

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

AUG 30 2006

Mr. Robert J. Sloan  
Sr. Regulatory Services Associate  
Lonza, Inc.  
90 Boroline Road  
Allendale, NJ 07401

Subject: **Formulation HWS-512**  
EPA Registration Number 47371-191  
Application Date April 12, 2006  
EPA Received Date April 14, 2006

Dear Sloan:

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

**Proposed Amendments:**

- Amendment

**Efficacy Review Comments:**

1. The proposed label claims that the product, HWS-5112, is effective disinfectant with virucidal activity against SARS Associated Coronavirus at a dilution of 1/4 oz. product per gallon of water on hard, non-porous surfaces with a contact time of 10 minutes. This claim is acceptable.
2. The proposed label claims that the product, HWS-256, is an effective disinfectant with virucidal activity against Adenovirus type 7 at a use dilution of 1 oz. per gallon of water on hard, on-porous surfaces with a contact time of 10 minutes. This claim is currently unacceptable. The use dilution given on the proposed label for general disinfection is 1/4 oz. per gallon. The agency does not allow claims for multiple organisms at varying dilutions. The user of the product will not know if they have Adenovirus Type 7 as opposed to Adenovirus Type 4 or others, and is likely to use the product at general dilution instructions. If you want to maintain a claim against Adenovirus Type 7 at 1 oz. per gallon, then this must become the use dilution for all viruses listed on the label.

CONCURRENCES							
SYMBOL							
SURNAME							
DATE							

2/10

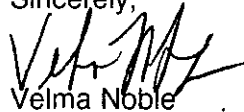
3. The proposed label (page 3, left column) has added the claim "{cause of Scarlet fever}" behind *Streptococcus pyogenes*. This claim is misleading and must be deleted. The actual cause of Scarlet fever is an immune reaction, and is not directly caused by this organism.

**General Comments:**

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

Should you have any questions or comments concerning this letter, please contact Drusilla Copeland at (703) 308-6224.

Sincerely,



Velma Noble

Product Manager (31)

Regulatory Management Branch I

Antimicrobials Division (7501C)

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**DANGER. CORROSIVE.** Causes irreversible eye damage and skin burns. Harmful if inhaled, swallowed or absorbed through the skin. Do not get in eyes, on skin, or on clothing. Wear protective eyewear (goggles, face shield or safety glasses), protective clothing and protective gloves (rubber or chemical resistant). Avoid breathing spray. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

**FIRST AID**

**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.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 - 20 minutes.

**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 the 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 treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

*(Note to reviewer. If container size is 5 gallons or greater, the following Environmental Hazards statements will be used:)*

**ENVIRONMENTAL HAZARDS**

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 to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**FORMULATION HWS-512**

**ONE-STEP DISINFECTANT**

**GERMICIDAL DETERGENT AND DEODORANT**

Disinfectant	Pseudomonacidal
Staphylocidal	Salmonellacidal
Bactericidal	Fungicidal
Mildewstatic	*Virucidal

FLORAL / CITRUS / FRESH / CLEAN / LEMON / PINE / MINT (scent) (fragrance) (odor) (scented)

**Active Ingredients:**

Didecyl dimethyl ammonium chloride.....	20.28%
n-Alkyl (C <sub>14</sub> 50%, C <sub>12</sub> 40%, C <sub>16</sub> 10%) dimethyl benzyl ammonium chloride .....	13.52%
Inert Ingredients: .....	66.20%
Total .....	100.00%

**KEEP OUT OF REACH OF CHILDREN**

**DANGER**

See (right) (left) (side) (back) panel for Precautionary Statements and First Aid

EPA Reg. No. 47371-191

EPA Est. No. *(insert Est. No. here)*

NET CONTENTS *(insert container size here)*

H&S CHEMICALS DIVISION  
c/o LONZA INC.,

90 Boroline Road, Allendale, NJ 07401

**ACCEPTED  
with COMMENTS**

**AUG 30 2006**

In accordance with the Fungicide, and Rodenticide Act as amended, for the pesticide, registered under EPA Reg. No. 47371-191

(Note to reviewer: The following is considered optional marketing language.)

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

A multi-purpose, neutral pH, germicidal detergent and deodorant effective in hard water up to 400 ppm (calculated as CaCO<sub>3</sub>) 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.

Recommended for use in hospitals, nursing homes, schools, colleges, commercial and industrial institutions, office buildings, veterinary clinics, animal life science laboratories, zoos, federally inspected meat and poultry plants, equine farms, tack shops, pet shops, airports, kennels, hotels, motels, poultry farms, turkey farms, dairy farms, hog farms, breeding establishments, grooming establishments, funeral homes, and households.

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

Use [on] [to clean and disinfect] nonporous athletic mats, wrestling mats, gymnastic mats, exercise equipment and training tables.

Use [on] [to clean and disinfect] nonporous personal protective safety equipment, wrestling headgear, boxing headgear, protective headgear, athletic helmets, 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 with warm water and allow to air dry before reuse. [Caution: Cleaning at the recommended 120°F. temperature will avoid overheating and distortion of the personal safety equipment that would necessitate replacement.]

Use in:

- Federally inspected meat and poultry plants on all hard, nonporous surfaces in inedible product processing areas, nonprocessing 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 materials 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.

Recommended for use in tanning salons.

Recommended for use on (tanning beds), (and) (tanning equipment).

**Formulation HWS-512** is effective at controlling mold and mildew odor on mattresses, pillows and shower curtains.

**Formulation HWS-512** can be used in the laundry to control odors on musty bedding and linens. Test on a small inconspicuous area before using.

**Formulation HWS-512** may be used on mildew stains in damp areas such as bathrooms, showers, kitchens, basements and laundry rooms.

**Formulation HWS-512** may be used in work areas such as tool rooms and garages for odor control and light duty cleaning.

**Formulation HWS-512** may be used to remove odors caused by flooding and smoke from fires.

**Formulation HWS-512** leaves a clean fresh scent.

**Formulation HWS-512** provides long lasting freshness against tough (pet) odors from litter boxes and pet accidents.

Effective against the following pathogens:

*(Bacteria:)*

Pseudomonas aeruginosa<sup>1</sup>  
Staphylococcus aureus<sup>1</sup>  
Salmonella choleraesuis

Acinetobacter calcoaceticus  
Bordetella bronchiseptica  
Chlamydia psittaci  
Enterobacter aerogenes  
Enterobacter cloacae  
Enterococcus faecalis – Vancomycin Resistant [VRE]  
Escherichia coli<sup>1</sup>  
Fusobacterium necrophorum  
Klebsiella pneumoniae<sup>1</sup>  
Legionella pneumophila  
Listeria monocytogenes  
Pasteurella multocida  
Proteus mirabilis  
Proteus vulgaris  
Salmonella enteritidis  
Salmonella typhi  
Salmonella typhimurium  
Serratia marcescens  
Shigella flexneri  
Shigella sonnei  
Staphylococcus aureus – Methicillin resistant [MRSA]  
Staphylococcus aureus – Vancomycin Intermediate Resistant [VISA]  
Staphylococcus epidermidis<sup>2</sup>  
Streptococcus faecalis<sup>1</sup>  
Streptococcus pyogenes [cause of Scarlet fever]  
<sup>1</sup> ATCC & antibiotic-resistant strain  
<sup>2</sup> antibiotic-resistant strain only

*(Viruses:)*

\*Adenovirus Type 4  
\*Adenovirus Type 7 (at 1 oz. / gallon)  
\*Hepatitis B Virus (HBV)  
\*Hepatitis C Virus (HCV)  
\*Herpes Simplex Type 1  
\*Herpes Simplex Type 2  
\*Human coronavirus  
\*HIV-1 (AIDS virus)  
\*Influenza A / Hong Kong  
\*Respiratory Syncytial Virus (RSV)  
\*Rubella (German Measles)  
\*SARS Associated Coronavirus [SARS] [cause of Severe Acute Respiratory Syndrome]  
\*Vaccinia [Pox virus]

*(Animal Viruses:)*

\*Avian polyomavirus  
\*Canine distemper  
\*Canine parvovirus - at 1 oz. per gallon  
\*Feline leukemia  
\*Feline picornavirus  
\*Infectious bovine rhinotracheitis  
\*Infectious bronchitis [Avian IBV]  
\*Pseudorabies [PRV]  
\*Rabies  
\*Transmissible gastroenteritis virus [TGE]

*(Fungi:)*

Aspergillus niger  
Candida albicans  
Trichophyton mentagrophytes [Athlete's Foot Fungus]  
[a cause of Ringworm] [a cause of Ringworm of the foot]

(Note to reviewer: The following is considered optional marketing language.)

**(AREAS OF USE:)**

Use **Formulation HWS-512** in:

Bathrooms  
Homes (households)  
Kitchens

Dental offices  
Health Care Facilities  
Hospitals  
Medical Offices  
Nursing homes

Day care centers  
Nurseries

Bars  
Cafeterias  
Convenience stores  
Food processing plants  
Food storage areas  
Institutional kitchens  
Restaurants  
USDA inspected food processing facilities

Athletic facilities  
Barber shops  
Business and office buildings  
Colleges  
Correctional facilities  
Dressing rooms  
Exercise facilities  
Factories  
Hotels  
Institutional facilities  
Institutions  
Locker rooms  
Motels  
Morgues  
Mortuaries  
Prisons  
Public facilities  
Public rest rooms  
Schools  
Shower and bath areas  
Salons (Beauty)  
Tanning Salons

Camp grounds  
Play ground equipment

Animal laboratories  
Dairy farms  
Farms  
Hog farms  
Kennels  
Poultry farms  
Pet animal quarters  
Pet shops  
Turkey farms  
Zoos

Airplanes  
Airports  
Boats  
Buses  
Campers  
Cars  
Emergency vehicles  
Mobile homes  
Ships  
Taxis  
Trailers  
Trains  
Transportation terminals

**(TYPES OF SURFACES:)**

Use **Formulation HWS-512** on washable hard, nonporous surfaces of:

Appliances, exteriors of  
Bathroom fixtures  
Bathtubs (Fiberglass)  
Cabinets  
Cages  
Chairs  
Coils and drain pans of air conditioning and refrigeration equipment and heat pumps  
Conductive flooring  
Counters (countertops)  
Countertop laminates  
Desks  
Doorknobs  
Floors  
Garbage cans  
Highchairs  
Kennel runs  
Microwave ovens, exteriors of

Outdoor furniture, except non-porous surfaces such as wood, upholstery, etc.  
Refrigerators, exteriors of  
Refrigerated storage and display equipment  
Telephones

Other hard nonporous surfaces made of:  
Glazed ceramic  
Glazed enameled surfaces  
Glazed porcelain  
Laminated Surfaces  
Metal  
Plastic (such as polystyrene or polypropylene)  
Sealed granite  
Sealed limestone  
Sealed marble  
Sealed slate  
Sealed stone  
Sealed terra cotta  
Sealed terrazzo  
Stainless steel  
Upholstery, vinyl and plastic  
Woodwork, finished

Non-critical medical device surfaces:  
Beds [Medical] [Hospital]  
Bed frames  
Bed rails  
Crutches  
Non-critical [hospital] [medical] equipment surfaces  
[Medical] Examining tables  
[Medical] [Hospital] Lamps  
[Medical] [Hospital] Scales  
Stands  
Stethoscopes  
Walkers  
Wheel chairs

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

DILUTION: 1:512 (660 ppm quat)      ¼ oz. per gallon of water  
½ oz. per 2 gallons of water  
1 oz. per 4 gallons of water  
1¼ oz. per 5 gallons of water  
2 oz. per 8 gallons of water

**DIRECTIONS FOR USE**

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

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

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

*(or)*  
This product is not for use on medical device surfaces.

**DISINFECTION / CLEANING / DEODORIZING**

**DIRECTIONS:** Remove heavy soil deposits from surface. Then thoroughly wet surface with a use-solution of ¼ oz. of the concentrate per gallon of water. The use-solution can be applied with a cloth, mop, sponge, or coarse spray, or soaking. For sprayer applications, use a coarse spray device. Spray 6-8 inches from the surface, rub with a brush, cloth or sponge. Do not breathe spray. Let solution remain on surface for a minimum of 10 minutes. Rinse or allow to air dry. Rinsing of floors is not necessary unless they are to be waxed or polished.

Food contact surfaces must be thoroughly rinsed with potable water. Do not use this product on utensils, glassware and dishes.

*(Note for reviewer: One of the following statements must be used:)*  
Food contact surfaces must be thoroughly rinsed with potable water. This product must not be used to clean the following food contact surfaces: utensils, glassware and dishes.

*(or)*  
This product is not for use on food contact surfaces.

*(Note to reviewer: one of the following two statements will be used:)*

**BACTERICIDAL STABILITY OF USE-DILUTION:** Tests confirm that Formulation HWS-512, when diluted in 400 ppm hard water (via use of automatic dispensing devices), remains effective against *Pseudomonas aeruginosa*, *Staphylococcus aureus* and *Salmonella choleraesuis* for (up to 7 days) (for up to one week) (for up to one month) (for up to 2 months) (for up to 3 months) (up to 4 months) (up to 5 months) (up to 6 months) (up to 7 months) (up to 8 months) (up to 9 months) (up to 10 months) (up to 11 months) (up to 12 months) (up to one year) when stored in a sealed container such as a spray bottle. If product becomes visibly dirty or contaminated, the use-dilution must be discarded and fresh product prepared. Always use clean, properly labeled containers when diluting this product. Bactericidal stability of the use-dilution does not apply to open containers such as buckets or pails.

*(or)*  
Prepare a fresh solution daily or more often if the solution becomes visibly dirty or diluted.

**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-solution. 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.

**FUNGICIDAL DIRECTIONS:**

For use in areas such as locker rooms, dressing rooms, shower and bath areas and exercise facilities follow disinfection directions.

**MILDEWSTATIC INSTRUCTIONS:** Will effectively control the growth of mold and mildew plus the odors caused by them when applied to hard, nonporous surfaces such as walls, floors, and table tops. Apply use-solution of ¼ oz. per gallon of water with a cloth, mop, sponge, or coarse spray. Make sure to wet all surfaces completely. Let air dry. Repeat application weekly or when growth reappears.

**CLEANING AND DISINFECTING HARD NONPOROUS SURFACES ON PERSONAL PROTECTIVE EQUIPMENT (RESPIRATORS):**

Preclean equipment if heavily soiled to ensure proper surface contact. Add ¼ oz. of Formulation HWS-512 to one gallon of water. Gently mix for a uniform solution. Apply solution to hard, nonporous surfaces of the respirator with a brush, coarse spray device, sponge, or by immersion. Thoroughly wet all surfaces to be disinfected. Treated surfaces should remain wet for 10 minutes. Remove excess solution from equipment prior to storage. Comply with all OSHA regulations for cleaning respiratory protection (29 CFR §1910.134).

**\*KILLS HIV-1 (AIDS VIRUS) AND HBV (HEPATITIS B VIRUS) AND HCV (HEPATITIS C VIRUS) 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 / body fluids, and in which the surfaces / objects likely to be soiled with blood / body fluids can be associated with the potential for transmission of Human Immunodeficiency Virus Type I (HIV-1)(associated with AIDS) or Hepatitis B Virus (HBV) or Hepatitis C Virus (HCV).

**SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATION AGAINST HIV-1 (AIDS VIRUS) OR HBV OR HCV OF SURFACES / OBJECTS SOILED WITH BLOOD / BODY FLUIDS:**

**Personal Protection:** Disposable protective gloves, gowns, face masks, or eye coverings as appropriate must be worn during all cleaning of blood / body fluids and during decontamination procedures.

**Cleaning Procedures:** Blood / body fluids must be thoroughly cleaned from surfaces / objects before application of disinfectant.

**Contact Time:** HIV-1 (AIDS virus) is inactivated after a contact time of 4 minutes at 25°C (77°F) (room temperature). HBV and HCV are inactivated after a 10 minute contact time. Use a 10-minute contact time for all other viruses, fungi, and bacteria listed.

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

**SALON (BARBER) INSTRUMENTS AND TOOLS DISINFECTION (BACTERICIDE) / VIRUCIDE / FUNGICIDE DIRECTIONS:**

Mix ¼ oz. of **Formulation HWS-512** per gallon of water (or equivalent dilution) to disinfect hard, nonporous instruments and tools. Use 1 oz./gal. for Adenovirus Type 7. Completely immerse combs, brushes, rollers, razors, scissors, blades, manicure and other salon instruments and tools for 10 minutes. For heavily soiled instruments and tools, a preliminary cleaning is required. Rinse thoroughly and dry before use. Prepare a fresh solution daily or more often if the solution becomes visibly diluted, cloudy or soiled.

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

**DISINFECTION OF HARD, NON-POROUS SURFACES IN FOOTBATHS**

To remove body oils, dead tissue, soil and all other buildups or organic matter on inanimate surfaces after using the footbath, drain the water and thoroughly clean all hard, non-porous surfaces with soap or detergent, then rinse with water. Saturate surfaces with a use solution of ¼ oz. per gallon of water (or equivalent use dilution) to exposed surfaces with a cloth, mop, sponge or sprayer. For spray applications, use a coarse spray device. Do not breathe spray. Brush or swab thoroughly and allow solution to stand for 10 minutes. After the unit has been thoroughly disinfected, rinse all surfaces with fresh water. Do not use equipment until treatment has been absorbed, set or dried.

**CLEANSING OF BODY SURFACES AND BODY ORIFICES OF HUMAN REMAINS:**

This product removes body 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 ¼ oz. per gallon of water. A soft hand brush may be employed on surfaces other than the face. Prepare a fresh solution for each (cadaver) remains or when solution becomes visibly dirty or diluted.

**FARM PREMISE, LIVESTOCK, POULTRY & TURKEY HOUSE DISINFECTANT**

DILUTION: 1:512

¼ oz. per gallon of water

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



**VETERINARY PRACTICE / ANIMAL CARE / ANIMAL LABORATORY / ZOOS / PET SHOP / KENNELS DISINFECTION DIRECTIONS:**

For cleaning and disinfecting hard nonporous surfaces: equipment used for animal food or water, utensils, instruments, cages, kennels, stables, catteries, etc. Remove all animals and feeds from premises, animal transportation vehicles, crates, etc. Remove all litter, droppings and manure from floors, walls and surfaces of facilities occupied or traversed by animals. Empty all feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with a use-solution of ¼ oz. of **FORMULATION HWS-512** per gallon of water (or equivalent dilution) for a period of 10 minutes. Wipe or allow to air dry. Ventilate buildings and other closed spaces. Thoroughly rinse all surfaces that come into contact with food, including equipment used for feeding or watering, with potable water before reuse. Do not house animals or employ equipment until treatment has been absorbed, set or dried.

**For Heavy Duty Cleaning and / or Odor Control:** When greater cleaning is desired, use ½ - 1 oz. of Formulation HWS-512 per gallon of water. Heavily soiled areas may require repeated cleaning before treatment.

**FOR CANINE PARVOVIRUS ACTIVITY:**

Formulation HWS-512 is effective against Canine Parvovirus at 1 oz. per gallon. Follow Veterinary Practice / Animal Care / Animal Laboratory / Zoos / Pet Shop / Kennels Disinfection Directions.

**CITRUS CANKER DISEASE CONTROL**

For prevention of Citrus Canker Disease through treatment of equipment. Effective against *Xanthomonas axonopodis* pv. citri (Citrus Canker Disease) at 2000 ppm active quat. Treatments can be applied to trucks, attached trailers, and field equipment including cargo area, wheels, tires, undercarriage, hood, roof, fenders, and any other hard nonporous equipment taken into infested areas.

Saturate surfaces with a 1:169 use-dilution (5 oz. per 6½ gallons of deionized water) (or equivalent dilution) (2000 ppm active quat) for a period of 10 minutes. Allow to air dry. All surfaces that come in contact with food or crop must be rinsed with potable water before reuse. To prevent the spread of Citrus Canker Disease by this artificial means of transportation, treatments are made by trigger spraying, dipping or brushing. Clothing should be thoroughly rinsed or laundered before reuse. Footwear should be rinsed before reuse.

Formulation HWS-512 is effective at eliminating odors on porous surfaces such as upholstery, drapes, carpets, bedding, shower curtains, mattresses and non-porous surfaces such as walls and floors. Excellent for fire restoration.

Other suggested Uses: Homes, Veterinary Clinics, Fish Markets, Kennels, Trash Compactors, Offices, Beauty Salons, Locker Rooms, Health Spas, Conference rooms, Elevators, Smoking Areas, Lounges, Day Care Centers, Dry Cleaners, Theaters, Farms, Auditoriums and Churches.

**Deodorizing directions:**

**Nursing Homes, Hospitals, Hotels, Schools, Restaurants:** Using 1/4 oz. in chemical toilets, waste receptacles, bed pans, drainage bottles, diaper pails, hampers, disposals, commodes and air conditioner pans will eliminate odors.

**Mopping Solutions, Automatic Scrubbers:** Use 1/4 oz. per gallon of cleaning solution to eliminate undesirable odors.

**Laundry:** ¼ oz. per load added during the final rinse cycle deodorizes all offensive odors.

**Air Freshener/Automotive Uses:** 1 oz. per gallon of water or desired concentration will effectively neutralize damp musty odors caused by mildew in storage areas, basements, closets and bathrooms. Effective on smoking and cooking odors (garlic, fish, onions, etc.). Automobile odors from tobacco, musty carpet smell and beverage smells will be eliminated.

**Carpets:** ¼ oz. per gallon of shampoo solution eliminates odors associated with urine, vomit, smoke, and mildew. Reapply after cleaning for freshening effects. Allow to dry.

**RV Holding Tanks:** Toilet waste: cover bottom of holding tank with water and add ¼ oz. If odors return before time to empty, simply add ¼ oz. to the tank. Kitchen waste: ¼ oz. of **Formulation HWS-512** to gray water tank as needed to control malodors created by dirty dish water.

**Pet Odors:** Use 1 - 2 oz. per gallon of water or desired concentration, for urine, feces, and vomit, in carpet and upholstery. Clean prior to application then spray onto affected areas. Test hidden area for colorfastness. Allow 10 minutes contact time. Then blot with clean cloth. Allow to dry. Also effective on pet bedding and litter boxes.

**Sewage Backup, Water, Smoke Damage:** Use 1/2 - 1 oz. per gallon of water or desired concentration. Spray over affected areas before and after cleaning and extraction. Allow ten minutes contact time. Use proper ventilation; open windows.

**Cleaning Solution:** Dilute 1/4 oz. per gallon of water for cleaning of kitchen counters, tables, walls, bathrooms, toilet seats, mopping floors and large routine applications.

**WATER, SMOKE DAMAGE RESTORATION 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 cushions, subfloors, drywall, concrete, brick, trim and frame lumber, tackless strip and paneling. Using appropriate dilution, saturate the affected materials with enough product to remain wet for at least 10 minutes.

**Sewer Backup and River Flooding:** During mitigation procedures, dilute 1/4 oz. of the concentrate 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 coarse spray device before and after cleaning and extraction.

**Carpets, Carpet Cushions and Other Porous Materials such as Subfloors, Drywall, Concrete, Brick, Trim and Frame Lumber, Tackless Strip and Paneling:** For water damage from a clean source, extract excess water. Test hidden area for colorfastness. Dilute 1/4 oz. of the concentrate per gallon of water, allowing for the diluting effect of absorbed water within saturated materials. Remove gross filth or heavy soil. Saturate all affected areas with a coarse spray device. Roll, brush or agitate into the materials and allow materials to remain wet for 10 minutes. Follow with a thorough extraction. Dry rapidly and thoroughly.

**Special instructions For Cleaning Carpet Against Odor Causing Bacteria:** Use this product in industrial and institutional areas such as homes, motels, hotels, nursing homes, schools, and hospitals. Use on wet-cleanable synthetic fibers. Do not use on wool. Vacuum carpet thoroughly prior to cleaning. Test fabric for colorfastness.

**For portable extraction units:** Mix 1/4 oz. of concentrate per gallon of water. **For truck mounted extraction machines:** Mix 1/4 - 1/2 oz. of concentrate per gallon of water and meter at 4 gallons per hour. **For rotary floor machines:** Mix 1/4 oz. of concentrate 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 the 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 manufacturer's directions.

*(Note to reviewer: If the container size is one gallon or less, the following Storage and Disposal directions will be used :)*

**STORAGE AND DISPOSAL**

Store in original container in areas inaccessible to children. Do not reuse empty container. Discard in trash or recycle.

*(Note to reviewer: If the container size is greater than one gallon, the following Storage and Disposal directions will be used:)*

**STORAGE AND DISPOSAL**

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

**Pesticide Storage**

Store in original container in areas inaccessible to children. Open dumping is prohibited. Do not reuse empty container.

**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**

*(Plastic containers:)* Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incinerate, or if allowed by state and local authorities, burn. If burned, stay out of smoke.

*(Fiber Drums With Liner:)* Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by state and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner.

*(Metal Container:)* Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or dispose of by other procedures approved by state and local authorities.

*(For Bag-in-Box Containers:)* Completely empty bag into application equipment. Dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities by burning or dispose of by other procedures approved by state and local authorities. If burned, stay out of smoke.