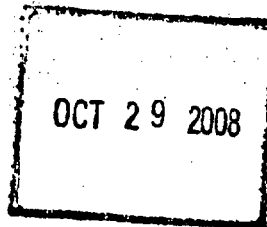


10/29/2008

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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



Subject: Maquat A  
EPA Registration No.: 10324-131  
Amendment Date: June 12, 2008  
EPA Receipt Date: July 1, 2008

Dear Ms. Tannehill,

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

- Addition of public health organisms
- Addition of directions for use and marketing claims

**Efficacy Data**

The efficacy data cited to support this product (10324-117 and 10324-81) did not support Community Associated Methicillin Resistant *Staphylococcus aureus*. The review of MRID 47360002 found the study to be unacceptable. Thus the reference to this study has been deleted from your data matrix. Do the same to the matrix in your files. Delete the reference to this organism on pages two and seven.

**Other Conditions**

Revise the label as follows:

- 1) Revise the Precautionary Statements to include the following expanded "Wash thoroughly..." statement as per the Label Review Manual. Revise to include: "Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet."

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2) Revise the Storage and Disposal statements by moving the "Packet Disposal" statement to the section for containers of 1 gallon or less.

3) Delete the phrase "with organic soil tolerance" from page one, right column. This statement is false and misleading as when this product is used as a non-food contact sanitizing rinse on hard, non-porous the surfaces must be pre-cleaned prior to treatment.

4) Correct the product name on page three under the heading "Marketing Claims" to read "Maquat A for use in:"

5) Revise the statement on page three, right column which begins: "Institutions, schools and colleges..." to include: "Institutions, schools and colleges, commercial sites, churches..." as there are no sites in this listing that qualify as industrial sites.

6) Delete the reference to "crypton barrier fabric" from the left column of page four which lists sites. This surface is correctly listed in surface section in the right column of page four.

7) Revise the claim on page four, left column which begins: "Hospital beds, bed railings, bedpans..." to end as follows: "...oxygen hoods, dental chairs/countertops." by deleting "instruments/implements OR surfaces." Treatment of dental instruments is regulated by the FDA and thus such claims are not to be included on an EPA label.

8) Revise the statement on page four, right column which begins: "Hair clippers, cutting implements..." by deleting: dryers, washers, and workstations. Your label does not include appropriate directions for treatment of these surfaces nor does your label clarify the specific surfaces to be treated. Also revise this section to indicate hard non-porous plastic rollers.

9) Delete the use site "Artificial Turf Surfaces" on page four and the directions on page twenty two. The Agency is not accepting claims for artificial turf at this time. It is believed that a more thorough evaluation of the post application exposure, environmental concerns, and efficacy considerations must be addressed prior to accepting this claim. Any Registrants with product labels currently in the market place with such a claim will be notified and asked to remove the claim pending a complete review associated with this use.

10) Delete the claim for "Hospital Pharmacy Compounding" on page five, left column in the section beginning "This product is a disinfectant and non-food contact sanitizer for Hospital Pharmacy Compounding..." This section is not descriptive enough to prohibit the use of this product on surfaces that contact drugs. If you would like to revise this section in the future to include this claim, you must include language that assures that surfaces which contact drugs are not being treated with the disinfectant/non-food contact sanitizer. The Agency does not have adequate information to determine if treatment of the listed surfaces would result in this product being in direct contact with a drug intended for human consumption. In addition, please revise to read as follows: "...BioSafety Cabinet work surfaces including countertops, sinks, plumbing fixture surfaces and exterior surfaces of incubators, refrigerators and Centrifuge surfaces..."

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11) Revise the section on page six, left column which begins: "This product has been designed for veterinarians..." ending: "it will disinfect metal clippers as well as many other hard, non-porous surfaces." Delete the references in this section to: "and providing protection against rust". This type of claim requires supporting data since products with these active ingredients are known to be corrosive to metal surfaces.

12) Revise this same section by deleting "germ free." Revise the statement to read "Regular use will help to maintain blades that operate with reduced friction and with smoother clipping action." It is false and misleading to state that this product will make a surface germ free. The claim implies that all germs will be killed which is not the case. The product has only proven efficacy against those public health organisms for which data has been provided.

13) Revise the statement on page six, right column which begins: "This product is for use by application through immersion tanks..." by deleting the reference to immersion tanks as your label does not include directions for treatment by this method. Although your product includes directions for use by immersion, we do not believe your label includes adequate directions for immersion tanks which are containers which hold many times more liquid than a standard sink. An immersion tank claim must be associated with directions which include the use of an immersion tank.

14) Revise the section on page six, right column which begins: "Escherichia coli (E. coli) and ..." ending: "as a disinfectant on food contact surfaces." Correct to read Salmonella enterica. Also revise the statement: "This product kills these bacteria and helps prevent the spread of food borne contamination on (treated) kitchen surfaces.... to read "This product kills these bacteria and helps prevent cross contamination on (treated) kitchen surfaces..."

15) Revise the last statement of the second claim on page six, right column which begins: "Escherichia coli (E. coli), Salmonella enterica (Salmonella) and Staphylococcus aureus..." to read "When used as a disinfectant, a potable water rinse is required after application on food contact surfaces."

16) Revise the third sentence in section on page six beginning: "Regular, effective cleaning and sanitizing..." by stating "Application of effective sanitizing procedures reduces the number of those microorganisms... indirectly through food"

17) Revise the following statement on page six as per the last stamped label for this product: "At 12 ounces per 100 lbs. of dry laundry, this product...and is effective against the HIV virus.

18) Revise the section on page seven, right column which begins "Use this product to clean, sanitize, and disinfectant non-porous personal protective safety equipment ... hearing protectors and ear muffs" by clarifying what part of a headphone is disinfected by stating "hard nonporous surfaces of headphones."

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19) Delete the *Note* section on page nine as it is in direct conflict with the Surgical Instrument Presoak directions listed above.

20) Revise the Fungicidal/Deodorization/Mold & Mildew section on page ten by correcting the "For Deodorizing Septic Storage Tanks" section. Delete the reference to disinfection in this section as these directions are for deodorization of septic storage tanks.

21) As per the efficacy review for this product, revise the "For Use as a Cleaner/Disinfectant in Food Processing Plants" directions on page thirteen to indicate the dilution rate of 1.75 ounces per 5 gallons of water instead of referring to the "use solution."

22) Revise the "For use as a sanitizer on dishes, glassware, silverware, eating utensils, cooking utensils" section on page sixteen by deleting the phrase: "For heavily soiled areas". This statement does not provide clarity to this section as all food contact surfaces must be pre-scraped and pre-cleaned.

23) Revise the following sections on pages sixteen and seventeen by correcting the rate to be in agreement with the listed ppm. Revise the "Sanitization of Interior Hard, Non-porous Surfaces of Water Softeners and Reverse Osmosis Units, Water Softeners," "Reverse Osmosis Units," "Sanitization of Interior Hard, Non-porous Surfaces of Ice Machines, Water Coolers, Water Holding Tanks and Pressure Tanks, Ice Machines" and "Water Coolers, Water Holding Tanks and Pressure Tanks" by correcting the rate to read: "...1 to 2 ounces of sanitizer per 4 gallons of water..." so that these statements are in agreement with the ppm rate of 200-400.

24) Revise the "Sanitizing of Food Processing Equipment (Ice Machines) and Other Hard Surfaces in Food Contact Locations" on page sixteen by deleting the statement at the end of the first section: "No potable water rinse is allowed." This statement is not in agreement with item #3 which indicates that a potable water rinse is to take place prior to the application of the sanitizer.

25) Revise the "Directions For Food Processing Equipment and Utensils (as regulated by) (40CFR 180.940(c))" directions on page seventeen by deleting the phrase: "Alternate statement" The alternate statement may not be used alone as it does not include the 1 minute contact time that appears in the original statement.

26) Revise the rate and the parts per million under "Sanitizing Egg Shells Intended for Food Directions" on page eighteen to read 150-200 ppm. The Agency is considering the treatment of eggs as a raw agricultural commodity in which a tolerance must be established. If you would like to support a higher parts per million rate, you must submit a tolerance petition.

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27) Revise the directions For Continuous Treatment of Meat and Poultry or Fruit and Vegetable Conveyors on page eighteen as per your similar labels (10324-144) to include: "Allow surfaces to remain wet for at least 60 sections."

28) Revise the directions on page twenty for "Disinfectant/Virucidal Directions to Treat Hard Non-Porous Food Contact Surfaces of Automated Tray, Rack and Buggy Washers" by indicating: "...buggy washers with solution for 10 minutes..."

29) Correct the directions "To Sanitize Hoof Trimming Equipment" on page twenty one by correcting the rate to be in agreement with the data which has been submitted to support this product. Revise to indicate 0.2 ounces per 1 gallon of water and correct the ppm rate to read 150 ppm.

30) Revise the Disinfect/Deodorize directions on page twenty two such that the second to last statement reads as follows: "Toilets must be precleaned according to the instructions under Restroom/Bathroom."

31) Revise the Laundry Sanitizer directions on page twenty two as per the last stamped label to read: "...and is effective against the HIV virus."

32) Revise the "Sanitization of Exterior Household Surfaces" directions on page twenty three by deleting the last statement which refers to turf treatment.

33) Revise the Oil Field Water Flood or Salt Water Disposal Systems directions to be in agreement with the cited "me-too" label: 10324-117. Revise the rate for the control of slime to indicate "... (7.5-15 gallons per 3,000 barrels of water) ..." and for the intermittent use to indicate "... (7.5-30 gallons per 3,000 barrels of water) ..."

34) Delete the entire three ounce package label as it does not include the correct product name nor the Registration Number associated with this product.

Data Matrix

The two study citations for Clostridium perfringens (MRID 46861602 and 46861609) have been deleted from your data matrix. Please do the same to the matrixes in your files. This organism has not been included in your product labeling.

General Comments

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

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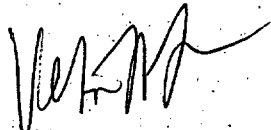
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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

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

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

Sincerely,



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

Enclosure: Stamped Label  
7510P:T.Lantz:10/28/08:10324-131

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**MASON CHEMICAL COMPANY**

**"The Quaternary Specialists"**

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

E.P.A. Reg. No. 10324-131

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

**MAQUAT® A**

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 into eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves and protective clothing when handling. Wash thoroughly with soap and water after handling 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 use or store near heat or open flame.  
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. Store in a dry place no lower in temperature than 50°F or higher than 120°F. 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.

**PACKET DISPOSAL:** Do not reuse. Discard empty container and put in trash.

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

**STORAGE AND DISPOSAL**

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

**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 Contamination Conditions

Formulated for effective Poultry Sanitation.

Formulated for effective Swine Premise Sanitation.

Formulated for effective Mushroom Farm Sanitation.

Oil Field Water Flood/Salt Water Displacement

ACCEPTED  
with COMMENTS  
EPA Letter Dated:  
**OCT 29 2008**

**ACTIVE INGREDIENTS:**

Octyl Decyl Dimethyl Ammonium Chloride.....3.0%  
Didecyl Dimethyl Ammonium Chloride.....1.5%  
Dioctyl Dimethyl Ammonium Chloride.....1.5%  
Alkyl (C<sub>14</sub>, 50%; C<sub>12</sub>, 40%; C<sub>16</sub>, 10%)  
dimethyl benzyl ammonium chloride.....4.0%

**INERT INGREDIENTS:**.....90.0%  
**TOTAL**.....100.0%

**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.)

**Table of Contents**

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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 (Households, Schools, Restaurants, Food Services, Dairies, Farm, Beverage and Food Processing Plants and Other Non-Medical Facilities):** 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 enterica* (ATCC 10708)
- Staphylococcus aureus* (ATCC 6538)

**DISINFECTION IN INSTITUTIONS (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)
- Corynebacterium ammoniagenes* (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 enterica* serovar *infantis* (ATCC 51741)
- Salmonella typhi* (ATCC 6539)
- Shigella sonnei* (ATCC 9290)
- Staphylococcus aureus* (ATCC 6538)
- Staphylococcus aureus* (Methicillin Resistant) (ATCC 33591)
- Streptococcus equi* (ATCC 33398)
- ~~*Community Associated Methicillin Resistant Staphylococcus aureus (CA-MRSA)*~~

**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 A (H5N1) virus
- Avian influenza/Turkey/Wisconsin virus
- Human Coronavirus (ATCC VR-740)
- Hepatitis B Virus
- Hepatitis C Virus
- Herpes Simplex Type 1 (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 A (H5N1) virus
- Avian influenza/Turkey/Wisconsin
- Infectious Bovine Rhinotracheitis virus (IBR) (ATCC VR-188)
- Canine Distemper (ATCC VR-128)
- Canine Coronavirus (ATCC VR-809)
- Equine Influenza A (H3N8) virus
- Equine Herpes Virus Type 1 (ATCC VR-2229)
- 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 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 6872)
- Escherichia coli* (ATCC 11229)

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*Escherichia coli* O157:H7 (ATCC 35150)  
*Enterococcus faecalis* Vancomycin resistant (ATCC 51299)  
*Enterobacter sakazakii* (ATCC 29544)  
*Listeria monocytogenes* (ATCC 984)  
*Klebsiella pneumoniae* (ATCC 4352)  
*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)  
*Streptococcus pyogenes* (ATCC 12344)  
*Yersinia enterocolitica* (ATCC 23715)

**LAUNDRY BACTERIOSTATIC PERFORMANCE:** This product was evaluated against the following:

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

**LAUNDRY PERFORMANCE:** This product was evaluated against the following:

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 ~~710~~ for use in:

- Hospitals, nursing homes, medical and dental offices and clinics, healthcare facilities, physician offices, operating rooms, radiology rooms, isolation wards, hospices and medical research facilities.
- Patient care rooms & facilities, recovery rooms, anesthesia, Emergency Rooms, X-ray cat labs, exam rooms, newborn nurseries, neonatal units, orthopedics, whirlpool surfaces, footbath surfaces, respiratory therapy, surgi-centers, labs, blood collection rooms, central supply, housekeeping & janitorial rooms, ophthalmic/optometric facilities.
- EMS & fire facilities, emergency vehicles, ambulance(s), ambulance equipment/surfaces, carts, gurneys, stretchers, police cars, fire trucks.
- Day care centers and nurseries, sick rooms, elder care centers, kindergartens, and preschools.
- Acute care institutions, alternate care institutions, home healthcare institutions.
- Life care retirement communities.
- Restaurants, restaurants and bars, bars, kitchens, taverns, 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, cadaver processing areas.
- Police stations, courthouses, correctional facilities, municipal government buildings, jails, prisons, 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, shower and bath areas.
- Hotel, motels, dormitories.
- Kitchens, bathrooms and other household areas.
- Homes (households), condos, apartments, vacation cottages, summer homes.
- Institutions, schools and colleges, commercial and industrial institutions, churches, classrooms, community colleges, universities, athletic facilities and locker rooms, exercise rooms, exercise facilities, exercise equipment, gyms, gymnasiums, fieldhouses.
- Cosmetic manufacturing facilities, medical device manufacturing facilities, biotechnology firms, pharmaceutical manufacturing facilities, warehouses.
- 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.
- Campgrounds, playgrounds, recreational facilities, 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, canneries, caterers, bakeries.
- 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 laboratories, animal research centers, animal quarantine areas, animal holding areas, animal breeding facilities, equine farms, kennels, dog/cat animal kennels, breeding and grooming establishments, pet animal quarters, zoos, pet shops, tack shops, operating rooms, washing areas, waiting rooms, examination rooms and other animal care facilities.

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- Farmhouses, barns, sheds, tool sheds, barns, cattle barns, swine barns, sheep barns, horse barns, brooder houses.
- Household and automotive garages, boats, ships, barges, watercraft, campers, RV's, trailers, mobile homes, cars, automobiles, automobile interiors, trucks, delivery trucks, boxcars, tankers, tank trucks, buses, trains, taxis and airplanes, helicopters.
- Cruise lines, cruise ships, airline terminals, airports, shipping terminals, public transportation.
- Commercial florist and flower shops.
- Basements, cellars, bedrooms, attics, living rooms, and porches.
- Laundry, laundry facilities, washing machines, clothes washing machines, commercial laundries, coin-operated laundries, laundry cleaning facilities.
- ~~Crypton barrier fabric~~

This product is for use on washable hard, non-porous surfaces such as:

- Food preparation and storage areas.
- Dishes, glassware, silverware, cooking utensils, eating utensils, plastic and other non-porous cutting boards, plastic and other non-porous chopping blocks, coolers, ice chests, refrigerator bins used for meat, vegetables, fruit and eggs, Tupperware®.
- Kitchen equipment such as food processors, blenders, cutlery, trash compactors and other utensils.
- Countertops (counters), countertop laminates, Slurppy® machines, stovetops (stoves), sinks (bathroom, kitchen), tub surfaces, appliances, refrigerators, ice machines, microwave ovens and refrigerators.
- Hospital beds, bed railings, bedpans, gurneys, traction devices, MRI, CAT, examining tables, scales, paddles, wheelchairs, cervical collars, neck braces, spine backboards, stretchers, unit stools, CPR training mannequins, curing lights, light lens covers, slit lamps, operating room lights, operating tables, oxygen hoods, dental chairs/countertops/~~instruments/implements OR surfaces~~.
- Ultrasonic baths, whirlpools, whirlpool bathtubs.
- Highchairs, baby cribs, diaper changing stations, infant bassinets/cribs/warmers/incubators/care equipment, folding tables, laundry pails.
- Shower stalls, shower doors and curtains, bathtubs and glazed tiles, chrome plated intakes, toilets, toilet seats, toilet bowls, toilet bowl surfaces, urinals, empty diaper pails, portable and chemical toilets and latrine buckets, glazed porcelain, glazed tile and restroom fixtures.
- Glass, laminated surfaces, metal, stainless steel, glazed porcelain, glazed ceramic, sealed granite, sealed marble, plastic (such as polycarbonate, polyvinylchloride, polystyrene or polypropylene), sealed limestone, sealed slate, sealed stone, sealed terra cotta, sealed terrazzo, chrome and vinyl, Plexiglass®, vanity tops.
- Tables, chairs, desks, folding tables, bed frames, lifts, washable walls, cabinets, doorknobs and garbage cans, trash barrels, trash cans, trash containers, cuspidors and spittoons.
- Enameled surfaces, painted woodwork (finished), Formica®, vinyl and plastic upholstery, washable wallpaper.
- Foundations, steps, plumbing fixtures, finished baseboards and windowsills.

- 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.
- 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.
- External Lenses Vision correction including eyeglasses (not for use on contact lenses), protective eyewear, goggles, light lens covers, optical instruments/implements.
- Hair clippers, cutting implements, ~~clippers~~ rollers, washable nail files, ~~washers~~ and ~~workstations~~.
- Hard hats, headphones.
- Kennels, kennel runs, cages, kennel/cages floors, conductive flooring, x-ray tables.
- Hatchers, setters, trays, racks, egg flats, walls, floors, ceilings, chick boxes, egg cases, vans and trash containers.
- Wrestling and gymnastic mats, athletic training tables, physical therapy tables.
- Crypton Barrier fabric
- ~~Artificial turf~~
- Beer fermentation and holding tanks, bottling or pre-mix dispensing equipment.
- Citrus processing equipment and holding tanks.
- Wine processing equipment and holding tanks.
- Drinking fountains.
- Dishes, silverware, glasses, cooking utensils, eating utensils and other similar size food processing equipment can be sanitized by immersion. NO POTABLE WATER RINSE ALLOWED (DO NOT RINSE).

This product is for use 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 is for use with a mop and bucket, trigger sprayers, sponge or by soaking.

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

Controls the growth of odor-causing and slime-forming bacteria when used in waterbeds. Prevents bubbles, preserves plasticizers, conditions vinyl interior, sequesters minerals

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 an effective non-food contact sanitizer in the presence of soils.

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).

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.

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.)

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

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.

Kill Avian Influenza on pre-cleaned environmental surfaces.

This product is a disinfectant and non-food contact sanitizer for ~~Hospital Pharmacy Compounding~~ Cleanroom, and Laboratory areas to disinfect washable, hard, non-porous surfaces such as: Laminar-airflow equipment and BioSafety Cabinet work surfaces and exterior surfaces including countertops, sinks, plumbing fixture surfaces, Incubators, Refrigerators and Centrifuge surfaces of metal, stainless steel, glass, plastic (such as polystyrene or polypropylene), Formica®, and vinyl.

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 you 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 is for use 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).

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.

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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 is for use 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). (Use on rocks and driftwood not allowed in California)

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 has been designed for veterinarians, animal groomers, hair stylists, barbers and beauticians, for use in disinfecting and maintaining clippers. It acts as a virucide and bactericide while also cleaning ~~and providing protection against rust~~. Regular use will help to maintain ~~germ-free~~ blades that operate with reduced friction and with smoother clipping action. Will help to prolong equipment life. This product is designed for use in pet salons, animal hospitals, barber and beauty shops. When used as directed it will disinfect metal clipper blades as well as many other hard, non-porous surfaces.

This product is for use as a sanitizer on dishes, glassware 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 (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 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 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.

This product is for use by application 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 ~~choleraesuis~~ (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 application on food contact surfaces.

This product has been cleared by the EPA in 40 CFR Section 180.940(a) and (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) are 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 12 ounces per 100 lbs. of dry laundry, this product provides sanitization against Staphylococcus aureus, Klebsiella pneumoniae, Pseudomonas aeruginosa, Methicillin-resistant Staphylococcus aureus (MRSA), and is effective against 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 10 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 and is effective against HIV.

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

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

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 must be treated by soaking in a solution of this product.

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

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

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 is for use 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 is for use 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 disinfect hard, non-porous surfaces of personal protective safety equipment, protective headgear, athletic helmets, wrestling/boxing headgear, athletic shoe soles, hard hats, headphones, 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 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.

**PREPARATION OF DISINFECTION/VIRUCIDAL USE SOLUTION:** Before using this product, food products and packaging materials must be removed from the room or carefully protected. Add 3 fluid ounces per 5 gallons of water (or equivalent use dilution) (450 ppm active quat) to disinfect hard non-porous surfaces OR mix a 3-fluid ounce packet with 5 gallons of water. 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 pump or trigger sprayer. Spray 6-8 inches from surface. Rub with brush, sponge or cloth. Do not breathe spray. Rinse or allow to air dry. Rinsing of floors is not necessary unless they are to be waxed or polished. Rinse all surfaces that come in contact with food such as countertops, appliances, tables and stovetops with potable water before reuse. A fresh solution must be prepared (Prepare a fresh solution) at least daily or when use solution becomes visibly dirty.

**Note:** With spray applications cover or remove all food products. For heavily soiled areas, a preliminary cleaning is required.

**DISINFECTION IN INSTITUTIONS (Hospitals, Dental Offices, Nursing Homes, and Other Health Care Institutions):** Add 3 ounces of this product to 5 gallons of water (0.60 ounces per gallon) (450 ppm active) OR mix a 3-ounce packet with 5 gallons of water. Treated surfaces must remain wet for 10 minutes. At this use level, this product is bactericidal according to the AOAC Use Dilution Test method on hard inanimate surfaces modified in the presence of 5% organic serum against:

*Burkholderia cepacia* (ATCC 25416)

*Campylobacter jejuni* (ATCC 29428)

~~*Campylobacter jejuni* (ATCC 29428)~~

*Corynebacterium ammoniagenes* (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 enterica serovar infantis* (ATCC 51741)  
*Salmonella typhi* (ATCC 6539)  
*Shigella sonnei* (ATCC 9290)  
*Staphylococcus aureus* (Methicillin Resistant) (ATCC 33591)  
*Staphylococcus aureus* (ATCC 6538)  
*Streptococcus equi* (ATCC 33398)

**DISINFECTANT IN NON-MEDICAL FACILITIES (Households, Schools, Restaurants, Food Services, Dairies, Farm, Beverage and Food Processing Plants and Other Non-Medical Facilities):** Add 1.75 ounces of this product to 5 gallons of water (260 ppm active quat). Treated surfaces must remain wet for 10 minutes. This product is not to be used as a disinfectant on glassware, dishes and eating utensils. 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 enterica* (ATCC 10708)                      *Staphylococcus aureus* (ATCC 6538)

**Virucidal Performance:** At 3 ounces per 5 gallons (0.60 ounces per gallon) (450 ppm quat active) use level, 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 A (H5N1) virus  
 Avian influenza/Turkey/Wisconsin  
 Hepatitis B Virus  
 Hepatitis C Virus  
 Herpes Simplex Type1 (ATCC VR-260)  
 Herpes Simplex Type 2 (ATCC VR-734)  
 Human Coronavirus (ATCC VR-740)  
 Influenza A2/Hong Kong (ATCC VR-544)  
 Influenza A<sub>2</sub>/J305 (ATCC VR-100)  
 Vaccinia virus (ATCC VR-119)

Add 3 ounces per 5 gallons (0.60 ounces per gallon) (450 ppm quat active). Treated surfaces must remain wet for 2 minutes. 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:

HIV-1

**NON-FOOD CONTACT SANITIZING PERFORMANCE:** At 5 ounces per 25 gallons use-level (or equivalent use dilution) and with a 3-minute contact time, this product is an effective one-step sanitizer against the following on hard non-porous environmental surfaces.

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

**PREPARATION OF NON-FOOD CONTACT SANITIZER USE SOLUTION:** (For) floors, walls, tables etc. At 5 ounces per 25 gallons use-level (or equivalent use dilution)

and with a 1-minute contact time, this product is an effective one-step sanitizer against *Staphylococcus aureus* and *Klebsiella pneumoniae* on hard non-porous environmental surfaces. Apply sanitizer use solution to pre-cleaned, hard, non-porous surfaces with a cloth, mop, sponge, sprayer or by immersion. For sprayer applications, use a coarse pump or trigger sprayer. Spray 6-8 inches from surface. Rub with brush, sponge or cloth. Do not breathe spray. Treated surfaces must remain wet for 3 minutes. Then wipe with sponge, mop or cloth or allow to air dry.

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

**FUNGISTATIC PERFORMANCE:** At 3 ounces per 5 gallons, (0.60 ounces per gallon) (450 ppm active quat) and with a 10-minute contact time, 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*

**CLEANING AND DISINFECTION:** For heavily soiled areas, a pre-cleaning step is required. For all general cleaning and disinfection, use 3 fluid ounces of this product per 5 gallons of water (or equivalent use dilution) (450 ppm active quat). Apply use solution using a cloth, mop or pressure sprayer so as to thoroughly wet surface to be cleaned/disinfected. For sprayer applications, use a coarse spray device. Allow surfaces to remain wet for 10 minutes and then let air dry. Prepare a fresh solution at least daily or when solution becomes visibly dirty or diluted.

(OR)

**FOR USE AS A ONE-STEP CLEANER/DISINFECTANT:**

1. Pre-clean heavily soiled areas.
2. Apply use solution (3 ounces per 5 gallons) (450 ppm active quat) (or equivalent use dilution) to hard, non-porous environmental surfaces.
3. To disinfect, all surfaces must remain wet for ten (10) minutes.
4. Wipe surfaces or let air dry.

**Note:** All food contact surfaces such as appliances and kitchen countertops must be rinsed with potable water. Do not use this product to clean or disinfect glassware, utensils, dishes or interior surfaces of appliances.

**FOR DISINFECTING HARD, NON-POROUS SURFACES AGAINST AVIAN INFLUENZA (H5N1):** For use in homes, hospitals, hotels, motels and schools, the directions for hospital disinfection must be followed using a rate of 3 oz per 5 gallons of water (450 active ppm) (or equivalent use dilution). (OR) For use in animal housing facilities, follow the animal premise directions.

**GENERAL DISINFECTANT-NON-MEDICAL DILUTION CHART**

Ounces of Product	Amount of Water
0.0875 ounces	1 quart
0.175 ounces	½ Gallon
0.35 ounces	1 gallon
0.875 ounces	2 ½ gallons
1.75 ounces	5 gallons
3.5 ounces	10 gallons

**HOSPITALS, DENTAL OFFICES, NURSING HOMES AND OTHER HEALTH CARE INSTITUTIONS DISINFECTION AND VIRUCIDAL DILUTION CHART**

Ounces of Product	Amount of Water
0.15 ounces	1 quart
0.3 ounces	½ Gallon
0.6 ounces	1 gallon

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1.5 ounces	2 ½ gallons
3.0 ounces	5 gallons
6.0 ounces	10 gallons

**DILUTION CHART:**

For Hospital or Medical Environment claims	3oz/5 gal. water
For General or Broad Spectrum claims	1.75oz/5 gal. water
For Virucidal claims	3oz/5 gal. water
For Animal Virucidal claims	3oz/5 gal. water
For Non-Food Contact Sanitizing claims	5oz/25 gal. water
For Food Contact Sanitizing claims at 150 ppm	0.75oz/4 gal. water
For Food Contact Sanitizing claims at 200 ppm	1oz/4 gal. water
For Food Contact Sanitizing claims at 400 ppm	2 oz./4 gal. water
For Laundry Bacteriostatic claims	10oz./100 lbs. of dry fabric
For Laundry Sanitizer	12oz./100 lbs. of dry fabric

**HOSPITAL/HEALTH CARE**

*(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.

**INSTITUTIONAL DISINFECTANT DIRECTIONS (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 ounces of this product to 5 gallons of water (0.60 ounces per gallon) (450 ppm active) (or equivalent use dilution) OR mix a 3-ounce packet with 5 gallons of water to disinfect hard, non-porous surfaces. Apply use solution to hard, inanimate, non-porous surfaces thoroughly wetting surfaces with a cloth, mop, sponge or sprayer. For sprayer applications, use a coarse spray device. Spray 6-8 inches from surface. Rub with brush, sponge or cloth. Do not breathe spray. Treated surfaces must remain wet for 10 minutes. Rinse or allow to air dry. Prepare a fresh solution at least daily or when use solution becomes diluted or soiled.

**Note:** With spray applications cover or remove all food products. For heavily soiled areas, a preliminary cleaning is required.

**\*VIRUCIDAL PERFORMANCE:** At 3 ounces per 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 ounces per 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 ounces per 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, HCV AND HBV 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 C virus (HCV) and Hepatitis B virus (HBV).

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

**Personal Protection:** Specific barrier protection items to be used when handling items soiled with blood or body fluids are disposable latex gloves, gowns, masks, and eye coverings. *(Alternate statement: Clean up must always be done wearing protective latex gloves, gowns, masks and eye protection.)*

**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, cleaning materials and clothing 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 ounces per 5 gallons use solution. This contact time will not control other common types of viruses and bacteria.

(OR)

For HIV, leave surfaces wet for two minutes with a 3-ounce per 5 gallons of water 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 a 3-ounce per 5 gallons of water solution (or equivalent use dilution) (450 ppm active quat).

**SURGICAL INSTRUMENT PRESOAK:** Add 3 ounces of this product to 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. Prepare a fresh solution at least daily or more often if solution becomes cloudy or soiled.

**Note:** Plastic instruments must remain immersed until ready to use. Metal instruments must be removed after 10 minutes, rinsed, dried, and kept in a clean non-contaminated receptacle. Prolonged soaking will 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 0.60 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 ounces of this product for each 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 solutions. Turn off pump. Wash down the unit sides, seat of the chair lift, and any/all related equipment with a clean swab, brush or sponge. Product to surface contact time

must be at least 10 minutes for proper disinfection. After the unit has been thoroughly disinfected, drain solutions from the unit and rinse any/all cleaned (disinfected) surfaces with fresh water. The unit is ready for reuse

**CLEANING AND DISINFECTING HARD, NON-POROUS SURFACES ON PERSONAL PROTECTIVE EQUIPMENT (RESPIRATORS):** Pre-clean equipment if heavily soiled to ensure proper surface contact. Add 3 ounces of this product to 5 gallons of water (or equivalent use dilution) (450 ppm active quat). Gently mix for uniform solution. Apply solution to hard, non-porous surfaces of the respirator with a brush, coarse spray device, sponge or by immersion. Thoroughly wet all surfaces to be disinfected. Treated surfaces must remain wet for ten (10) minutes. Remove excess solution from equipment prior to storage. The user must comply with all OSHA regulations for cleaning respiratory protection equipment (29 CFR § 1910.134).

### SANITIZER DIRECTIONS FOR NON-FOOD CONTACT SURFACES IN INSTITUTIONAL FACILITIES

**ULTRASONIC BATH SANITIZER DIRECTIONS:** Use this product to sanitize hard, (inanimate) non-porous, non-critical objects compatible with Ultrasonic cleaning units. Pour a fresh solution of 0.25 ounce per gallon of water (or equivalent use dilution) (200 ppm active quat) directly into bath chamber. Pre-clean soiled objects. Place objects into unit and operate for a minimum of 3 minutes, according to manufacturers' use directions. Remove objects and rinse with sterile water (sterile water for injection), or allow to air dry. Replace solution at least daily or when solution becomes visibly dirty or discolored.

### DEODORIZATION / MOLD & MILDEW

**MOLD AND MILDEW CONTROL:** At 3 ounces per 5 gallons, (0.60 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 solution to dry on surface and repeat treatment every seven days or when new growth appears. Allow surface to remain wet for ten (10) minutes.

**CLEANING/DEODORIZING DIRECTIONS:** Add 2.25 to 9 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.

**GENERAL DEODORIZATION:** To deodorize, add 1.75 ounces of this product to 5 gallons of water (or equivalent use dilution) (260 ppm active quat). Excess liquid must be wiped up or allowed to air dry.

**FOR DEODORIZING GARBAGE CANS, GARBAGE TRUCKS, INDUSTRIAL WASTE RECEPTACLES AND GARBAGE HANDLING EQUIPMENT:** It is especially important to pre-clean for the product to perform properly. Then, apply a wetting concentration of 3.25 ounces of this product per gallon of water (or equivalent use dilution) (2,500 ppm quat active). Treated surfaces must remain wet for 10 minutes.

**FOR DEODORIZING SEPTIC STORAGE TANKS:** When tanks are empty, pour 3 oz. per 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 ounces per 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 ounces per 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.

**FOR DISINFECTION AND 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 ounces per 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.

**GLASS CLEANING/DEODORIZING DIRECTIONS:** Add 3 fluid ounces per 5 gallons of water (or equivalent use dilution) 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.

**HUMIDIFIER DIRECTIONS:** Thoroughly clean water tank and filters. Add 0.25 ounces of this product per gallon of refill water (or equivalent use dilution). Not for use in heat or atomizing type humidifiers.

(OR)

**HUMIDIFIER BACTERIA/ALGAE TREATMENT:** 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 0.25 ounces of this product (or equivalent use dilution). When you refill the tank, add 0.25 ounces of this product for every gallon of water added in the tank (or equivalent use dilution).

Not for use in heat vaporizing or atomizing type humidifiers.

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

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

**SEWER BACKUP & RIVER FLOODING:** During mitigation procedures, dilute 1.1-2.2 ounces of this product per gallon of water (or equivalent use dilution) allowing for the diluting effect of absorbed water within saturated materials. Remove gross filth or heavy



soil along with non-salvageable materials. Saturate all affected areas with a sprayer using a coarse spray tip before and after cleaning and extraction.

**CARPETS, CARPET CUSHIONS AND OTHER POROUS MATERIALS SUCH AS SUB FLOORS, DRYWALL, TRIM AND FRAME LUMBER, TACKLESS STRIP AND PANELING:** For water damage from a clean water source, extract excess water. Test hidden area for colorfastness. Dilute 1.1-2.2 ounces of the product per gallon of water (859-1718 ppm active quat) (or equivalent use dilution) 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 is for use in industrial and institutional, commercial and residential areas such as homes, motels & hotel chains, nursing homes, schools and hospitals. For use on wet cleanable synthetic fibers. Do not use on wool. Vacuum carpet thoroughly prior to cleaning. Test fabric for color fastness.

**For portable extraction units:** Mix 1.1 ounce of this product per gallon of water (or equivalent use dilution).

**For truck mounted extraction machines:** Mix 13.5 ounces of this product per gallon of water (or equivalent use dilution) and meter at 4 gallons per hour.

**For rotary floor machines:** Mix 2.2 ounces of this product per gallon of water (or equivalent use dilution) 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 is for use in industrial and institutional, commercial and residential areas such as homes, motels, hotel chains, nursing homes and hospitals.

Vacuum carpet thoroughly prior to application. Mix 1.1 ounce of product per gallon of water (or equivalent use dilution). Follow the injection and/or extraction procedures as specified for any conventional steam-cleaning equipment you are using. For rotary floor machines, mix 2.2 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 must 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 must not be mixed with other cleaning products.

**SMOKE DAMAGE RESTORATION (Not for use in CA):** Effective against odor causing bacteria and fungi for home, institutional, industrial and hospital use. This product is particularly suitable for use in smoke damage restoration situations against odor

causing bacteria on the following porous and semi-porous materials: carpets, carpet cushion, sub floors, drywall, trim and frame lumber, tackless strip and paneling. Follow directions as outlined in the Water Damage Restoration section. 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, plastic rollers, razors, manicure/pedicure tools, clippers and trimmer blades, tweezers and scissors, can be disinfected by immersing in 0.35 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. Prepare a fresh solution 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, plastic rollers, razor, manicure/pedicure tools, clippers and trimmer blades, tweezers and scissors, in a 0.60 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. Prepare a fresh solution at least daily or more often if solution becomes cloudy or soiled.

(OR)

#### **FOR USE TO CLEAN AND DISINFECT BARBER AND BEAUTY/MANICURE INSTRUMENTS AND TOOLS:**

1. Pre-clean heavily soiled items.
2. Completely immerse pre-cleaned combs, scissors, plastic rollers, clipper blades, razors, manicure implements and other non-porous instruments in the use solution (0.60 ounces per gallon) (or equivalent use dilution) so that surfaces remain wet for ten (10) minutes.
3. Rinse surfaces thoroughly and let air dry before reuse.
4. Change solution at least daily or sooner if visibly dirty.

**DISINFECTING/VIRUCIDE GROOMING CLIPPERS:** Remove hair, dandruff and dust particles prior to disinfecting the blades. Turn the clipper off occasionally during use and spray between the teeth of blades a solution of 3 ounces per 5 gallons (or equivalent use dilution) (450 ppm active quat). Allow surface to remain wet for at least 10 minutes. Rinse surfaces thoroughly. Then wipe dry with a clean soft cloth.

**CLEANING HAIR CLIPPERS AND ELECTRIC SHEARS:** While clipper/shear is running, hold in the downward position and spray 0.35 ounce 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 surface to remain wet for at least 10 minutes. Rinse surfaces thoroughly. 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. Turn off clipper/shear. Immerse pre-cleaned shear/implement into a container of 0.35 ounce per gallon of water solution (or equivalent use dilution) (260 ppm active quat) of this product for at least 10 minutes. Rinse surfaces thoroughly. Remove shear/implement and wipe dry. Use fresh solution at least daily or when immersion tank (bowl) (sink) solution becomes diluted or visibly soiled.

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

**DISINFECTION OF HARD, NON-POROUS SURFACES IN FOOTBATHS:** To remove body oils, dead tissue, soil and all other buildups or organic matter on inanimate surfaces after using the footbath, drain the water and thoroughly clean all hard, non-porous surfaces with soap or detergent, then rinse with water. Saturate surfaces with a use solution of 1.75 ounce per 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 0.60 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.

#### SANITIZER DIRECTIONS FOR NON-FOOD CONTACT SURFACES IN BARBER/SALON FACILITIES

**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 0.25 ounces per gallon (or equivalent use dilution) (200 ppm active) of water for at least 3 minutes. Rinse thoroughly and dry before use. Fresh solution must be prepared at least daily or more often if solution becomes cloudy or soiled. (Alternate statement: Prepare a fresh solution at least daily or more often if solution becomes cloudy or soiled).

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

#### RESTROOM/BATHROOM

##### NON-ACID TOILET BOWL (AND URINAL) (& BATHROOM) DISINFECTANT/CLEANER DIRECTIONS

Remove gross filth prior to disinfection.

**FROM CONCENTRATE:** Add 0.60 oz. to the toilet bowl or urinal and mix. Brush thoroughly over exposed surfaces and under the rim with a cloth, mop, or sponge. Repeat and allow solution to stand for 10 minutes and flush.

*(Or use alternate Concentrate Use directions.)*

##### FOR USE AS A NON-ACID BOWL CLEANER/DISINFECTANT IN TOILET BOWLS FROM CONCENTRATE:

1. Pre-clean heavily soiled areas.

2. Add 0.60 ounces into toilet bowl (or equivalent use dilution).
3. Swab entire surface area especially under the rim.
4. Repeat and allow entire surface to remain wet for ten (10) minutes.
5. Flush toilet and rinse swab applicator thoroughly.

**FROM USE-SOLUTION:** Preclean surface. Empty toilet bowl or urinal and apply a use solution of 0.60 oz per gallon to exposed surfaces including under the rim with a cloth, mop, sponge or sprayer. Brush or swab thoroughly and allow solution to stand for 10 minutes and flush. For spray applications, use a coarse spray device.

*(Or use alternate Use-Dilution directions.)*

##### FOR USE AS A NON-ACID BOWL CLEANER/DISINFECTANT IN TOILET BOWLS (AND URINALS) FROM USE-DILUTION :

1. Pre-clean heavily soiled areas.
2. Empty toilet bowls by forcing water through the trap. Allow toilet bowl to refill with water and apply Use Solution to exposed surfaces in toilet bowls and urinals.
3. Swab entire surface area especially under the rim.
4. Allow entire surface to remain wet for ten (10) minutes.
5. Flush toilet and rinse swab applicator thoroughly.

*(Or use alternate Use-Dilution directions)*

**TOILET BOWLS/URINALS:** Swab bowl with brush to remove heavy soil prior to cleaning or disinfecting. Clean by applying use-solution around the bowl and up under the rim. Stubborn stains may require brushing. To disinfect, first preclean to remove heavy soil, then remove or expel over the inner trap the residual bowl water. Allow toilet bowl to refill with water. Pour in 3 oz. of the use dilution. Swab the bowl completely using a scrub brush or mop, making sure to get under rim. Let stand for 10 minutes or overnight, then flush.

**FOR HEAVY DUTY CLEANING:** Preclean surface. Empty toilet bowl or urinal and apply 3.25 ounces per gallon (or equivalent use 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 sprayer application, use a coarse spray device and swab all areas after spraying.

*(Or)*

**GENERAL CLEANING TOILET BOWL:** Apply (Open cap) (Squeeze gently, directing) 0.60 ounces of bowl cleaner under the rim and on sides of bowl (inside only). Brush clean and flush toilet. (Close cap). Rinse brush with clean water. Do not use on any other surfaces including toilet seat, toilet lid, countertops, tubs and sinks. To clean other acid resistant toilet bowls or urinals, dilute product with 3 parts water. Do not allow solution to remain on surfaces without immediately rinsing thoroughly with water.

*(Or)*

**TO CLEAN AND DISINFECT:** A preliminary cleaning is required for the removal of heavy soil prior to disinfection. Fill toilet bowl with clean water. Saturate mop with 0.60 ounces of this product while holding bottle and mop applicator over bowl. Swab bowl completely making sure to get under the rim. Let stand for 10 minutes then flush. Rinse applicator completely.

*(Or)*

**TO DISINFECT TOILET BOWLS:** Fill toilet bowl with clean water. Apply (Squeeze) 0.60 ounces of bowl cleaner onto bowl brush. Clean the entire unit especially under the rim at water outlets. Allow surface to remain wet 10 minutes. Flush and rinse out bowl brush with clean water. A preliminary cleaning step is required for the removal of heavy soil prior to disinfection.

*(Or)*

**TO DISINFECT TOILET BOWLS:** Flush to remove heavy soil. To clean, simply squirt 0.60 ounces of this product under the rim and around sides. Allow it to stand several

minutes then scrub entire surface (especially under the rim) with a bowl (toilet) mop. Flush and rinse. To disinfect, squirt at least 0.60 ounces of this product under the rim and around the sides. Scrub bowl with mop. Allow solution to remain in the bowl for 10 minutes after scrubbing. Flush and rinse.

(Or)

#### TO DISINFECT TOILET BOWLS:

1. Remove gross filth and heavy soil deposits.
2. Fill toilet bowl with clean water.
3. Apply 0.60 ounces of this product to swab applicator, cloth, mop, sponge, or directly to surface.
4. Swab entire surface area, especially under the rim.
5. Allow entire surface to remain wet for ten (10) minutes.
6. Flush toilet and rinse swab applicator thoroughly.

(Or)

**TOILET BOWL (AND URINAL) DISINFECTION/CLEANER DIRECTIONS:** Remove gross filth prior to disinfection. Empty toilet bowl or urinal and apply solution of 0.60 ounces of this product per 128 ounces of water to exposed surfaces including under the rim. Allow toilet bowl to fill with water. Brush or swab thoroughly with a cloth, mop, sponge or sprayer and allow solution to stand for 10 minutes and flush.

(Or)

**TO CLEAN AND DISINFECT URINALS:** Flush to remove heavy soil. Remove screens and strainers. Then squirt 0.60 ounces of this product per 128 ounces of water around edges and top. Allow solution to flow down over surfaces. Allow it to stand several minutes before scrubbing, then flush and rinse. To disinfect, allow solution to remain in urinal at least 10 minutes after scrubbing.

(Or)

#### TO DISINFECT URINAL:

1. Remove gross filth and heavy soil deposits.
2. Apply solution of 0.60 ounces of this product per 128 ounces of water directly to urinal surfaces including water outlets area for general cleaning.
3. Then pour an additional 0.60 ounces of product on applicator.
4. Clean entire unit, especially under rim at water outlets, with applicator.
5. Remove screen trap to deodorize drain and apply 4 ounces directly on edge and into drain.
6. Wait 10 minutes, flush and rinse applicator.

**TO DISINFECT TUBS, SHOWER STALLS, SINKS, FAUCETS:** Swab area and remove gross filth and heavy soil. Apply 0.60 ounces of (product name) per gallon of water (450 ppm active quat) (or equivalent use dilution) onto surface to be cleaned or apply with cloth or sponge to wet all surfaces thoroughly and allow surface to remain wet for at least 10 minutes. Wipe around with damp cloth or sponge. Do not allow solution to dry on surface. Rinse thoroughly with water.

#### 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 ounces per 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. **Special instructions for foam guns:** Pour concentrate into foam gun bottle and attach bottle to spray nozzle and ensure gun is attached to hose. (**Note:** See foam gun instructions for more information. Make sure setting is set for a 1:50 dilution.) Once in place, squeeze the handle to disperse foam solution. To disinfect, all surfaces must remain wet for ten (10) minutes. (*Foam guns not for use in California.*)

3. Scrub using a deck brush or other coarse material as necessary.

4. Rinse surfaces thoroughly and let air dry.

**Note:** Rinsing is not necessary unless floors are to be coated with finish or restorer. All food contact surfaces, such as appliances and kitchen countertops, must be rinsed with potable water. Do not use this product to clean or disinfect glassware, utensils, dishes or interior surfaces of appliances.

**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 (or equivalent use dilution) to deodorize. If odors return before time to empty, add 2.25 to 4.5 ounces (or equivalent use dilution) to the tank. For kitchen waste, add 2.25 to 4.5 ounces (or equivalent use dilution) to gray water tank as needed to control malodors created by dirty dishwasher.

### FOOD PROCESSING PREMISES

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 food contact surfaces provided that the surfaces are adequately drained before contact with food so that little or no residue remains.

**DIRECTIONS FOR FOOD PROCESSING PLANTS:** For use on non-food contact surfaces such as floors, walls, tables, garbage cans and disposal areas. Before using this product, food products and packaging materials must be removed from the room or carefully protected. Follow Disinfection directions.

**DIRECTIONS FOR FOOD STORAGE AREAS:** For use on non-food contact surfaces such as shelves, floors, walls and tables. Before using this product, food products and packaging materials must be removed from the room or carefully protected. Then follow Disinfection directions.

#### FOR USE AS A CLEANER/DISINFECTANT IN FOOD PROCESSING PLANTS:

1. Before using this product in food processing areas, food products and packaging materials must be removed from the room or carefully protected.
2. Apply use solution evenly over surface using a cloth, mop, sponge or coarse spray device. Be sure to wet all surfaces thoroughly. Do not breathe spray.
3. Allow product to remain on surface for ten (10) minutes.
4. Wipe with clean cloth, sponge or paper towel.
5. For heavily soiled areas, thoroughly clean surface prior to disinfecting.
6. When disinfecting food contact surfaces used for food preparation, rinse surfaces thoroughly with potable water. This product must not be used to clean the following surfaces: utensils, glassware, dishes or interior surfaces of processing equipment.

**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 ounces of this product to 5 gallons (0.60 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 surface 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 ounces of this product to 5 gallons (0.60 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 surface to remain wet for 10 minutes. Then remove excess liquid and rinse the surface with potable water.

**FOR USE ON NON-FOOD CONTACT SURFACES AS A GENERAL DISINFECTANT IN THE BREWERY INDUSTRY:** Use 1.75 ounces of this product per 5 gallons (or equivalent use dilution) (0.35 ounces per gallon) (260 ppm active quat) of water. Follow the general disinfectant directions above.

**DIRECTIONS FOR FOGGING 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 1.5 ounces of product to 1 gallon of water (1,200 ppm) (or equivalent use dilution). Wear a dust mist respirator when mixing the use solution and pouring it into the fogging apparatus. Vacate the area of all personnel prior to 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 must a room or building be entered by anyone within two hours of the actual fogging and a minimum of 4 air exchanges (ACH) per hour in the facility. 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.

**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, walls, countertops, metal surfaces, painted surfaces, glazed porcelain, glazed tile, glass, chrome, rubber, and plastic in restaurants, kitchens, dishwashing areas, and bar and wait station areas. Remove food and food packaging prior to use. Cover exposed food-handling surfaces. After removing gross filth, apply a solution of 0.58 ounces of this product per gallon 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 0.58 ounces per gallon 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.

## SANITIZER DIRECTIONS FOR NON-FOOD CONTACT SURFACES IN FOOD PROCESSING FACILITIES

**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 a 0.25 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 to 1.5 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 (1.25 - 2.5 oz. per 2.5 gallons 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 1.5 ounces of product to 1 gallon of water (1,200 ppm) (or equivalent use dilution). Wear a dust mist respirator when mixing the use solution and pouring it into the fogging apparatus. 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 must a room or building be entered by anyone within two hours of the actual fogging and a minimum of 4 air exchanges (ACH) per hour in the facility. If the building must be entered, then the individuals entering the building must wear a self-contained respirator approved by NIOSH/MSHA, goggles, long sleeves and long pants.

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

### MUSHROOM FARM INDUSTRY USE DIRECTIONS

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

**Disinfection:** Use 3 ounces of this product per 5 gallons of water (0.60 ounces per gallon of water) (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, preclean first. Prepare a fresh solution for each use.

**For Heavy Duty Cleaning:** When greater cleaning is desired, use 6 ounces of this product per 5 gallons of water (1.2 ounces of this product per gallon of water) (or equivalent dilution). Heavily soiled areas will require additional 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.

**FOOD CONTACT AND TOBACCO PROCESSING EQUIPMENT  
SANITIZING DIRECTIONS**

**FOOD CONTACT SANITIZING PERFORMANCE:** At 1 ounce per 4 gallons of water (200 ppm active) this product eliminates 99.999% 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:

<i>Aeromonas hydrophila</i> (ATCC 23213)	<i>Salmonella enteritidis</i> (ATCC 4931)
<i>Campylobacter jejuni</i> (ATCC 6872)	<i>Salmonella typhi</i> (ATCC 6539)
<i>Escherichia coli</i> (ATCC 11229)	<i>Shigella dysenteriae</i> (ATCC 9361)
<i>Escherichia coli</i> O157:H7 (ATCC 35150)	<i>Shigella sonnei</i> (ATCC 25931)
<i>Enterococcus faecalis</i> Vancomycin resistant (ATCC 51299)	<i>Staphylococcus aureus</i> (ATCC 6538)
<i>Enterobacter sakazakii</i> (ATCC 29544)	<i>Staphylococcus aureus</i> Methicillian Resistant (ATCC 33592)
<i>Listeria monocytogenes</i> (ATCC 984)	<i>Streptococcus pyogenes</i> (ATCC 12344)
<i>Klebsiella pneumoniae</i> (ATCC 4352)	<i>Yersinia enterocolitica</i> (ATCC 23715)
<i>Salmonella enterica</i> (ATCC 10708)	

At 0.75 ounce per 4 gallons (150 ppm) this product is effective with a 1-minute contact time as a food-contact surface sanitizer in water up to 500-ppm hardness against *Escherichia coli* and *Staphylococcus aureus*.

**SANITIZING DILUTION CHART**

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

Active quat solution	1 gallon	4 gallons	10 gallons	20 gallons
150 ppm	0.19 ounces	0.75 ounces	1.92 ounces	3.84 ounces
200 ppm	¼ ounce	1.0 ounce	2 ½ ounces	5.0 ounces
300 ppm	0.375 ounce	1 ½ ounces	3 ¾ ounces	7 ½ ounces
400 ppm	½ ounce	2.0 ounces	5.0 ounces	10.0 ounces

**SANITIZING OF FOOD PROCESSING EQUIPMENT AND OTHER HARD SURFACES IN FOOD PROCESSING LOCATIONS, MEAT PLANTS, DAIRIES, BAKERIES, CANNERIES, BEVERAGE PLANTS, 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 (DO 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 must be sanitized by immersion in a 0.75 to 2 ounce(s) per 4 gallons solution of this product (or equivalent use dilution) (150-400 ppm active) for a contact time of 1 minute. **NO POTABLE WATER RINSE IS ALLOWED.**

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

**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.

**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 0.75 to 2 ounces 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 pump or trigger sprayer. Spray 6 to 8 inches from surface. Rub with brush, sponge, or cloth. Do not breathe spray. With spray applications cover or remove all food products. From a Closed Loop Dilution Center, apply 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. Prepare a fresh solution at least daily or when use solution becomes visibly dirty. For mechanical application use solution must not be reused for sanitizing applications. **NO POTABLE WATER RINSE IS ALLOWED AFTER APPLICATION OF THE SANITIZING SOLUTION (after use as a sanitizer).**

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

1. Scrape, flush or presoak articles (whether mobile or stationary) to remove gross food particles and soil.
2. Thoroughly wash articles with an appropriate detergent or cleaner.
3. Rinse articles thoroughly with potable water.
4. Sanitize articles using a solution of 0.19 to ½ 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 items to air dry also. NO POTABLE WATER RINSE IS ALLOWED (DO NOT RINSE) AFTER APPLICATION OF THE SANITIZING SOLUTION (after use as a sanitizer).

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

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

1. Thoroughly wash equipment and utensils in a hot detergent solution. Rinse utensils and equipment thoroughly with potable water.
2. Sanitize equipment and utensils by immersion in a 0.75 to 2 ounces of this product per 4 gallons of water solution (or equivalent use dilution) for at least 60 seconds at a temperature of 75°F. This dilution is equivalent to a solution containing 50 ppm available chlorine.
3. For equipment and utensils too large to sanitize by immersion, apply a ¼ ounce per 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.

#### 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 0.75 to 1 ounce 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 at least daily or more often when visibly soiled or diluted. (Alternate statement: Prepare fresh sanitizing solution at least daily or more often when visibly soiled or diluted.)

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

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

#### WISCONSIN STATE DIVISION OF HEALTH

##### DIRECTIONS FOR EATING ESTABLISHMENTS *(Not 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) (or equivalent use dilution). Immerse all utensils for at least two minutes or for contact time specified by governing sanitary code.
5. Place sanitized utensils on a rack or drain board to air-dry.
6. Fresh sanitizing solution must be prepared at least daily or more often when visibly soiled or diluted. (Alternate statement: Prepare fresh sanitizing solution at least daily or more often when visibly soiled or diluted.)

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

#### DIRECTIONS FOR RESTAURANT AND BAR SANITIZER

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

For precleaned dishes, glassware, silverware, eating utensils, and cooking utensils, immerse in a solution containing 0.75 to 2 ounces 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).

#### FOR USE AS A SANITIZER ON DISHES, GLASSWARE, SILVERWARE, EATING UTENSILS, COOKING UTENSILS:

~~For use as a sanitizer on dishes, glassware, silverware, eating utensils, and cooking utensils, immerse in a solution containing 0.75 to 2 ounces 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).~~ 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 (Do not rinse).

#### SANITIZING OF FOOD PROCESSING EQUIPMENT (ICE MACHINES) AND OTHER HARD SURFACES IN FOOD CONTACT LOCATIONS:

For sanitizing food processing equipment, dairy equipment, refrigerated storage and display equipment and other hard, non-porous surfaces. Equipment and utensils must be thoroughly preflushed or prescraped and when necessary presoaked to remove gross food particles. No potable water rinse is allowed (Do not rinse).

1. Turn off refrigeration
2. Unit must be washed with a compatible detergent and rinsed with potable water before sanitizing.
3. Wash and rinse all surfaces thoroughly.
4. Apply a solution of 0.75 to 2 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 for each cleaning. (Alternate statement: Prepare a fresh solution for each cleaning). No potable water rinse is allowed (Do not rinse) when product is used as directed.
5. Return machine to service.

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

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

1. Tank must be washed with a compatible detergent and rinsed with potable water before sanitizing. Backwash the softener and add 0.75 to 2 ounces of sanitizer per 4 gallons of water (200-400 ppm active) (or equivalent use dilution) to the brine tank well. (The brine tank must have water in it to permit the solution to be carried into the softener.) (NOTE: Standard system capacity is 48 gallons.)
2. Unit must be washed with a compatible detergent and rinsed with potable water before sanitizing.
3. Proceed with the normal regeneration or interrupt the cycle after the brining step and let the softener soak for a minimum of 60 seconds.
4. Backwash the softener with potable water to make sure all sanitizing solution is thoroughly rinsed from the unit before returning the system to service. Return system to service. NO POTABLE WATER RINSE IS ALLOWED.

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

1. Turn off RO system, drain storage tank and remove membrane element and pre-filters. Put membrane element in a plastic bag so it remains wet. Do not use this product to sanitize the membrane element. Membrane element must be sterilized separately.
2. Tank must be washed with a compatible detergent and rinsed with potable water before sanitizing.
3. Fill empty pre-filter housing with ~~0.75~~ to 2 ounces of sanitizer per 4 gallons of water (200-400 ppm active) (or equivalent use dilution) and turn on raw water. (NOTE: Standard system capacity is 1 to 2 gallons).
4. After holding tank is full, let system stand idle for a minimum of 60 seconds. Turn off water. Drain holding tank.
5. Before the system is put back into service, flush system with potable water to assure sanitizing solution is rinsed thoroughly from system. Return unit(s) to normal operation. NO POTABLE WATER RINSE IS ALLOWED. Follow the manufacturer's directions for re-installation of new pre-filters, membrane element and post filter.

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

**Ice Machines** – Sanitization must occur after initial installation, after the machine is serviced and periodically during its use.

1. Shut off incoming water line to machine.
2. Unit must be washed with a compatible detergent and rinsed with potable water before sanitizing.
3. Prepare a solution of ~~0.75~~ to 2 ounces of sanitizer per 4 gallons of water (200-400 ppm active) (or equivalent use dilution).
4. Circulate solution through machine making sure to wet all surfaces and allow a minimum contact of 60 seconds.
5. Drain and completely flush system twice with potable water.
6. Return machine to normal operation.

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

1. Shut off incoming water line.
2. Units/tanks must be washed with a compatible detergent and rinsed with potable water before sanitizing.
3. Prepare a solution of ~~0.75~~ to 2 ounces of sanitizer per 4 gallons of water (200-400 ppm active) (or equivalent use dilution).
4. Apply or circulate (if possible) to wet all surfaces and allow a minimum contact of 60 seconds.
5. Drain and completely flush machine twice with potable water.
6. Return to service by opening incoming water lines.

**FOOD PROCESSING EQUIPMENT AND UTENSILS**

At 1 oz. 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.

**FOR FOOD PROCESSING EQUIPMENT AND UTENSILS IN FOOD PROCESSING FACILITIES:** 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 0.75 to 2 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 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: Surfaces must remain wet for at least 1 minute, then allow sanitized surfaces to adequately drain before contact with food). Prepare a fresh solution at least daily or when use solution becomes visibly dirty. For mechanical application use solution must not be reused for sanitizing applications. NO POTABLE WATER RINSE IS ALLOWED AFTER APPLICATION OF THE SANITIZING SOLUTION (after use as a sanitizer).

(OR)

**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 3.84 to 10 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). Surfaces must remain wet for at least 1 minute. (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food).

(OR)

**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 0.19 to ½ 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.
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). (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food).

**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 0.75 to 2 ounces of this product per 4 gallons of water (or equivalent use dilution) (150-400 ppm active quaternary). No potable water rinse is allowed (Do not rinse).

**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 0.75 to 2 ounces 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 must be drained from the system. To insure the removal of flavors during changeover between products, the system must 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 (Do not rinse). (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food).

#### 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 0.75 to 2 ounce(s) of this product per 4 gallons of water (or equivalent use dilution) (150-400 ppm active) for the exterior application for the filler and closing machine. Allow surfaces to remain wet for at least 60 seconds. Drain thoroughly and allow to air dry before reuse. No potable water rinse is allowed (Do not rinse).

#### 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 0.75 to 2 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 must not be reused for sanitizing, but can 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 0.75 to 2 ounce(s) of this product per 4 gallons of warm water (or equivalent use dilution) (150-400 ppm active). The solution must be warmer than the eggs, but not to exceed 130°F. Wet eggs thoroughly and allow to drain. Eggs sanitized with this product must 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. Do not reuse the solution for sanitizing eggs. (Alternate statement: 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 (0.75 to 2 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, WINE, CITRUS, POTATO & ICE CREAM PROCESSING PLANTS:** For use as a sanitizer on conveyor belts follow the "For

Continuous Treatment of Meat and Poultry or Fruit and Vegetable Conveyors" directions. For directions to reduce or eliminate odors on the equipment in the processing area, follow the "Food Processing Equipment" directions. Also, for directions for reducing bacteria associated with condensation on equipment and pipes, follow directions for "Sanitizing Filling Equipment Sanitizer Directions".

**GLOVE DIP SANITIZER DIRECTIONS:** To prevent cross contamination from area to area in animal 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 0.75 ounces of this product per 4 gallons 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.**

#### ANIMAL PREMISES

**Animal Premise Virucidal Performance:** At 3 ounces of this product per 5 gallons of water (or equivalent use dilution) (450 ppm active quat) and with a 10-minute contact time, 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 A (H5N1) virus	Infectious Laryngotracheitis virus
Avian influenza/Turkey/Wisconsin	Newcastle disease virus (ATCC VR-109)
Canine Distemper (ATCC VR-128)	Porcine Respiratory & Reproductive Virus (PRRSV)
Canine Coronavirus (ATCC VR-809)	Porcine Rotavirus (ATCC VR-893)
Equine Influenza A (H3N8) virus	Pseudorabies virus (ATCC VR-135)
Equine Herpes Virus Type 1 (ATCC VR-2229)	Infectious Bovine Rhinotracheitis virus (IBR) (ATCC VR-188)
	Transmissible Gastroenteritis (TGE)

**VETERINARY CLINICS/ANIMAL LIFE SCIENCE LABORATORY/ANIMAL CARE FACILITIES/ANIMAL RESEARCH CENTERS/ANIMAL QUARANTINE AREAS/ANIMAL HUSBANDRY/ANIMAL BREEDING FACILITIES/ZOOS/PET SHOP/KENNELS/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 ounces per 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 dispenses food or water 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 hard non-porous 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. (Use on rocks and driftwood not allowed in California.)

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 disinfecting and virucidal solution (3 ounces per 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:** Do not apply this product directly onto the small animal. If this product comes into contact with the small animal's skin, then immediately wash the material off of the animal with lukewarm water. If the small animal ingests this product, contact your veterinarian immediately. 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.

**REPTILE TANK CLEANING AND DISINFECTION DIRECTIONS:** Remove all reptiles from the enclosure (tank) prior to cleaning and disinfecting. Remove all litter or drippings from surfaces. Empty all equipment used for feeding or watering reptiles. Thoroughly clean all surfaces with soap or detergent and rinse with water. Apply the disinfecting and virucidal solution (0.60 ounce per gallon of water) (or equivalent dilution) (450 ppm active quat) to the surfaces of the enclosure (tank) until thoroughly wet. Allow surfaces to remain wet for 10 minutes. Wipe dry. Rinse all surfaces that come in contact with food with potable water before reuse. Allow the enclosure (tank) to ventilate for a minimum of 10-15 minutes before replacing the reptiles. *(Note to reviewer: Only one use dilution will be used in this section.)*

**Note:** Do not apply this product directly onto the reptile. If this product comes into contact with the reptile's skin, then immediately wash the material off of the animal with lukewarm water. If the reptile ingests this product, contact your veterinarian immediately.

**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 1.75 ounces of this product per 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 ounces of this product per 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.

#### FARM PREMISE DISINFECTION DIRECTIONS

**FARM PREMISE DISINFECTION Directions:** 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 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. Saturate all surfaces with disinfecting or virucidal solution and allow surface 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)

#### 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 traversed 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 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.

**VEAL, CALVING, HOG, CATTLE AND HORSE OPERATIONS:** Between depopulations of facilities, cleaning and disinfection of pens, hutches, aisles and other environmental surfaces are 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 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.

#### FOR USE IN THE 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 traversed 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 disinfecting and virucidal solution (3 ounces per 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.

**POULTRY (AND SWINE) PREMISE SANITATION SITE PREPARATION**

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

**DISINFECTANT/VIRUCIDE OF POULTRY/TURKEY EQUIPMENT, SWINE QUARTERS, LIVESTOCK FARMS, EQUINE QUARTERS, ANIMAL QUARTERS AND KENNELS DIRECTIONS:** Prior to disinfection, remove all poultry, other animals and their feeds from premises, vehicles (trucks and cars), and enclosures (coops, crates, kennels, stables). Remove all litter, 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 and 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 3 ounces of this product per 5 gallons of water (or equivalent use dilution) (450 ppm active quat). Saturate surfaces with the 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 poultry, or other 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.

(OR)

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.

**HATCHERIES:** For general disinfection, use 1.75 ounces of this product per 5 gallons of water. For disinfection/virucide, use 3 ounces of this product per 5 gallons of water. Apply to hatching, 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. Rinse with potable water before reuse. Then allow surface 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

1.75 ounces of this product per 5 gallons of water for general disinfection. Use 3 ounces of this product per 5 gallons of water for disinfection/virucide. Leave all treated surfaces exposed to solution for 10 minutes or more and allow to air dry. *(Note to reviewer: Only one use dilution will be used in this section.)*

**FOR USE IN LIVESTOCK, POULTRY AND TURKEY HOUSES :**

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), chutes and other facilities and fixtures occupied or traversed 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 (Use) (Apply) 3 ounces of this product per 5 gallons of water 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.

**DISINFECTANT/VIRUCIDAL DIRECTIONS FOR CHICK VANS, EGG TRUCKS HATCHERY and FARM VEHICLES:** Clean all vehicles including mats, crates, cabs, and wheels with high-pressure water and this product. Use 3 ounces of this product per 5 gallons of water (or equivalent dilution) to treat all vehicles. Leave all treated surfaces exposed to disinfectant solution wet for 10 minutes or more. For sprayer applications, use a coarse spray device.

**DISINFECTANT/VIRUCIDAL\* DIRECTIONS TO TREAT HARD NON-POROUS, NON-FOOD CONTACT SURFACES OF AUTOMATED TRAY, RACK AND BUGGY WASHERS:** Mix a solution containing 3 ounces of this product per 5 gallons of water (or equivalent dilution). Remove all litter and manure from surfaces to be treated. Treat hard non-porous, non-food contact surfaces of automated trays, racks and buggy washers into solution for 10 minutes. Thoroughly clean all surfaces with soap or detergent and rinse with water before reuse. Change the disinfecting solution at least daily or when solution appears dirty.

**DISINFECTANT/VIRUCIDAL\* DIRECTIONS TO TREAT HARD NON-POROUS, NON-FOOD CONTACT SURFACES IN EGG RECEIVING AND EGG HOLDING AREAS:** Mix a solution containing 3 ounces of this product per 5 gallons of water (or equivalent dilution). Remove all litter and manure from surfaces to be treated. Saturate hard non-porous, non-food surfaces with the solution for a period of 10 minutes. Apply by mop, brush or sprayer. Thoroughly clean all surfaces with soap or detergent and rinse with water before reuse. Change the disinfecting solution at least daily or when solution appears dirty.

**SPECIAL INSTRUCTIONS FOR INACTIVATING AVIAN INFLUENZA A (H5N1):** 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 disinfecting solution (3 oz per 5 gallons of water) (450 ppm active quat) (equivalent use dilution) for a period of 10 minutes. Immerse all halters, ropes and other types of equipment used in handling and restraining animals as well as forks, shovels, scrapers used in removing litter and manure. Ventilate buildings, coops, and

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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.

### SANITIZER DIRECTIONS FOR NON-FOOD CONTACT SURFACES IN ANIMAL PREMISES

**TO SANITIZE HOOF TRIMMING EQUIPMENT:** Prior to application, pre-clean hoof trimming equipment 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 0.25 oz of this product per 1 gallon of water (or equivalent use dilution) (200 ppm active quat) 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 3 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 140 ounces of this product to 2.5 gallons water (or equivalent use dilution). Wear a dust mist respirator when mixing the use solution and pouring it into the fogging apparatus. Insert the nozzle of the fogger through a suitable opening into the room. With the setting in maximum output, fog for one minute for each 4000 cubic feet of space in the room. When fogging is completed, ventilate buildings and other closed spaces. Do not allow people to contact or breathe this fog and do not enter until 2 hours after fogging is complete. Do not house livestock or employ equipment until treatment has been absorbed or dried. Thoroughly clean all surfaces with soap or detergent and rinse with water.

### SANITIZING INCUBATORS AND HATCHERS USING FOGGING DEVICES

Mix 13.5 ounces of this product to 120 ounces of water (or equivalent use dilution). Wear a dust mist respirator when mixing the use solution and pouring it into the fogging apparatus. Fog 3-8 ounces of this into setters and hatchers immediately after transfer. Repeat daily in setters and every 12 hours in hatchers. Discontinue hatcher treatments at least 24 hours prior to pulling the hatch. Do not allow people to contact or breathe this fog. It is acceptable to fog setters and hatchers with a 1.1-ounce per gallon solution of this product (or equivalent use dilution) on an hourly or every other hour basis. If this is done, fog for 30-90 seconds once per hour or once every two hours. When fogging is complete, ventilate buildings, and other closed spaces. Do not house livestock or employ equipment until treatment 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.

**Note:** The fog generated is irritating to the eyes, skin and mucous membranes. Under no circumstances must a room or building be entered by anyone within two hours of the actual fogging and a minimum of 4 air exchanges (ACH) per hour in the facility. 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.

#### OTHER

### 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 ounces of this product for each 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.

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

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

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

### 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 ounces of this product to 5 gallons of water (0.60 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 can 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.

**FOR USE ON FINISHED FLOORS:** To limit gloss reduction, use 3 ounces of this product per 5 gallons of water (or equivalent use dilution). Apply with a damp mop or auto scrubber. Allow surface to air dry.

**COMMERCIAL FLORIST USE DIRECTIONS:** To clean, disinfect and deodorize hard, non-porous surfaces in one step, prepare use solution by adding (mixing) 3 ounces per 5 gallons of water (450 ppm active) (or equivalent use dilution). For heavy-duty use, add (mix) 12 ounces per 5 gallons of water (1,875 ppm active) (or equivalent use dilution).

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

For heavily soiled areas, a preliminary cleaning is required.

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

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

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

**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 2.5 ounces per 1 gallon of water (2000 ppm active quat). Treatment is for use on 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.

**ARTIFICIAL TURF SURFACES:** This product may be used on indoor and outdoor artificial turf surfaces such as athletic game fields and practice fields (i.e. football, soccer, baseball, lacrosse, golf). Prepare a 3 ounce of this product per 5 gallons of water solution (450 ppm active quat) (or equivalent use dilution). Apply to turf surfaces with a portable tank sprayer or handheld pressure sprayer. Saturate turf surface with enough product to remain wet for at least 10 minutes. Do not use field for a minimum of 30 minutes or when surface has completely dried. One (1) gallon of diluted product will treat 400-600 sq ft of turf surface.

#### DIRECTIONS FOR HOUSEHOLD USE

**KITCHEN/BATHROOM/HOUSEHOLD CLEANING:** Apply 3 ounces per 5 gallons of water (450 ppm active) (or equivalent use dilution) solution with a cloth, sponge, mop or directly on surface with a mechanical spray. If a mechanical spray is used spray must be coarse. Hold container 6 inches to 8 inches from surface and spray until thoroughly wet. Wipe the soiled area clean. This product is not to be used on dishware, glasses or eating utensils.

**DISINFECT/DEODORIZE:** To disinfect hard, non-porous surfaces such as floors, walls, counters, sinks, tubs, toilets, glazed tile, exterior surfaces of appliances, refrigerators or freezers, microwave exteriors, stove tops and hoods, tables, garbage pails and faucets apply 3 ounces per 5 gallons of water (450 ppm active) (or equivalent use dilution) with cloth, sponge, mop or mechanical spray. If a mechanical spray is used, spray must be coarse. Hold container 6 inches to 8 inches from surface and spray until thoroughly wet. Treated surface must remain wet for 10 minutes before wiping. For heavily soiled areas a pre-cleaning step is required. The pre-cleaning step must be done according to the Kitchen/Bathroom/Household Cleaning directions. Rinse with potable water after use on surfaces that come in contact with food.

#### SANITIZER DIRECTIONS FOR NON-FOOD CONTACT SURFACES

##### 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 10 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 10 ounces per 100 lbs. of dry laundry. This product was evaluated against:

*Corynebacterium ammoniagenes* (ATCC 6872)

*Klebsiella pneumoniae* (ATCC 4352)

*Staphylococcus aureus* (ATCC 6538)

**LAUNDRY DEODORIZER (AGAINST ODOR CAUSING BACTERIA):** Use 3 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 is also to be treated by soaking.

**PRESERVATION AGAINST MILDEW BY SOAKING:** Use 10 ounces of this product per 100 pounds of fabric (dry weight). A minimum soaking time of 5 minutes is 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 1oz/gal water to yield 780 ppm active quat (1 ounce per gallon of water) (12 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 must be used per manufacturer's instructions in subsequent rinse cycles after the sanitizing rinse cycle.

When added at the rate of 1 oz/gal water to yield 780 ppm active quat (1 ounce per gallon of water) (12 ounces per 100 lbs. of dry laundry) (or equivalent use dilution), this formulation provides sanitization against *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, and Methicillin-resistant *Staphylococcus aureus* (MRSA) and is effective against HIV. 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 ounce per gallon of water) (12 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 at a rate of 12 ounces per 100 lbs. of dry laundry in water hardness of 400 ppm.

##### OTHER

**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 0.25 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 sanitized, drain the solution from the unit and rinse any/all cleaned surfaces with fresh water. Repeat for heavy soiled units.

##### SANITIZATION OF EXTERIOR HOUSEHOLD SURFACES DIRECTIONS

**Preparation of Use Solution:** Add 3 oz. per 5 gallons of water (450 ppm active) (or equivalent use dilution) to sanitize hard, non-porous exterior surfaces such as vinyl,

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plastic, sealed concrete, painted or sealed woodwork, and sealed stucco. Surfaces to be treated include house siding, decks, patios, walkways and driveways.

**Application:** Preclean surfaces. Apply solution with a mop, cloth, sponge, hand pump trigger sprayer, or with a low-pressure (less than 60 psi) airless sprayer so as to wet all surfaces thoroughly. Treated surfaces must remain wet for 3 minutes. Wearing suitable respiratory protective equipment to control exposure to spray, pressure wash surfaces to thoroughly clean all treated areas using a high-pressure spray. Do not breathe spray. One half gallon of diluted product will treat 200-300 sq. ft. of turf surface.

### WATER TREATMENT

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Please read entire label and use strictly in accordance with precautionary statements and directions.

### OIL FIELD WATER FLOOD OR SALT WATER DISPOSAL SYSTEMS

Do not apply in Marine and Estuarine Oil Fields.

1. For the control of slime forming and sulfate reducing bacteria in oil field water flood or salt water disposal systems, add 5-10 ppm (active) of this product (10-20 gallons per 3,000 barrels of water) continuously. Levels for effective control will vary depending on conditions at the site.

2. For intermittent use, dose at rate of 5-20 ppm (active) of this product (10-40 gallons per 3,000 barrels of water) for 4 to 8 hours per day, one to four times a week as needed to maintain control. Add this water treatment microbiocide directly from the drum with the proper type of metering equipment.

### 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 5 gallons of water. Keep packets in box until ready to use.

(OR)

Pour contents of (3 oz) packet into 5 gallons of water. Keep packets in box until ready to use.

#### REFILLS

**To Refill Concentrate From Large Containers Into Smaller Containers:** This product can 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.

## THREE OUNCE PACKET LABEL TO BE USED WITH MASTER CONTAINER LABEL

MIX EACH PACKET WITH 5 GALLONS OF WATER  
FOR USE AS A DISINFECTANT

# MAQUAT® 710-M

E.P.A. Reg. No. 10324-117 E.P.A. Est. No. 10324-IL-1

NET CONTENTS: 3.0 FLUID OZ.

#### ACTIVE INGREDIENTS:

Octyl Decyl Dimethyl Ammonium Chloride.....	3.0%
Didecyl Dimethyl Ammonium Chloride.....	1.5%
Diocetyl Dimethyl Ammonium Chloride.....	1.5%
Alkyl (C <sub>14</sub> , 50%; C <sub>12</sub> , 40%; C <sub>6</sub> , 10%) dimethyl benzyl ammonium chloride.....	4.0%
<b>INERT INGREDIENTS:</b> .....	90.0%
<b>TOTAL</b> .....	100.0%

**KEEP OUT OF REACH OF CHILDREN**

**DANGER**

SEE OUTER CONTAINER FOR PRECAUTIONARY STATEMENTS AND  
USE DIRECTIONS

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

**MASON CHEMICAL COMPANY**  
"THE QUATERNARY SPECIALISTS"

721 W. Algonquin Road  
Arlington Heights, IL 60005

847-290-1621

Toll Free:  
1-800-362-1855

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