

10324-154

4/11/2008

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

APR 11 2008

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Ms. Erin Tesch
Consultant for Mason Chemical
Technology Sciences Group, Inc.
1150 18th Street, N.W., Suite 1000
Washington, D.C. 20036

Subject: Maquat 64-NHQ
EPA Registration No.: 10324-154
Amendment Date: November 1, 2007
EPA Receipt Date: October 31, 2007

Dear Ms. Tesch,

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

Acceptable Data

Efficacy Data

The data from Registration #10324-141, may be used to support this product.

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, or using tobacco,"
- 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 claim for *Clostridium difficile*-vegetative cells as the Agency is no longer accepting this claim.

MBOL	In order to claim effectiveness against this organism testing must be conducted on the spore form of <i>Clostridium difficile</i> . Delete this claim from page two.				
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- 4) 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.
- 5) Revise the statement on page four, left column beginning: "Large inflatable non-porous..." by deleting "fishing gear." This statement implies that exterior surfaces of inflatable rafts may be treated. This is not an appropriate use for this product as the Agency has concerns should this product come in contact with aquatic environments.
- 6) 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.
- 7) Revise the statement on page four, right column which begins: "This product may be applied through immersion tanks..." by deleting the reference to immersion tanks as your label does not include directions for treatment by this method.
- 8) Delete the entire section on page five, left column beginning "This product is a disinfectant and non-food contact sanitizer for Hospital Pharmacy Compounding..." 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.
- 9) Revise the last section on page five, left column beginning: "This product is a one-step (hospital use) germicidal..." by deleting the reference to removal of food residue as this implies that this product may be used on food contact surfaces.
- 10) 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.
- 11) 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.
- 12) Revise the section on page seven, left column which begins: "Escherichia coli (E. coli) and ..." ending: "as a disinfectant on food contact surfaces." 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..."
- 13) On page seven right column delete the claim for *Clostridium difficile-vegetative* as the Agency is no longer accepting this claim. In order to claim effectiveness against this organism testing must be conducted on the spore form of *Clostridium-difficile*.
- 14) Revise the "For Disinfecting Hard, Non-Porous Surfaces Against Avian Influenza A" on page eight by adding the following statement to this section: "For use in *homes, hospitals, hotels, motels, schools* the directions for hospital disinfection must be followed...water. *For use in animal housing facilities follow the animal premise directions.*"

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

16) Revise page ten by adding the following statement at the end of the section "Directions for Fogging For Use in Dairies, Beverage and Food Processing Plants" to provide clarity to the end user.

"To treat hard, nonporous surfaces as an adjunct to acceptable manual cleaning and disinfecting as described above."

17) Any ADBAC containing product supporting fogging directions for animal housing facilities and food processing plants must be revised to comply with the mitigation measures addressed in the ADBAC RED. Therefore, revise the "Directions for Fogging for Use in Dairies, Beverage, and Food Processing Plants" and "Food Processing Plants Using Fogging Devices" on pages ten and eleven as well as "Sanitizing Hatchery Rooms using Fogging Devices" and "Sanitizing Incubators and Hatchers Using Fogging Devices" on page fourteen by adding the statement,

"wear a dust mist respirator when mixing the use solution and pouring it into the fogging apparatus." Also, revise the second statement under "Note" to read "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."

18) Repeat the **Note** on page twelve in the Reptile Tanks Cleaning section to also appear at the end of the "Terrarium and Small Animal Cage..." section modifying the statement to refer to small animals instead of reptiles.

19) Revise the Veal, Calving, Hog, Cattle and Horse Operations directions on page twelve. Since this product is intended to treat hard non-porous surfaces, revise the fifth statement to read: "Saturate all surfaces with the disinfecting and virucidal solution (2 oz. per gallon of water-see Organism guide at beginning of this section for appropriate use dilution with appropriate virus) (or equivalent dilution) and allow **surfaces** to remain wet for a period of 10 minutes."

20) Revise page twelve by correcting the Note to Reviewer located in the VEAL, CALVING, HOG, CATTLE AND HORSE OPERATIONS section to read: *"Only one use dilution must be used. The inclusion of hog operations mandates the higher rate."*

21) Revise pages twelve and thirteen by deleting the 8 oz dilution rate from the following animal premise sections. The higher use rate must only be included when dogs or pigs are likely to be present in these areas. Also delete the Note to Reviewer in the same sections since there will be only one use dilution rate.

- REPTILE TANK CLEANING AND DISINFECTION-*delete all references to the higher use rate and organism guide from this section of your label.*
- HATCHERIES -*delete the higher use rate, organism guide and the "Note to Reviewer: Only one use dilution will be used in this section"*
- DISINFECTANT/VIRUCIDAL DIRECTIONS TO TREAT HARD-NON-POROUS, NON-FOOD CONTACT SURFACES OF AUTOMATED TRAY..."- *delete the higher use rate, organism guide and the "Note to Reviewer: Only one use dilution will be used in this section"*
- DISINFECTANT/VIRUCIDAL DIRECTIONS TO TREAT HARD-NON-POROUS, NON-FOOD CONTACT SURFACES IN EGG RECEIVING..."- *delete the higher use rate, organism guide and the "Note to Reviewer: Only one use dilution will be used in this section"*

22) Revise page thirteen by correcting the header "DISINFECTANT DIRECTIONS FOR CHICK VANS, EGG TRUCKS HATCHERY and FARM VEHICLES **SERVICEMAN VEHICLES (VEHICLES)**" to read "DISINFECTANT DIRECTIONS FOR CHICK VANS, EGG TRUCKS HATCHERY AND FARM VEHICLES" as the term serviceman vehicles is too broad and does not necessarily refer to vehicles found at these sites.

23) Revise page thirteen by correcting the Note to Reviewer statements located in the animal premise sections to reflect the Mandatory Language of PR Notice 2000-5 as follows: "Only one use dilution *must* be used in this section" in the sections indicated below:

- Disinfection/Fungicide/Virucide of Poultry/Turkey Equipment, Swine Quarters, Livestock Farms, Equine Quarters, Animal Quarters and Kennels Directions
- Vehicles
- Disinfectant Directions For Chick Vans, Egg Trucks Hatchery And Farm Vehicles

24) Revise the "Disinfection/Fungicide/Virucide for Barber/Salon Tools" directions on page fourteen by qualifying rollers as hard nonporous surfaces by stating "*plastic*" rollers.

25) Revise the "Disinfecting/Virucide Grooming Clippers" directions on page fourteen by adding the statements, "*Rinse surfaces thoroughly. Then wipe dry with a clean soft cloth.*" Also, revise the last statement to read "Remove hair, dandruff, and dust particles prior to disinfecting the blades" and move it to be the first statement in this set of directions.

26) Revise the "Cleaning Hair Clippers and Electric Shears" and "Cleaning Barber/Salon Sheers and Other Implements" directions on page fourteen by placing the statement, "Turn off clipper/shear," immediately prior to the contact time statement. Also, add the statement, "*Rinse surfaces thoroughly.*" It must appear after the contact time statement.

27) Revise the "Cleaning Barber/Salon Sheers and Other Implements" directions on page fourteen by adding the statement, "*Rinse surfaces thoroughly*" and deleting the statement, "No rinsing is necessary."

28) A number of corrections are required in the bathroom section on page fifteen.
Make the following revisions:

A. **To Clean and Disinfect:** Delete the statement: "Flush toilet and use toilet mop to push water from the bowl over the trap." Also add the statement: "*A preliminary cleaning is required for the removal of heavy soil prior to disinfection.*"

B. **To Disinfect Toilet Bowls:** Delete the statement: "Remove water from the bowl."

C. **To Disinfect Toilet Bowls:** Delete: "use toilet (bowl) mop to push water from the bowl over the trap." Revise to state: "*To disinfect, squirt 2 ounce of this product under the rim and around sides. Scrub bowl with mop. Allow solution...*"

D. **To Disinfect Toilet Bowls** (third section): Delete the second statement: "With swab applicator...water over the trap."

E. **Toilet Bowl (And Urinal) Disinfection/Cleaner Directions:** Revise the second statement to read: "Empty bowl or urinal and apply solution of 2 ounces of this product *per 128 ounces of water* to exposed surfaces including..."

F. **To Clean and Disinfect Urinals:** Revise the third statement to read: "Then squirt a solution of 2 ounces of this product *per 128 ounces of water* around the edges..."

G. **To Disinfect Urinal:** Revise statement #2 to read: "Apply solution of 2 ounce of this product *per 128 ounces of water* directly to the urinal..." Revise #3 to indicate: "Then pour additional solution on applicator."

29) Revise the Deodorization/Mold & Mildew section on page sixteen 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.

30) Delete the word "*recommended*" from the "Water/Smoke Damage Restoration" directions in the left column and "Smoke Damage Restoration" directions in the right column on page seventeen to reflect PR Notice 2000-5. Revise this section to include the following statement: "Saturate affected materials with enough product to remain wet for at least 10 minutes. Use proper ventilation."

31) Revise the section heading "Carpet Deodorizer/Sanitizer Against Odor Causing Bacteria ...Hospital Use on page seventeen by deleting the term, "Sanitizer." Also, revise the first statement in this section by deleting the term, sanitizer. The term, sanitizer, is an established public health claim that cannot be associated with a nonpublic health organisms. The use of the term in conjunction with a nonpublic health organisms is construed as false and misleading statement.

32) Revise the "Disinfection of Hard, Non-Porous Surfaces in Whirlpool (Foot Spa) Units" heading on page seventeen by deleting "foot spa." The directions for use in this section are not appropriate for treatment of foot spas.

33) Delete the "Artificial Turf" directions on page eighteen. Your label does not indicate a specific claim in association with this use. Including this use on a pesticidal label without a specific claim leaves it open to broad interpretation. Such unqualified use sites/surfaces are not acceptable on pesticide labels.

34) Delete from page sixteen the heading: "Sanitizing Exterior Household Surfaces Directions" and the "Preparation of Use Solution" as well as "Application" sections on this label. You have not indicated the surfaces which you expect to be treated using these methods. This information will assist the Agency in determining if your directions for use are appropriate.

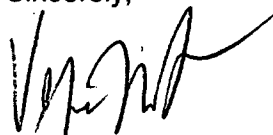
General Comments

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

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

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

Sincerely,



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

Enclosure: Stamped Label, DER
7510P:T.Lantz:3/4/08:10324-141d



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. 10324-154

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

MAQUAT® 64-NHQ

Net Contents

Batch No.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

KEEP OUT OF REACH OF CHILDREN. Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing spray mist. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield, rubber gloves and protective clothing when handling. Wash thoroughly with soap and water after handling and before eating, drinking, 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

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL OR CHEMICAL HAZARDS

Do not mix with oxidizers, anionic soaps and detergents.

Do not use or store near heat or open flame.

(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 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 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.

One Step Disinfectant

Germicidal Detergent and Deodorant

Disinfectant, Cleaner, Mildewstat, Fungicide, Virucide*, Deodorizer (Odor Counteractant) (Odor Neutralizer) for Hospitals, Nursing Homes, Whirlpool, Households, Food Service, Commercial, Institutional, and Industrial Use (Only) (Suitable) For Use in Meat and Poultry Plants, Schools, Dairy, Equine, Poultry/Turkey Farm, Veterinary, Restaurant, Food Handling and Process Areas.

Effective in hard water up to 400 ppm hardness (Calculated as CaCO₃) in the presence of 5% serum contamination.

Non-Dulling to Floors (Floor Finishes).

Athletic Surface Disinfectant.

(Product of USA) (Made in the USA)

ACTIVE INGREDIENTS:

Didecyl Dimethyl Ammonium Chloride	2.535%
n-Alkyl (C ₁₄ 50%, C ₁₂ 40%, C ₁₆ 10%)	
dimethyl benzyl ammonium chloride	1.690%
INERT INGREDIENTS:	95.775%
TOTAL	100.000%

**ACCEPTED
with COMMENTS
in EPA Letter Dated:**

APR 11 2008

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 10324-154

KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

See left (back), (side), (right), panel (or 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.

Transportation Information

DOT Hazard Class: 8 Corrosive

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

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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.)

Disinfection in Institutions (Hospitals, Dental Offices, Nursing Homes, and Other Health Care Institutions) and Non-Medical Facilities (Households, Schools, Restaurants, Food Services, Beverage, Food Processing Plants and Other Non-Medical Facilities): Using approved AOAC test methods (under Good Laboratory Practices, [GLP's]), in the presence of 400 ppm hard water and 5% serum load this product is effective against the following organisms on hard non-porous inanimate surfaces:

(Or)

This product is Bactericidal according to the AOAC Use Dilution Test method, Virucidal* according to the virucidal qualification on hard inanimate surfaces, Fungicidal according to the AOAC fungicidal test, modified in the presence of 5% organic serum against:

Acinetobacter baumannii (ATCC 19003)
Acinetobacter lwoffii (ATCC 9957)
Acinetobacter lwoffii (ATCC 15309)
Bordetella bronchiseptica (ATCC 10580)
Chlamydia psittaci (ATCC VR-125)
Citrobacter freundii (ATCC 8090)
Clostridium difficile-vegetative (ATCC 9689)
Enterobacter agglomerans (ATCC 27155)
Enterobacter aerogenes (ATCC 13048)
Enterobacter cloacae (ATCC 13047)
Escherichia coli (ATCC 11229)
Tetracycline Resistant *Escherichia coli* (ATCC 47041)
Enterococcus faecalis (ATCC 19433)
Enterococcus hirae (ATCC 10541)

Fusobacterium necrophorum (ATCC 27852)
Klebsiella oxytoca (ATCC 13182)
Klebsiella pneumoniae (ATCC 13883)
Listeria monocytogenes (ATCC 19117)
Micrococcus luteus (ATCC 14452)
Micrococcus luteus (ATCC 4698)
Pasturella multocida (ATCC 12947)
Proteus vulgaris (ATCC 9920)
Proteus vulgaris (ATCC 13315)
Pseudomonas aeruginosa (ATCC 15442)
Tetracycline Resistant *Pseudomonas aeruginosa* (ATCC 27853)
Pseudomonas cepacia (ATCC 25416)
Salmonella enterica (ATCC 23564)
Salmonella enterica (ATCC 10708)
Salmonella enterica (ATCC 4931)
Salmonella enterica serotype pullorum (ATCC 19945)
Salmonella typhi (ATCC 6539)
Salmonella typhimurium (ATCC 23564)
Serratia marcescens (ATCC 9103)
Serratia marcescens (ATCC 14756)
Shigella flexneri (ATCC 9380)
Shigella flexneri (ATCC 12022)
Shigella sonnei (ATCC 25931)
Staphylococcus aureus (ATCC 6538)
Staphylococcus aureus (ATCC 25923)
Staphylococcus aureus sub species aureus (ATCC 33586)
Staphylococcus aureus (ATCC 14154)
Community Associated Methicillin Resistant *Staphylococcus aureus* (CA-MRSA)
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Staphylococcus epidermidis (ATCC 14990)
Antibiotic resistant *Staphylococcus epidermidis* (ATCC 51625)
Streptococcus agalactiae (ATCC 13813)
Staphylococcus haemolyticus (ATCC 29970)
Streptococcus pneumoniae Penicillin Resistant (ATCC 51915)
Streptococcus pyogenes (ATCC 19615)
Streptococcus mutans (ATCC 25175)
Vancomycin Resistant *Enterococcus faecalis* (VRE) (ATCC 51299)
Vancomycin Intermediate Resistant *Staphylococcus aureus* (VISA) (ATCC 5836)
Vibrio cholera (ATCC 11623)
Yersinia enterocolitica (ATCC 23715)

Virucidal Performance: This product was evaluated modified in the presence of 400 ppm hard water and found to be effective against the following viruses on hard, non-porous environmental surfaces:

Avian Influenza A (H3N2) virus (Avian Reassortant) (ATCC VR-2072)
Avian Influenza A (H5N1) virus
Cytomegalovirus
Hantavirus
Hepatitis B Virus
Hepatitis C Virus
Herpes Simplex Virus Type 1 (ATCC VR-773)
Herpes Simplex Virus Type 2 (ATCC VR-734)
Human Coronavirus

Human Immunodeficiency Virus type 1 (HIV 1)
Influenza A virus (ATCC VR-544)
Respiratory syncytial virus (ATCC VR-26)

Animal Premise Virucidal Performance: This product was evaluated and found to be effective against the following viruses on hard, non-porous environmental surfaces:

Avian Infectious Bronchitis virus Beaudette IB42
Avian Influenza A (H5N1) virus
Avian Influenza A (H3N2) virus (Avian Reassortant) (ATCC VR-2072)
Canine Coronavirus
Canine Parvovirus (CPV) at 8 oz. per gallon
Canine Distemper virus (ATCC VR-128)
Feline Picornavirus (ATCC VR-649)
Infectious Bovine Rhinotracheitis virus (ATCC VR-188)
Porcine Parvovirus (8 oz. per gallon)
Pseudorabies virus (ATCC VR-135)
Transmissible Gastroenteritis virus
Vaccinia virus (ATCC VR-119)

Fungicidal Performance: This product is highly effective against the following:

Aspergillus niger (ATCC 16404)
Candida albicans (ATCC 10231)
Trichophyton mentagrophytes (ATCC 9533)

Non-Food Contact Sanitizing Performance: This product is an effective one-step sanitizer against the following on hard non-porous environmental surfaces:

Klebsiella pneumoniae
Staphylococcus aureus

MARKETING CLAIMS

This formulation (Maquat® 64-NHQ) is for use in:

- Hospitals, medical and dental offices and clinics, healthcare facilities, nursing homes, 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, morgues, mortuaries, burial vaults, mausoleums, autopsy rooms, cadaver processing areas.
- Police stations, courthouses, correctional facilities, jails, prisons, municipal government buildings, penitentiaries, correctional institutions, bus stations, train stations.
- Institutional facilities, laboratories, factories, business and office buildings, restrooms, hotels and motels, and transportation terminals.
- Public restrooms, public facilities, waysides, travel rest areas, shower rooms, shower stalls, bathrooms, shower and bath areas.
- Hotels and motels, dormitories.
- Kitchens, bathrooms, and other household areas.
- Homes (households), condos, apartments, vacation cottages, summer homes.
- Institutions, schools, 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 salons, tanning spas/beds, tanning equipment, 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.
- Campgrounds, playgrounds, playground equipment, recreational facilities, picnic facilities, sports arenas, sports complexes.
- Food processing plants, USDA inspected food-processing facilities, food storage areas, federally inspected meat and poultry plants, egg processing plants, farms, equine farms, poultry farms, turkey farms, dairy farms, hog farms, meat/poultry processing plants, meat/poultry producing establishments, mushroom farms, rendering plants, canneries, caterers, bakeries.
- Processing facilities for Fish, Milk, Citrus, Wine, Fruit, Vegetable, Ice Cream, and Potatoes, and beverage plants.
- Veterinary clinics, animal life science laboratories, animal laboratories, animal research centers, animal quarantine areas, animal holding areas, zoos, equine farms, tack shops, pet shops, kennels, dog/cat animal kennels, breeding establishments, grooming establishments, pet animal quarters, operating rooms, washing areas, waiting rooms, examination rooms and other animal care facilities.
- 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, transportation terminals.
- Commercial florist and flower shops.
- Basements, cellars, bedrooms, attics, living rooms, porches.

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

- Storage areas.
- Kitchen equipment such as trash compactors.
- Counters (countertops), countertop laminates, stovetops (stoves), sinks (bathroom, kitchen), tub surfaces, and exterior surfaces of appliances, of Slurpee® machines, 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, bathroom 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 and fishing gear.
- Hard, non-porous surfaces of picnic tables and outdoor furniture or Non-wooden Picnic tables and outdoor furniture except cushions and wood frames.
- 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, dryers, rollers, washable nail files, washers and workstations.
- Hard hats, headphones.
- Kennels, kennel runs, cages, kennel/cage 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 surfaces

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 can be used with a mop and bucket, trigger sprayers, sponge or by soaking.

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

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

This product is for use as a disinfectant on hard, non-porous surfaces (at 660 ppm active). A potable water rinse is required after application on food contact surfaces.

This product is for use as a sanitizer on hard, non-porous, non-food contact surfaces (660 ppm active). A potable water rinse is required.

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

This product meets AOAC efficacy standards for hard surface sanitizers.

One-step cleaner.

Cleans and shines.

Antibacterial.

This product delivers non-acid, disinfection performance.

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

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

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

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

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

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

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) germs (and viruses*).

This detergent/disinfectant has been designed specifically for hospitals, nursing homes, schools, food processing plants, food service establishments and other institutions where housekeeping is of prime importance.

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.

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

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).

Kill Avian Influenza on pre-cleaned environmental surfaces.

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

Hospital Use Disinfectant. Institutional Disinfectant.

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 Bovine Viral Diarrhea Virus BVDV (surrogate for human Hepatitis C virus).

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

This product is 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 is a one-step (hospital-use) germicidal (disinfectant) cleaner and deodorant (odor-counteractant) (odor neutralizer) designed for general cleaning, (and) disinfecting, (deodorizing) (and controlling mold and mildew on) (of) hard, non-porous environmental surfaces. This product cleans quickly by removing dirt, grime, mold, mildew, food residue, body oils, dead skin, blood and other organic matter commonly

found in hospitals (and) (in health care facilities) (on medical surfaces), nursing homes, schools and colleges, (day care centers), (medical) offices, funeral homes, veterinary clinics, pet shops, (equine farms), animal life science laboratories, hotels, motels, public areas and restrooms, foodservice establishments (restaurants) and federally inspected meat and poultry establishments (food [processing] plants). It (also) eliminates odors leaving (restroom) surfaces smelling clean and fresh. Use where odors are a problem.

This product cleans, disinfects and deodorizes (hard, non-porous environmental hospital (medical) surfaces) in one step (with no rinsing required). Its non-abrasive formula is designed for use on (Use daily on) (the following) hard, non-porous environmental surfaces: vinyl, painted surfaces, plastic (surfaces), glazed ceramic, glazed porcelain, chrome, stainless steel, brass, copper, laminated surfaces and baked enamel surfaces associated with floors, walls, ceilings, tables, chairs, countertops, telephones, fixtures, glazed tile, toilets, toilet bowls, urinals, sinks found in (health care facilities [hospitals]), patient rooms, operating rooms, ICU areas, shower rooms, and locker rooms. It can also be used to pre-clean and disinfect (hospital items: wheelchairs, [hospital] [patient] bed rails and linings, wash basins, bed pans, medical equipment surfaces, food establishments, (restaurants), (commercial kitchens) & restrooms) any washable (food and non-food contact) surface (where disinfection is required). A potable water rinse is required when disinfecting food contact surfaces. Do not use on glasses, dishes, utensils, or interior surfaces of appliances.

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

This product improves labor results by effectively controlling odors.

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

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 is effective against household germs and odors caused by animal waste, septic tank or sewage backup, smoke and bathroom and kitchen 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 is a one-step cleaner and deodorant (odor counteractant) (odor-neutralizer) designed for general cleaning, (and) disinfecting, (deodorizing) (and controlling mold and mildew) on hard, non-porous environmental surfaces.

This product cleans, disinfects and deodorizes surfaces by killing odor causing microorganisms and mold and mildew. Its non-abrasive formula is designed for use on (restroom surfaces): glazed ceramic (restroom) tile, glazed porcelain, chrome, stainless steel and plastic surfaces associated with floors, walls, fixtures, toilets, urinals, sinks, shower rooms, and locker rooms.

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

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

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

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

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

This product will not leave a grit or soap scum.

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

Kills Athlete's Foot fungus on bathroom surfaces.

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

This product is a (concentrated) non-acid (bowl and) bathroom cleaner, which cleans, disinfects and deodorizes in one easy step. It cleans, disinfects and deodorizes surfaces by killing many odor-causing microorganisms and mold and mildew. Its non-abrasive formula is designed for use (Use daily) on ([hard, non-porous environmental] restroom surfaces): glazed ceramic (restroom) tile, glazed porcelain, chrome, stainless steel and plastic surfaces associated with floors, walls, fixtures, toilets, urinals, sinks, shower rooms and locker rooms.

Malodor(s) (Activity) (Odor) (Counteractancy) – eliminates (destroys) odors and odor-causing bacteria in restroom areas, behind and under sinks and counters, and storage areas (and other places where bacterial growth can cause malodors).

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

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

This product can be used to disinfect, clean and deodorize terrarium and small animal cages, hot rock, substrate and cage furniture (plastic terrarium ornaments, driftwood, heat caves and water dishes). (Use on rocks and driftwood not allowed in California.)

This product cleans, disinfects and deodorizes (hard, non-porous environmental surfaces) in one step. Its non-abrasive formula is designed for use on (Use daily on) (Use daily to clean and disinfect) (hard, non-porous surfaces): plated or stainless steel, aluminum, chrome, glazed porcelain, glazed tile, laminated surfaces (associated with floors, walls, countertops, cages, kennels, animal equipment) found in (barns, pens and stalls) animal housing facilities.

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 cleans rodent soiled areas.

This product is for Poultry Premise Sanitation (Hatcheries)

Egg Receiving Area	Tray Dumping Area	Chick Processing Area
Egg Holding Area	Chick Holding Area	Chick Loading Area
Setter Room	Hatchery Room	Poultry Buildings

This product is for Swine Premise Sanitation:

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

This product is effective against Canine Parvovirus at 8 oz. per gallon. Follow the directions under Animal Housing Facilities.

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

When used as directed, this product will disinfect hard, non-porous surfaces such as flower buckets, floors and walls of coolers, design and packing benches, and countertops.

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

Use this product to clean, disinfect and deodorize flower buckets, walls, floors of coolers, shippers, greenhouse packing areas, garbage pails and other areas where obnoxious odors may develop.

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

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

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

Use to clean and disinfect non-medical (i.e. industrial and fire fighting) respirators in industrial, commercial and institutional premises.

Use (on) (to clean and disinfect) non-porous athletic mats, wrestling mats, gymnastic mats, exercise equipment and training tables.

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

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

Cleans everyday kitchen messes.

Cleans kitchen surfaces and food preparation areas.

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

For use in:

Federally inspected meat and poultry plants on all hard, non-porous surfaces in inedible product processing areas, non-processing areas and/or exterior areas. All surfaces must be thoroughly rinsed with potable water.

Federally inspected meat and poultry plants as a floor and wall cleaner for use in all departments. Food products and packaging material must be removed from the room or carefully protected. All surfaces must be thoroughly rinsed with potable water.

Federally inspected meat and poultry plants as a disinfectant agent for use in all departments. Food products and packaging material must be removed from the room or carefully protected. Use product in accordance with its label. All surfaces must be thoroughly rinsed with potable water.

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

This product cleans by removing dirt, grime and food soils in food preparation and processing areas. Its non-abrasive formula will not harm (scratch) surfaces. It cleans, disinfects and eliminates odors leaving surfaces smelling clean and fresh. Use where odors are a problem.

Use this product on finished floors, high speed burnished floors, conductive flooring, washable walls, tables, chairs, bathroom bowls, sinks, basins, shower stalls, tubs, glazed tiles, toilet, countertops, stove tops, exterior surfaces of appliances and refrigerators, cabinets, garbage cans, outdoor furniture (except cushions and wood frames), desks, telephones, door knobs and handles, and glass surfaces including windows and mirrors.

Disinfects, cleans, and deodorizes the following hard, non-porous inanimate surfaces: floors, walls, (non-medical) metal surfaces, (non-medical) stainless steel surfaces, glazed porcelain, plastic surfaces (such as polypropylene, polystyrene, etc.).

This product is designed for use on (Use daily on) (the following) (hard, non-porous environmental surfaces): vinyl, painted surfaces, plastic (surfaces), glazed ceramic, glazed porcelain, chrome, stainless steel, aluminum, laminated surfaces and baked enamel surfaces associated with floors, walls, ceilings, tables, chairs, countertops, telephones, fixtures, glazed tile, toilets, urinals, sinks, shower rooms and locker rooms (areas) — any washable (food and non-food contact) surface where disinfection is required. This product's non-dulling formula eliminates the time and labor normally required for rinsing. A potable water rinse is required for food contact surfaces. Do not use on glasses, dishes, utensils or interior surfaces of appliances.

- Concentrate (Concentrated).
- Neutral (Neutral pH).
- Disinfects (Disinfectant).
- Cleans (Cleaner).
- Deodorizes (Deodorizer).

For use in households.

A multi-purpose, neutral pH, germicidal detergent and deodorant effective in hard water up to 400 ppm (calculated as CaCO₃) in the presence of a moderate amount of soil (5% organic serum) according to the AOAC Use-dilution Test. Disinfects, cleans, and deodorizes in one labor-saving step.

DIRECTIONS FOR USE

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

Apply use solution to hard, inanimate, non-porous surfaces thoroughly wetting surfaces as recommended and required, with a cloth, mop, sponge or sprayer.

(Or)

This product can be applied by mop, sponge, cloth, paper towel, (hand pump) coarse trigger sprayer, auto scrubber or foam gun (device). Change cloth, sponge or towels frequently to avoid redeposition of soil. For disinfection, all surfaces must remain wet for 10 minutes.

For heavily soiled areas, a preliminary cleaning is required.

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

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

Treated surfaces must remain wet for 10 minutes. Prepare a fresh solution at least daily or when use solution becomes diluted or soiled.

Rinse all surfaces that come in contact with food such as countertops, appliances, tables and stovetops with potable water before reuse. Do not use this product to clean or disinfect utensils, glassware, dishes or interior surfaces of appliances.

Disinfection in Institutions (Hospitals, Dental Offices, Nursing Homes, and Other Health Care Institutions) and Non-Medical Facilities (Households, Schools, Restaurants, Food Services, Beverage, Food Processing Plants and Other Non-Medical Facilities): At 2 fluid ounces per gallon (16 milliliters per liter) of water (1:64) and a 10-minute contact time, this product is effective against the following organisms on hard non-porous inanimate surfaces:

Acinetobacter baumannii (ATCC 19003)
Acinetobacter lwoffii (ATCC 9957)
Acinetobacter lwoffii (ATCC 15309)
Bordetella bronchiseptica (ATCC 10580)
Chlamydia psittaci (ATCC VR-125)
Citrobacter freundii (ATCC 8090)
Clostridium difficile-vegetative (ATCC 9689)
Enterobacter agglomerans (ATCC 27155)
Enterobacter aerogenes (ATCC 13048)
Enterobacter cloacae (ATCC 13047)
Escherichia coli (ATCC 11229)
Tetracycline Resistant *Escherichia coli* (ATCC 47041)
Enterococcus faecalis (ATCC 19433)
Enterococcus hirae (ATCC 10541)
Fusobacterium necrophorum (ATCC 27852)
Klebsiella oxytoca (ATCC 13182)
Klebsiella pneumoniae (ATCC 13883)

Listeria monocytogenes (ATCC 19117)
Micrococcus luteus (ATCC 14452)
Micrococcus luteus (ATCC 4698)
Pasturella multocida (ATCC 12947)
Proteus vulgaris (ATCC 9920)
Proteus vulgaris (ATCC 13315)
Pseudomonas aeruginosa (ATCC 15442)
Tetracycline Resistant *Pseudomonas aeruginosa* (ATCC 27853)
Pseudomonas cepacia (ATCC 25416)
Salmonella enterica (ATCC 23564)
Salmonella enterica (ATCC 10708)
Salmonella enterica (ATCC 4931)
Salmonella enterica serotype pullorum (ATCC 19945)
Salmonella typhi (ATCC 6539)
Salmonella typhimurium (ATCC 23564)
Serratia marcescens (ATCC 9103)
Serratia marcescens (ATCC 14756)
Shigella flexneri (ATCC 9380)
Shigella flexneri (ATCC 12022)
Shigella sonnei (ATCC 25931)
Staphylococcus aureus (ATCC 6538)
Staphylococcus aureus (ATCC 25923)
Staphylococcus aureus sub species aureus (ATCC 33586)
Staphylococcus aureus (ATCC 14154)
Community Associated Methicillin Resistant *Staphylococcus aureus* (CA-MRSA)
Methicillin Resistant *Staphylococcus aureus* (MRSA) (ATCC 33592)
Staphylococcus epidermidis (ATCC 14990)
Antibiotic resistant *Staphylococcus epidermidis* (ATCC 51625)
Streptococcus agalactiae (ATCC 13813)
Staphylococcus haemolyticus (ATCC 29970)
Streptococcus pneumoniae Penicillin Resistant (ATCC 51915)
Streptococcus pyogenes (ATCC 19615)
Streptococcus mutans (ATCC 25175)
Vancomycin Resistant *Enterococcus faecalis* (VRE) (ATCC 51299)
Vancomycin Intermediate Resistant *Staphylococcus aureus* (VISA) (ATCC 5836)
Vibrio cholera (ATCC 11623)
Yersinia enterocolitica (ATCC 23715)

Virucidal Performance: At 2 ounces per gallon (660 ppm quat active) use level, this product was evaluated modified in the presence of 400 ppm hard water with a 10-minute contact time and found to be effective against the following viruses on hard, non-porous environmental surfaces:

Avian Influenza A (H3N2) virus (Avian Reassortant) (ATCC VR-2072)
Avian Influenza A (H5N1) virus
Cytomegalovirus
Hantavirus
Hepatitis B Virus
Hepatitis C Virus
Herpes Simplex Virus Type 1 (ATCC VR-773)
Herpes Simplex Virus Type 2 (ATCC VR-734)
Human Coronavirus
Human Immunodeficiency Virus type 1 (HIV 1)
Influenza A virus (ATCC VR-544)
Respiratory syncytial virus (ATCC VR-26)

Non-Food Contact Sanitizing Performance: At 2 ounces per gallon use-level, this product is an effective one-step sanitizer against the following on hard non-porous environmental surfaces:

Klebsiella pneumoniae

Staphylococcus aureus

Fungicidal Performance: When used as directed at a 1:64 dilution (2 fluid ounces per gallon of water) (or equivalent use dilution) and a 10-minute contact time, this product is highly effective against the following:

Aspergillus niger (ATCC 16404)
Candida albicans (ATCC 10231)
Trichophyton mentagrophytes (ATCC 9533)

PREPARATION OF DISINFECTION/FUNGICIDAL/VIRUCIDAL USE SOLUTION: For water hardness up to 400 ppm add 2 ounces per gallon (16 milliliters per liter) of water (1:64) (or equivalent use dilution) to disinfect hard, non-porous surfaces OR mix a 2 ounce packet with 1 gallon of water. Treated surfaces must remain wet for 10 minutes. 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. Do not use this product to clean or disinfect utensils, glassware, dishes or interior surfaces of appliances.

(OR)

General Disinfectant-Non-medical (schools, restaurants, food services, dairies, farm, beverage and food processing plants): Add 2 ounces of this product to gallon of water. This product is not to be used as a disinfectant on glassware, dishes or interior surfaces of appliances.

CLEANING AND DISINFECTION: For heavily soiled areas, a pre-cleaning step is required. For all general cleaning and disinfection, use 2 ounces of this product per one gallon of water (1:64 solution) (or equivalent use dilution). Apply this product 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 (2 ounces per gallon) (660 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: For all use sites, the directions for use for hospital disinfection must be followed using a rate of 2 oz per gallon of water.

Preparation of sanitizer use solution: (For) floors, walls, tables etc. Apply 2 ounces per gallon of water 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.

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

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

Disinfection/Fungicidal/Virucidal Dilution Chart

Ounces of Product	Amount of Water
1/2 ounce	1 quart
1 ounce	1/2 gallon
2 ounces	1 gallon
6 ounces	3 gallons
10 ounces	5 gallons
20 ounces	10 gallons

Dilution Guide:

For Hospital or Medical Environment claims	2 oz/1 gal. water
For General or Broad Spectrum claims	2 oz/1 gal. water
For Fungistatic claims	2 oz/1 gal. water
For Virucidal claims	2 oz/1 gal. water
For Animal Virucidal claims	2 oz/1 gal. water
For Non-Food Contact Sanitizing claims	2 oz/1 gal. water

HOSPITAL/HEALTH CARE/INSTITUTIONAL

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)

Not for use on medical devices or medical equipment surfaces.

This product is a Hospital Disinfectant at 2 ounces per gallon (or equivalent use dilution) (16 milliliters per liter), (1:64 dilution), modified in the presence of 400 ppm hard water with a 10 minute contact time.

(Or)

When used as directed at a 1:64 dilution (2 ounces per gallon of water) (or equivalent use dilution) (16mL/L), this product contains 660 ppm of active quaternary germicide making it highly effective against a wide variety (broad spectrum) of pathogenic microorganisms (including bacteria, antibiotic resistant bacteria, viruses, fungi, mold and mildew).

Hepatitis Virus

At 2 ounces of this product per gallon of water (or equivalent use dilution) in the presence of 400 ppm hard water (CaCO_3) and 5% serum this product was proven to be effective against Hepatitis B Virus and Hepatitis C Virus with a contact time of 10 minutes. *(This statement is not for use in California)*

(OR)

At 2 ounces per gallon (or equivalent use dilution) (660 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 2 ounces per gallon of water in the presence of 400 ppm of hardness for a 10 minutes contact time, this product was found to be effective against Hantavirus.

(OR)

At 2 ounces per gallon (or equivalent use dilution) in the presence of 400 ppm hard water (CaCO_3) and 5% organic load, this product was proven to be effective against Hantavirus with a contact time of 10 minutes.

***KILLS HIV, HBV AND HCV ON PRECLEANED ENVIRONMENTAL SURFACES/OBJECTS PREVIOUSLY SOILED WITH BLOOD/BODY FLUIDS** in health care settings or other settings in which there is an expected likelihood of soiling of inanimate surfaces/objects with blood or 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 1, (HIV-1) (associated with AIDS), (Duck) Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV).

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

Personal Protection: 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 this product.

Disposal of Infectious Materials: Blood, 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: Leave surface wet for 10 minutes with 2 ounces per gallon (16 milliliters per liter) use solution (or equivalent use dilution).

Surgical Instrument Presoak: Add 2 ounces of this product to 1 gallon of water (or equivalent use dilution) (660 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: Plastics may remain immersed until ready to use. Instruments must be removed after 10 minutes, rinsed, dried, and kept in a clean non-contaminated receptacle. Prolonged soaking may cause damage to metal instruments.

Ultrasonic Bath Disinfectant Directions: Use this product to disinfect hard (inanimate) non-porous, non-critical objects compatible with Ultrasonic cleaning units. Pour (a) fresh solution of 2 ounces per gallon of water (or equivalent use dilution) (660 ppm active quat) directly into bath chamber. Pre-clean soiled objects. Place objects into unit and operate for a minimum of 10 minutes, according to manufacturers' use directions. Remove objects and rinse with sterile water (sterile water for injection), or allow to air dry. Replace solution at least daily or when solution becomes visibly dirty or discolored.

For Disinfecting Hard, Non-Porous (Fiberglass) Bath and Therapy Equipment: To remove body oils, dead tissue, soil and all other buildups or organic matter on inanimate surfaces after using the unit, drain the water and refill with fresh water to just cover the intake valve. Add 2 ounces of this product for each gallon of water (or equivalent use dilution) (660 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 2 ounces of this product to one gallon of water (or equivalent use dilution) (660 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 2 ounces per gallon of water (or equivalent use dilution) (660 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.

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 required after use as a disinfectant.

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 2 ounces of this product to 1 gallon of water (or equivalent use dilution) (660 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, exterior surfaces of appliances, and tables. Before using this product food products and packaging materials must be removed from area or carefully protected. Add 2 ounces of this product to gallon of water (or equivalent use dilution) (660 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 2 ounces of this product per gallon (or equivalent use dilution) (660 ppm active quat) of water. Follow the general disinfectant directions above.

Directions for Fogging For Use in Dairies, Beverage and Food Processing Plants: Prior to fogging, food products and packaging material must be removed from the room or carefully protected. After cleaning, fog desired areas using 1 quart per 1000 cubic feet of room area with a solution containing 3.6 ounces of product to 1 gallon of water (1,200 ppm) (or equivalent use dilution). Vacate the area of all personnel during fogging and for a minimum of 2 hours after fogging. All food contact surfaces must be sanitized with an EPA approved food contact sanitizer solution prior to use. Allow food contact surfaces to drain thoroughly before operations are resumed.

NOTE: The fog generated is irritating to the eyes, skin and mucous membranes. Under no circumstances must a room or building be entered by anyone within two hours of the actual fogging. Use for 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.

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 2 ounce of this product per gallon of water (or equivalent use dilution) solution for 3 minutes 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 2 - 4 ounces per gallon of water (or equivalent use dilution) 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

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for 3 minutes 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 (2 – 4 oz. per gallon of water) 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 3.6 ounces of product to 1 gallon of water (1,200 ppm) (or equivalent use dilution). Vacate the area of all personnel during fogging and for a minimum of 2 hours after fogging. All food contact surfaces must be thoroughly rinsed prior to reuse with potable water.

NOTE: The fog generated is irritating to the eyes, skin and mucous membranes. Under no circumstances must a room or building be entered by anyone within two hours of the actual fogging. Use for 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 may be accomplished by using a shovel, broom, or vacuum, depending on the area to be disinfected.

Disinfection: Use 2 ounces of this product 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 8 ounces of this product per gallon of water (or equivalent dilution). Heavily soiled areas may require repeated cleaning before treatment.

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

ANIMAL PREMISES

Animal Premise Virucidal Performance: At 2 ounces per gallon (660 ppm quat active) use level, this product was evaluated with a 10 minute contact time and found to be effective against the following viruses on hard, non-porous environmental surfaces:

Avian Infectious Bronchitis virus Beaudette IB42
Avian Influenza A (H5N1) virus
Avian Influenza A (H3N2) virus (Avian Reassortant) (ATCC VR-2072)
Canine Coronavirus
Canine Distemper virus (ATCC VR-128)
Feline Picornavirus (ATCC VR-649)
Infectious Bovine Rhinotracheitis virus (ATCC VR-188)
Pseudorabies virus (ATCC VR-135)
Transmissible Gastroenteritis virus

Vaccinia virus (ATCC VR-119)

At 8 ounces per gallon use level, this product was evaluated with a 10-minute contact time and found to be effective against the following viruses on hard, non-porous environmental surfaces:

Canine Parvovirus (CPV) at 8 oz. per gallon
Porcine Parvovirus (8 oz. per gallon)

Veterinary Clinics/Animal Life Science Laboratory/Animal Care Facilities/Animal Research Centers/Animal Quarantine Areas/ Animal Breeding Facilities/ Animal Husbandry/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 (Use) (Apply) 2 oz per gallon of water (8 oz per gallon of water against CPV and Porcine Parvovirus) 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.

Effectiveness against Canine Parvovirus (CPV) and Porcine Parvovirus: At 8 ounces per gallon of water or equivalent dilution this product was evaluated in the presence of 5% serum with a 10 minute contact time and found to be effective against Canine Parvovirus (CPV) and Porcine Parvovirus on hard, non-porous environmental surfaces.

Special Instructions for Cleaning and Disinfecting areas which may be infested with Hantavirus

Infection with Hantavirus occurs by inhalation of infectious materials. CDC recommends that persons involved with cleanup wear coveralls, (disposable, if possible), rubber boots or disposable shoe covers, rubber or plastic gloves, protective goggles, and a half mask air purifying, negative pressure respirator with a high efficiency particulate air (HEPA) filter or a powered air-purifying respirator (PAPR) with HEPA filter.

All potential infective waste material (including respirator filter) from cleanup operations that cannot be burned or deep buried on site must be double bagged in appropriate plastic bags. The bagged material must then be labeled as infectious (if it is to be transported) and disposed of in accordance with local requirements for infectious wastes.

Rodent droppings and visible dust may be reservoirs for Hantavirus. If you are cleaning out a building that has been closed up, such as a cabin, shed or garage:

- Air out the building for at least 30 minutes by opening windows and doors.
- Leave the building while it is airing out.
- Do not vacuum, sweep or dust. This may spread the virus through the air.
- Thoroughly wet the contaminated areas with the product and allow solution to stand undisturbed for 10 minutes.
- Carefully remove contaminated material and dispose by burial or burning. Contact your local and state health department for additional disposal methods.
- Treat the surface again following the label directions and allow solution to stand undisturbed for 10 minutes.

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 2 ounces of this product per gallon of water (or equivalent use dilution) (660 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.

Terrarium and Small Animal Cage and Cage Furniture Disinfection *(Use on rocks and driftwood not allowed in California.):* Animals frequently defecate on hot rocks and other cage furniture items inside your terrarium. This can result in high bacteria and ammonia levels that can lead to possible infection/disease in your animals. When used regularly, this product can eliminate these high bacteria/ammonia levels in your cage and on your cage furniture items.

1. Remove all animals.
2. Thoroughly clean all surfaces and objects (hot rocks, caves, cage furniture, feeding and watering dishes, and appliances) including the substrate in the terrarium or cage with soap or detergent and rinse with water.
3. Saturate all surfaces (floors, walls, cages and other washable hard, non-porous environmental surfaces) with the disinfecting and virucidal solution (2 oz. per gallon of water or 8 oz. per gallon of water – see Organism guide at beginning of this section for appropriate use dilution with appropriate virus) (or equivalent dilution) for a period of 10 minutes. For smaller surfaces, use a trigger spray bottle to spray all surfaces with solution until wet. Then wipe surfaces dry.
4. Saturate gravel as above and let stand for 10 minutes. Place in bucket of clean water and swirl for 15-30 seconds. Thoroughly air dry before returning to terrarium.
5. Do not return animals to the habitat until it is dry and ventilated.
6. Thoroughly scrub all treated surfaces with soap or detergent and rinse with potable water before reuse.
7. Clean terrarium at least once weekly or more as needed.

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

Reptile Tank Cleaning and Disinfection Directions: Remove all reptiles from the enclosure (tank) prior to cleaning and disinfecting. Remove all litter or droppings 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 (2 oz. per gallon of water or 8 oz. per gallon of water – see Organism guide at beginning of this section for appropriate use dilution with appropriate virus) (or equivalent dilution) 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: 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.

FARM PREMISE DISINFECTION DIRECTIONS

FARM PREMISE USE: Do not use in milking stalls, milking parlors or milk houses. Remove all animals and feed from premises, vehicles and enclosures. Remove all litter and manure from floors, walls and surfaces of barns, pens, stalls, 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 (Use) (Apply) 2 oz per gallon of water (8 oz. per gallon of water against CPV and Porcine Parvovirus) 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), 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) 2 oz per gallon of water (8 oz per gallon of water against CPV and Porcine Parvovirus) 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 may be required. Empty all troughs, racks, and other feeding and watering appliances. Flush soils from these areas. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate all surfaces with the disinfecting and virucidal solution (2 oz. per gallon of water or 8 oz. per gallon of water – see Organism guide at beginning of this section for appropriate use dilution with appropriate virus) (or equivalent dilution) and allow solution 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 for Treatment of Animal Housing Facilities:

1. Remove all animals and feeds from areas being treated.
2. Remove all litter and manure from floors, walls and surfaces of barns, pens, stalls, chutes and other facilities occupied or traversed by animals.
3. Empty all troughs, racks and other feeding and watering appliances.
4. Thoroughly clean all surfaces with soap and detergent and rinse with water.

5. Apply (Use) (Saturate all surfaces with) 2 oz per gallon of water (8 oz per gallon of water against CPV and Porcine Parvovirus) to floors, walls, cages and other washable hard, non-porous environmental surfaces. For smaller surfaces, use a coarse trigger spray bottle to spray all surfaces with solution until wet. To disinfect, all surfaces must remain wet for ten (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 and other closed spaces.
8. Do not house animals or employ equipment until product has dried.
9. Then thoroughly scrub all treated surfaces with soap and 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.

Disinfection/Fungicide/Virucide of Poultry/Turkey Equipment, Swine Quarters, Livestock Farms, Equine Quarters, Animal Quarters and Kennels Directions: Prior to use, 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 or other animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. (Use) (Saturate all surfaces with) (Apply) 2 oz per gallon of water (8 oz per gallon of water against CPV and Porcine Parvovirus). 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 animals or employ equipment until treatment has been absorbed, set or dried.

Thoroughly scrub all treated equipment (feed racks, mangers, troughs, automatic feeders, fountains and waterers and other equipment which may contact food and water) with soap or detergent and rinse with potable water before reuse.

HATCHERIES: Use (2 oz. per gallon of water or 8 oz. per gallon of water – see Organism guide at beginning of this section for appropriate use dilution with appropriate virus) (or equivalent dilution). Apply to the following hard, non-porous surfaces: hatcher, 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 to air dry.

VEHICLES: Clean all vehicles including mats, crates, cabs, and wheels with high-pressure water and this product. For spray applications use a coarse spray device. Use (2 oz. per gallon of water or 8 oz. per gallon of water – see Organism guide at beginning of this section for appropriate use dilution with appropriate virus) (or equivalent dilution). Leave all treated surfaces exposed to solution wet for 10 minutes or more and allow to air dry.

DISINFECTANT DIRECTIONS FOR CHICK VANS, EGG TRUCKS HATCHERY and FARM VEHICLES SERVICEMAN VEHICLES (VEHICLES): Clean all vehicles including mats, crates, cabs, and wheels with high-pressure water and this product. Use (2 oz. per gallon of water or 8 oz. per gallon of water – see Organism guide at beginning of this section for appropriate use dilution with appropriate virus) (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.

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) 2 oz per gallon of water (8 oz per gallon of water against CPV and Porcine Parvovirus) 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 TO TREAT HARD NON-POROUS, NON-FOOD CONTACT SURFACES OF AUTOMATED TRAY, RACK AND BUGGY WASHERS: Mix a solution containing (2 oz. per gallon of water or 8 oz. per gallon of water – see Organism guide at beginning of this section for appropriate use dilution with appropriate virus) (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 (2 oz. per gallon of water or 8 oz. per gallon of water – see Organism guide at beginning of this section for appropriate use dilution with appropriate virus) (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: 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 (2 oz per gallon of water) (660 ppm active quat) (equivalent use dilution) for a period of 10 minutes. Ventilate buildings, coops, and other closed spaces. Do not house poultry or employ equipment until treatment has been absorbed, set, or dried. Thoroughly scrub

treated feed racks, troughs, automatic feeders, fountains, and waterers with soap or detergent, and rinse with potable water before reuse.

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 2 oz of this product per 1 gallon of water solution (660 ppm active quat) (or equivalent use dilution). 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 5 ounces of this product to 5 gallons water (or equivalent use dilution). Insert the nozzle of the fogger through a suitable opening into the room. With the setting in maximum output, fog for one minute for each 4000 cubic feet of space in the room. When fogging is completed ventilate buildings and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed or dried. Thoroughly clean all surfaces with soap or detergent and rinse with water.

SANITIZING INCUBATORS AND HATCHERS USING FOGGING DEVICES

Mix 19 ounces of this product to 120 ounces of water. Fog 3-8 ounces of this into setters and hatchers immediately after transfer. Repeat daily in setters and every 12 hours in hatchers. Discontinue hatcher treatments at least 24 hours prior to pulling the hatch. Do not allow people to contact or breathe this fog. It is acceptable to fog setters and hatchers with a 4.4 ounces 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.

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. Use for 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.

BARBER/SALON

Disinfection/Fungicide/Virucide for Barber/Salon Tools Directions: Immerse pre-cleaned barber/salon tools, such as combs, brushes, rollers, razors, clipper and trimmer blades, tweezers, manicure/pedicure tools and scissors and other salon instruments and tools, in a 2 ounce per gallon solution of the product (or equivalent use dilution) (660 ppm active quat). Completely immerse instruments and tools for at least 10

minutes. Rinse thoroughly and dry before use. Fresh solution must be prepared at least daily or more often if solution becomes cloudy or soiled.

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

(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, clipper blades, razors, manicure implements and other non-porous instruments in the use solution (2 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.

(OR)

Disinfecting/Virucide Grooming Clippers: Turn the clipper off occasionally during use and spray between the teeth of blades a solution of 2 ounces per gallon of water (or equivalent use dilution) (660 ppm active quat). Allow surface to remain wet for at least 10 minutes. Spray away hair, dandruff and dust particles while disinfecting the blades.

(OR)

Cleaning Hair Clippers and Electric Shears: While clipper/shear is running, hold in the downward position and spray a 2 ounces per gallon of water solution (or equivalent use dilution) (660 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. Then wipe dry with a clean soft cloth. Lubricate as per clipper/shear manufacturer's instructions.

(OR)

Cleaning Barber/Salon Shears and Other Implements: Spray shear/implement until thoroughly wet. Wipe away visible debris using a soft bristle brush or cloth. Immerse pre-cleaned shear/implement into a container of 2 ounces per gallon of water solution (or equivalent use dilution) (660 ppm active quat) of this product for at least 10 minutes. Remove shear/implement and wipe dry. No rinsing is necessary. Use fresh solution at least daily or when immersion tank (bowl) (sink) solution becomes diluted or visibly soiled.

Disinfection/Fungicide/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 2 ounces per gallon of water (or equivalent use dilution) (660 ppm active quat) to exposed surfaces with a cloth, mop, sponge or sprayer. Brush or swab thoroughly and allow solution to stand for 10 minutes. For spray applications, use a coarse spray device. Do not breathe spray. After the unit has been thoroughly disinfected, rinse all cleaned surfaces with fresh water. Do not use equipment until treatment has been absorbed, set or dried.

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 2 ounces per gallon (or equivalent use dilution) (660 ppm active quat) of water for at least 3 minutes. Rinse thoroughly and dry before use. Prepare a fresh solution at least daily or more often if solution becomes cloudy or soiled.

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

RESTROOM/BATHROOM

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

Remove gross filth prior to disinfection.

From Concentrate: Add 1½ ounces to the toilet bowl (¾ gallon water) (or equivalent use dilution) and mix. Brush thoroughly over exposed surfaces and under the rim. 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 1½ ounces into toilet bowl (¾ gallon of water) (or equivalent use dilution) for a 1:64 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. Empty toilet bowl or urinal and apply 2 ounces per gallon (16 milliliters per liter) use solution (or equivalent use dilution) to exposed surfaces, including under the rim with a cloth, mop, sponge or sprayer. Allow solution to stand for 10 minutes and flush. For sprayer applications, use a coarse spray device and swab all areas after spraying.

(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. 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. 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. Empty toilet bowl or urinal and apply 8 ounces per gallon (64 milliliters per liter) use solution (or equivalent use dilution) to exposed surfaces including under the rim with a cloth, mop, sponge or sprayer. Allow solution 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) 2 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: Flush toilet and use toilet mop to push water from the bowl over the trap. Fill toilet bowl with clean water. Saturate mop with 2 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: Remove water from bowl. Fill toilet bowl with clean water. Apply (Squeeze) 2 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 Disinfectant Toilet Bowls: Flush to remove heavy soil. To clean, simply squirt 2 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, use toilet (bowl) mop to push water from the bowl over the trap. Fill toilet bowl with clean water. Squirt at least 2 ounces of this product under the rim and around the sides. Allow solution to remain in the bowl for 10 minutes after scrubbing. Flush and rinse.

(Or)

To Disinfectant Toilet Bowls:

1. Remove gross filth and heavy soil deposits.
2. With swab applicator, remove water from bowl by forcing water over the trap.
3. Fill toilet bowl with clean water.
4. Apply 2 ounces of this product to swab applicator, cloth, mop, sponge, or directly to surface.
5. Swab entire surface area, especially under the rim.
6. Allow entire surface to remain wet for ten (10) minutes.
7. 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 2 ounces of this product 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 2 ounces of this product per gallon 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 2 ounces of this product per gallon of water directly to urinal surfaces including water outlets area for general cleaning.
3. Then pour an additional 2 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 2 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 2 ounces of (product name) per gallon of water (660 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 to floors, walls and ceilings making sure not to over spray. To disinfect, all surfaces must remain wet for ten (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 1:64 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 1 – 4 ounces per gallon of water to deodorize. If odors return before time to empty, add 1 – 2 ounces per gallon of water to the tank. For kitchen waste, add 1 to 2 ounces to gray water tank as needed to control malodors created by dirty dishwasher.

FUNGICIDAL/DEODORIZATION/ MOLD & MILDEW

Fungicidal Performance:

Aspergillus niger (ATCC 16404)
Candida albicans (ATCC 10231)
Trichophyton mentagrophytes (ATCC 9533)

To Kill Fungi: Pre-clean heavily soiled areas. Apply use solution to hard, non-porous environmental surfaces. Allow surface to remain wet for ten (10) minutes. Wipe surfaces (and let air dry). Use as directed at a 1:64 dilution (2 fluid ounces per gallon of water) (or equivalent use dilution).

(Or use alternate Fungicidal directions.)

FUNGICIDAL DIRECTIONS: For use in areas such as locker rooms, dressing rooms, shower and bath areas and exercise facilities. Use as directed at a 1:64 dilution (2 fluid

ounces per gallon of water) (or equivalent use dilution). Allow surface to remain wet for ten (10) minutes. Wipe surfaces or let air dry.

(OR)

Fungicidal Activity: At 2 ounces per gallon use-level (or equivalent use dilution) this product is effective against *Trichophyton mentagrophytes* (athlete's foot fungus) (a cause of Ringworm) (a cause of Ringworm of the foot) and *Aspergillus niger* on inanimate surfaces in locker rooms, dressing rooms, shower and bath areas and exercise facilities. Preclean all surfaces prior to using this product. Saturate surfaces with use solution for a period of 10 minutes. Allow solution to dry on surface and repeat treatment every seven days or when new growth appears.

Mold and Mildew Control: To control the growth of mold and mildew and their odors on hard, non-porous surfaces, apply use solution to thoroughly wet all treated surfaces completely. Let surface air dry. Repeat application weekly or when growth or odor reappears. Use as directed at a 1:64 dilution (2 fluid ounces per gallon of water) (or equivalent use dilution). Allow surface to remain wet for ten (10) minutes.

For Use as a (General) Cleaner and/or Deodorizer: Apply use solution to surfaces. Wipe surfaces (and let air dry). For heavy-duty use, add 8 ounces per gallon (64 milliliters per liter) of water (1:16) to clean hard, non-porous surfaces.

General Deodorization: To deodorize, add 2 ounces of this product to one gallon of water (or equivalent use dilution) (660 ppm active quat). Excess liquid material must be wiped up or allowed to air dry.

For Deodorizing Garbage Cans, Garbage Trucks, Industrial Waste Receptacles and Garbage Handling Equipment: It is especially important to preclean for the product to perform properly. Then, apply a wetting concentration of 7 ounces of this product per gallon of water (or equivalent use dilution) (2,300 ppm quat active).

For Deodorizing Septic Storage Tanks: When tanks are empty, pour 2 oz. per gallon of water (660 ppm active quat) (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: Effective on smoking and cooking odors (garlic, fish, onions, etc.). Automobile odors from tobacco, musty carpet smell, and beverage smells will be eliminated. A solution of 2 ounces of this product per gallon of water (or equivalent use dilution) (660 ppm active quat) will effectively neutralize damp musty odors caused by mildew in storage areas, basements, closets, bathrooms and A/C filters. 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 surfaces 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 2 ounces per gallon 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: For use on wrestling and gymnastic mats, athletic mats, exercise equipment, 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 2 ounces per gallon 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 1 to 4 ounces per gallon (8-32 milliliters per liter) 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 2 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 2 ounces of this product (or equivalent use dilution). When you refill the tank, add 2 ounces of this product for every gallon of water added in the tank (or equivalent use dilution).

Not for use in heat or atomizing type humidifiers.

WATER/SMOKE DAMAGE RESTORATION *(Not Applicable in California)*

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

Sewer backup & river flooding *(Not Applicable in California):* During mitigation procedures, dilute 2 to 4 ounces of this product per gallon of water allowing for the diluting effect of absorbed water within saturated materials. Remove gross filth or heavy soil along with non-salvageable materials. Saturate all 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. *(Not Applicable in California):* For water damage from a clean water source, extract excess water. Test hidden area for colorfastness. Dilute 2 to 4 ounces of the product per gallon of water, allowing for the diluting effect of absorbed water within saturated materials. Remove gross filth or heavy soil. Apply directly with a sprayer using a coarse spray tip, to fully saturate affected materials. Roll, brush or agitate into materials and allow the materials to remain damp for 10 minutes. Follow with a thorough extraction. Dry rapidly and thoroughly.

Special Instructions for Cleaning Carpet Against Odor Causing Bacteria *(Not Applicable in California):* This product may be used in industrial and institutional 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 2 ounces of this product per gallon of water.

For truck mounted extraction machines: Mix 9 ounces of the product per gallon of water and meter at 4 gallons per hour.

For rotary floor machines: Mix 2 ounces of this product per gallon of water and apply at the rate of 300-500 sq. ft. per gallon.

Do not mix this product with other cleaning products. Follow the cleaning procedures specified by the manufacturer of the cleaning equipment. After using this product, set the carpet pile and protect the carpet from furniture legs and bases while drying. Do not over wet. If applied to stain resistant nylon carpet, apply a fabric protector according to the carpet manufacturer's directions.

CARPET DEODORIZER/SANITIZER AGAINST ODOR-CAUSING BACTERIA, FOR HOME, INSTITUTIONAL, INDUSTRIAL AND HOSPITAL USE *(Use as Sanitizer is not for use in California)*

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

Vacuum carpet thoroughly prior to application. Mix 2 ounces of product per gallon of water (or equivalent use dilution). For rotary floor machines, mix 2 ounces per gallon of water. Follow the Injection and/or Extraction procedures as specified for any conventional steam cleaning equipment you are using. For rotary floor machines, mix 2.6 ounces per gallon of water and spray on carpet at a rate of 300-500 sq. ft. per gallon.

For use on washable synthetic fibers. Do not use on wool. Test color fastness of carpet before use. Apply diluted product to a small concealed spot, then rub with a clean white cloth. If color changes or transfers to cloth, a water-based product 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 Applicable in California):* Effective against odor-causing bacteria and fungi for home, institutional, industrial and hospital use. This product is particularly suitable for use in smoke damage restoration situations against odor-causing bacteria on the following porous and semi-porous materials: carpets, carpet cushion, sub floors, drywall, trim and frame lumber, tackless strip and paneling. Follow directions as outlined in the Water Damage Restoration section. Using solutions recommended, saturate affected materials with enough product to remain wet for at least 10 minutes. Use proper ventilation.

OTHER USES

Disinfection of Hard, Non-Porous Surfaces in Whirlpool (Foot Spa) Units: After using the whirlpool unit, drain and refill with fresh water to just cover the intake valve. Add 2 ounces of this product for each gallon of (or equivalent use dilution) (660 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.

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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 9.8 fluid ounces in a free flow waterbed of 90 to 180 gallon capacity. Add 19.8 fluid ounces 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: This product removes secretions, soil and blood, along with their accompanying malodor, from the surfaces and orifices of human remains. Using a sponge or washcloth, bathe the entire body with a use solution of 2 ounces per gallon of water (or equivalent use dilution). A soft hand brush may be employed on surfaces other than the face. Allow a 10 minute contact time for optimal results. Prepare a fresh solution for each (cadaver) remains or when solution becomes visibly dirty or diluted.

For Use on Finished Floors: To limit gloss reduction, use 2 ounces of this product per gallon of water. 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) 2 ounces per gallon of water (1:64) (or equivalent use dilution). For heavy-duty use, add (mix) 8 ounces per gallon of water (or equivalent use dilution).

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

For heavily soiled areas, a preliminary cleaning is required.

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

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

Prepare a fresh solution at least daily or when 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 2100 ppm active quat. Treat all trucks, attached trailers, field harvesting, vehicles, and equipment thoroughly at a dilution of 6.4 ounces per gallon of water (2100 ppm active quat). Treatment can be applied to trucks, attached trailers, field harvesting equipment; including cargo area, wheels, tires, under carriage, hood, roof, fenders and any other part of transportation equipment that can be taken into infested areas. To prevent the spread of Citrus Canker by this artificial means of transportation, treatments are made by trigger spraying, dipping or brushing, using maximum rate 2100 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 2 oz of this product per 1 gallon of water solution (660 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 2 oz per gallon of water (660 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. Do not use on paint or acrylic plastics. 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, faucets apply 2 oz per gallon of water (660 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-clean step must be done according to the instructions under Restroom/Bathroom. Rinse with potable water after use on surfaces that come in contact with food.

SANITIZER DIRECTIONS FOR NON-FOOD CONTACT SURFACES

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 2 ounces of this product per gallon of (or equivalent use dilution) (660 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 2 ounces per gallon of water (660 ppm active) (or equivalent use dilution) to sanitize hard, non-porous exterior surfaces such as vinyl, plastic, sealed concrete, painted or sealed woodwork, and sealed stucco.

Application: 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 (mist), pressure wash surfaces to thoroughly clean all treated areas using a high-pressure spray. Do not breathe spray.

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)

Pour contents of packet into 1 gallon of water. Keep packets in box until ready to use.

REFILLS

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

2 OUNCE PACKET LABEL TO BE USED WITH MASTER CONTAINER LABEL

MIX EACH PACKET WITH 1 GALLON OF WATER FOR
DISINFECTION

MAQUAT® 64-NHQ

E.P.A. Reg. No. 10324-154 E.P.A. Est. No. 10324-IL-1

NET CONTENTS: 2 FLUID OZ.

ACTIVE INGREDIENTS:

Didecyl Dimethyl Ammonium Chloride.....	2.535%
n-Alkyl (C14 50%, C12 40%, C16 10%) dimethyl benzyl ammonium chloride.....	1.690%

INERT INGREDIENTS:	95.775%
TOTAL	100.000%

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"



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