution) (150-400 ppm active) to pre-cleaned, hard surfaces thoroughly wetting surfaces with a cloth, mop, sponge, sprayer or by immersion. For spray applications, use a coarse (mist) 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 150-200 ppm active solution to the surface to be sanitized. Surfaces must remain wet for at least 1 minute followed by adequate draining and air drying. A fresh solution must 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 APPLICATION OF THE SANITIZING SOLUTION (after use as a sanitizer). (Use of "mist" is not allowed in California.)**

**DIRECTIONS FOR SANITIZING FOOD CONTACT SURFACES IN PUBLIC EATING PLACES, DAIRY PROCESSING EQUIPMENT AND FOOD PROCESSING EQUIPMENT AND UTENSILS REGULATED BY 40CFR sec 180.049(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 0.25 to 0.68 ounces of this product per gallon of water (150-400 ppm active). Articles that can be immersed in solution must remain in solution for 60 seconds. Articles too large for immersing must be thoroughly wetted by rinsing, spraying or swabbing.
5. Remove immersed items from solution to drain and then air dry. Allow non-immersed item to air dry also. **NO POTABLE WATER RINSE IS ALLOWED AFTER APPLICATION OF THE SANITIZING SOLUTION (after use as a sanitizer).**

**WISCONSIN STATE DIVISION OF HEALTH**

**DIRECTIONS FOR EATING ESTABLISHMENTS (Not for use in California)**

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 1 to 1.36 ounce(s) per 4 gallons of this product. (150-200 ppm active quaternary). 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. Fresh sanitizing solution must be prepared (Prepare fresh sanitizing solution) at least daily or when visibly soiled or diluted.

**NOTE:** A clean potable water rinse following sanitization is not permitted under Section HFS 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 for use in California)**

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 (150-200 ppm active quaternary). 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. Fresh sanitizing solution must be prepared (Prepare fresh sanitizing solution) at least daily or when visibly soiled or diluted.

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

**DIRECTIONS FOR RESTAURANT AND BAR SANITIZER**

Equipment and utensils must be thoroughly preflushed or prescaped 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 1 to 2.67 ounce(s) of this product per 4 gallons of water (or equivalent use dilution) (150-400 ppm active quaternary). Allow surface to remain wet for at least 60 seconds. Drain thoroughly before reuse. No potable water rinse is allowed (Do not rinse).

18/01

*(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 (150-400 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 1 to 2.67 ounce(s) of this product per 4 gallons of water (or equivalent use dilution) (150-400 ppm active quaternary). No potable water rinse is allowed.

At 1 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 CaCO<sub>3</sub> 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 1 to 2.67 ounce(s) of this product per 4 gallons of water (or equivalent use dilution) (150-400 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).

### **FOOD PROCESSING EQUIPMENT AND UTENSILS**

**For Food Processing Equipment and Utensils:** Prior to applications, remove gross food particles and soil by pre-flush, or pre-scrape, and when necessary, pre-soak. Then thoroughly wash or flush objects with a compatible detergent followed by a potable water rinse before applications of sanitizing solutions. Apply a solution of 1 to 2.67 ounce(s) of this product in 4 gallons of water (or equivalent use dilution) (150-400 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 (mist) 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 150-400 ppm active solution to the surface to be sanitized. Surfaces must 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). A fresh solution must 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 APPLICATION OF THE SANITIZING SOLUTION (after use as a sanitizer). (Use of "mist" is not allowed in California.)**

*(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 5 to 13.3 ounce(s) of this product per 20 gallons of water (or equivalent use dilution) (150-400 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.
3. Rinse articles thoroughly with potable water.
4. Sanitize articles using a solution of ¼ to 0.67 ounce of this product per gallon of water (150 to 400 ppm active). Articles that can be immersed in solution must remain in solution for 60 seconds. Articles too large for immersing must be thoroughly wetted by rinsing, spraying or swabbing. (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food).
5. 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).

### **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 1 to 2.67 ounce of this product per 4 gallons of water (solution) 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 1 ounce 2 gallons solution of this product (300 ppm active) by rinsing, spraying or swabbing until thoroughly wetted.
4. Allow sanitized surfaces to drain and air dry. Do not rinse.

**Sanitizing of Food Processing Equipment (Ice Machines) and Utensils:** For sanitizing food processing 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 1 to 2.67 ounce(s) this product in 4 gallons of water (or equivalent use dilution) (150-400 ppm active) by mechanical spray, directly pouring or by recirculating through the system. Surfaces must remain wet for at least one minute followed by complete draining and drying. Fresh solution must be prepared (Prepare a fresh solution) for each cleaning. No potable water rinse is allowed (Do not rinse) when product is used as directed.
4. Return machine to service.

19/11

### SANITARY FILLING EQUIPMENT SANITIZER DIRECTIONS

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 150-400 ppm active quat. Prepare a solution of 1 to 2.67 ounce(s) of this product per 4 gallons of water (or equivalent use dilution) (150-400 ppm active) for the exterior application of the filler and closing machine. Allow surfaces to remain wet for at least 60 seconds. Drain thoroughly and allow to air dry before reuse. No potable water rinse is allowed.

**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 suitable clean container that contains enough freshly made sanitizing solution to cover the gloved area. Make up the sanitizing solution by adding ¼ ounces of this product per gallon of water (or equivalent use dilution) (150 ppm active). Dip (Soak) in solution for 60 seconds. **NO POTABLE WATER RINSE IS ALLOWED (DO NOT RINSE).** 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.**

### STORAGE TANK SANITIZER DIRECTIONS

For sanitizing beer fermentation and holding tanks, wine, citrus and food processing storage, and holding tanks. Remove gross filth and soil by pre-flush or pre-scrape and when necessary presoak. Then wash surfaces with a compatible detergent and rinse with potable water prior to sanitizing. Prepare a solution of 1 to 2.67 ounce(s) of this product per 4 gallons of water (or equivalent use dilution) (150-400 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 (Do not rinse). (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food).

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.

### 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 to 2.67 ounce(s) of this product per 4 gallons of warm water (or equivalent use dilution) (150-400 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 must be reasonably dry before casing or breaking. The solution must not be re-used for sanitizing eggs.

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

### 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 150-400 ppm quat level (1 to 2.67 ounce(s) per 4 gallons) (or equivalent use dilution) to conveyors with suitable feeding equipment. Do not allow this solution to be sprayed directly on food. 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 150-400 ppm active quat. Conveyor equipment must be free of product when applying this coarse spray.

### FOR SANITIZING IN FISHERIES, MILK, CITRUS, WINE, POTATO & ICE CREAM PROCESSING PLANTS:

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*.

### MUSHROOM FARM INDUSTRY USE DIRECTIONS

**Site Preparation:** The first step in any on-going sanitation program must 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 3.5 ounces of this product per 4.5 gallons of water (0.78 ounces per gallon) (or equivalent 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 7 ounces of this product per 4.5 gallons of water (1.5 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.

### DIRECTIONS FOR ALTERNATE CONTAINERS

#### 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.

**PACKETS** (For pre-measured tear open packets)

(Simply) (Tear) open and pour contents into 4.5 gallons of water. Keep packets in box until ready to use.

OR

Pour contents of (3.5 oz) packet into 4.5 gallons of water. Keep packets in box until ready to use.

#### REFILLS

**To Refill Concentrate From Large Containers Into Smaller Containers:** This product may be used to fill and refill clean, properly labeled containers for dilution elsewhere within your facility. Make sure the small container has been cleaned, dried and properly labeled according to state and local regulations. Also make sure other items (funnels or hand pumps) are properly cleaned and dried. To refill, simply pour (or pump product) from the larger container directly into the smaller one being careful not to spill any product. Keep both containers sealed when not in use.

201/21

**3.5 OUNCE PACKET LABEL TO BE USED WITH MASTER  
CONTAINER LABEL**

MIX EACH PACKET WITH 4.5 GALLONS OF WATER  
FOR USE AS A DISINFECTANT.

**MAQUAT 7.5-M**

E.P.A. Reg. No. 10324-81 E.P.A. Est. No. 10324-IL-1

NET CONTENTS: 3.5 FLUID OZ.

**ACTIVE INGREDIENTS:**

|                                                                                                                        |                 |
|------------------------------------------------------------------------------------------------------------------------|-----------------|
| Octyl Decyl Dimethyl Ammonium Chloride .....                                                                           | 2.250%          |
| Didecyl Dimethyl Ammonium Chloride .....                                                                               | 1.125%          |
| Diocetyl Dimethyl Ammonium Chloride .....                                                                              | 1.125%          |
| Alkyl (C <sub>14</sub> , 50%; C <sub>12</sub> , 40%; C <sub>16</sub> , 10%)<br>dimethyl benzyl ammonium chloride ..... | 3.000%          |
| <b>INERT INGREDIENTS:</b> .....                                                                                        | <u>92.500%</u>  |
| <b>TOTAL</b> .....                                                                                                     | <b>100.000%</b> |

**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  
Arlington Heights, IL 60005

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