

# NISUS DSV™

**Disinfectant, sanitizer, virucide.**

**KILLS FLU VIRUS, HANTAVIRUS & MORE.**



EPA Reg. No. 10324-80-64405  
EPA Est. 64405-TN-1

A broad spectrum disinfectant, sanitizer, virucide, mildewstat, fungicide and deodorizer, Nisus DSV comes in an economical concentrate that is diluted and applied by spraying, using a mop and bucket or by soaking.

As a multisurface solution, DSV can be used both for everyday cleaning as well as a wide variety of critical or emergency situations. It's labeled for use on poultry, dairy, swine and equine farms, at USDA processing facilities and in many other locations. It's also labeled as a contact pesticide to kill small flies in drains and other areas.



*H1N1 virus (Swine Flu)*

Source: Centers for Disease Control



*Salmonella bacteria*

Info: CDC.gov Image: www.salmonellablog.com



*E. coli*

Source: Centers for Disease Control

**Nisus DSV is a broad spectrum disinfectant, sanitizer, virucide, mildewstat, fungicide and deodorizer that is labeled to kill 34 strains of bacteria and 21 different viruses – and small flies.**

- Specially formulated as a concentrate for the pest management industry.
- First created to assist pest management professionals to help prevent contamination of structures after Hurricane Katrina
- Listed pests include small flies, viruses, bacteria and fungi such as Hantavirus, Avian influenza, Hepatitis B and C, Influenza A (H1N1), HIV-1, Salmonella and many others.
- Labeled for use in hundreds of commercial establishments and residential area uses.
- Use in all areas to disinfect and sanitize.
- Protect employees from hantavirus, avian flu and other gross soils in the work environment.

Visit [www.nisuscop.com](http://www.nisuscop.com) for the complete line of green products.

100 Nisus Drive ■ Rockford, TN 37853 ■ (800) 264-0870 ■ [www.nisuscop.com](http://www.nisuscop.com)

This product is not for use in California as noted on the label. Read the label instructions thoroughly and follow them carefully before using. Nisus DSV and Nisus Corporation are trademarks or registered trademarks of Nisus Corporation. ©2014 Nisus Corporation. #SS-DSV-1214a



*Green Pest Control Solutions*

# Nisus D | S | V

**disinfectant • sanitizer • virucide\***

**SEWER BACKUP • RIVER FLOODING • WATER/SMOKE DAMAGE RESTORATION  
HOME • INDUSTRIAL • HOSPITAL • FARM & FOOD HANDLING AND PROCESS AREAS**

**ACTIVE INGREDIENTS:**

Octyl Decyl Dimethyl Ammonium Chloride....	1.650%
Didecyl Dimethyl Ammonium Chloride .....	0.825%
Dioctyl Dimethyl Ammonium Chloride .....	0.825%
Alkyl (C <sub>14</sub> , 50%; C <sub>12</sub> , 40%; C <sub>16</sub> , 10%) dimethyl benzyl ammonium chloride .....	2.200%
<b>INERT INGREDIENTS .....</b>	<b>94.500%</b>
<b>TOTAL.....</b>	<b>100.000%</b>

EPA Reg. No. 10324-80-64405    EPA Est. 64405-TN-1

MADE IN U.S.A.

**KEEP OUT OF REACH OF CHILDREN  
DANGER PELIGRO**

**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.

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

**DANGER: IF YOU CANNOT READ ENGLISH, ASK YOUR SUPERVISOR TO EXPLAIN THE APPROPRIATE DIRECTIONS FOR USE BEFORE WORKING WITH THIS PRODUCT.**

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans & Domestic Animals**

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

**PHYSICAL OR CHEMICAL HAZARDS**

Do not use or store near heat or open flame. Do not mix with oxidizers, anionic soaps and detergents.

**NISUS DSV**

Disinfectant, Cleaner, Mildewstat, Fungicide, Non-Food Contact Surface Sanitizer, Virucide\*, Deodorizer for Hospitals, Nursing Homes, Whirlpools, Home, Hotels, Motels, Waterbed Conditioner, Institutional, Industrial, School, Dairy, Equine, Poultry/Turkey Farm, Veterinary, Restaurant, Food Handling and Process Areas, Federally Inspected Meat and Poultry Plants, Bar and Institutional Kitchen Use and for Harvesting & Handling Equipment. Effective in hard water up to 400 ppm hard-

ness (calculated as CaCO<sub>3</sub>) in the presence of 5% serum contamination.

Small Fly Ovicidal Treatment.

Athletic Surface Disinfectant.

Formulated for effective Poultry, Swine Premise and Mushroom Farm Sanitation.

This formulation is for use on hard, non-porous surfaces in:

- Hospitals, medical and dental offices and clinics, healthcare facilities, nursing homes, physician offices, operating rooms/theaters, radiology rooms, isolation wards, quarantine areas, hospices, and medical research facilities.
- Patient care rooms & facilities, recovery rooms, Emergency Rooms, X-ray cat labs, exam rooms, newborn nurseries, neonatal units, orthopedics, respiratory therapy, surgi-centers, labs, out-patient surgical centers, blood collection rooms, central supply, housekeeping & janitorial rooms, ophthalmic/optometric facilities.
- EMS & fire facilities, emergency vehicles, ambulances, ambulance equipment/surfaces, 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, elder care facilities.
- 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, maintenance vehicles.
- Public restrooms, public facilities, waysides, travel rest areas, shower rooms, shower stalls, bathrooms, shower and bath areas.
- Hotels, motels, dormitories.
- Kitchens, bathrooms and other household areas.
- Homes, condos, apartments, vacation cottages, summer homes.
- Institutions, schools and colleges, commercial and industrial institutions, churches, classrooms, community colleges, universities, athletic facilities and locker rooms, exercise rooms, exercise facilities, gyms, gymnasiums, fieldhouses.
- Cosmetic manufacturing facilities, medical device manufacturing facilities, biotechnology firms, pharmaceutical manufacturing facilities, warehouses.
- Health clubs, spas, tanning salons, tanning spas/beds, footbath surfaces, massage/facial salons, hair/nail/pedicure salons, barber/beauty shops, salons, tattoo parlors. *Not for use on needles or other skin piercing instruments.*
- Museums, art galleries, post offices, performance / theater centers, banks, libraries, movie houses, bowling alleys.
- Recycling centers.
- Humidifier water tanks.
- Campgrounds, playgrounds, recreational facilities, picnic facilities, sports arenas, sports complexes.
- Food processing plants, USDA inspected food-processing facilities, farms, dairy farms, hog farms, equine farms, poultry and turkey farms and egg processing plants, meat/poultry processing plants, meat/poultry producing establishments, mushroom farms, rendering plants, canneries, caterers, bakeries, meat packing plants, hide and leather processing plants.
- Processing facilities for Fish, Milk, Citrus, Wine, Fruit, Vegetable, Ice Cream, and Potatoes and beverage plants.
- Tobacco plant premises and equipment.
- Veterinary clinics, animal life science laboratories, animal laboratories, animal research centers, animal quarantine areas, animal holding areas, animal breeding facilities, kennels, dog/cat animal kennels, breeding and grooming establishments, pet animal quarters, zoos, equine farms, pet shops, tack shops, 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, seed houses.
- Household and automotive garages, boats, ships, barges, watercraft, campers, RVs, trailers, mobile homes, cars, automobiles, trucks, delivery trucks, box-cars, tankers, tank trucks, buses, trains, taxis, helicopters and airplanes.
- Cruise lines, cruise ships, airline terminals, airports, shipping terminals, public transportation, transportation terminals.
- Commercial florist and flower shops.

- Basements, cellars, bedrooms, attics, living rooms and porches.

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

- Food preparation and storage areas.
- Kitchen equipment such as trash compactors.
- Countertops, countertop laminates, stovetops, sinks, tub surfaces, non-food contact surfaces of Slurpee<sup>®</sup> machines, and exterior surfaces of appliances, refrigerators, microwave ovens and ice machines, shelves, racks and carts.
- Hospital beds, bed railings, bedpans, gurneys, traction devices, MRI, CAT, examining tables, scales, paddles, wheelchairs, hard, non-porous surfaces of cervical collars and 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, examination tables, X-ray tables, washing areas, anesthesia, carts, whirlpool surfaces, footbath surfaces.
- Ultrasonic baths, whirlpools, whirlpool bathtubs.
- Highchairs, baby cribs, diaper changing stations, infant bassinets / cribs / warmers / incubators / care equipment, folding tables, hampers, 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, Plexiglas<sup>®</sup>, vanity tops.
- Tables, chairs, desks, folding tables, workstations, bed frames, lifts, washable walls, cabinets, doorknobs and garbage cans/pails, trash barrels, trash cans, trash containers, cuspidors and spittoons.
- Enameled surfaces, painted (finished) woodwork, Formica<sup>®</sup>, vinyl and plastic upholstery, washable wallpaper.
- Sealed foundations, steps, plumbing fixtures, finished baseboards and windowsills.
- Exhaust fans, refrigerated storage and display equipment, coils and drain pans of air conditioning and refrigeration equipment and heat pumps.
- Large, inflatable, non-porous plastic and rubber structures such as animals, promotional items, moonwalks, slides, obstacle course play and exercise equipment.

- Non-wooden picnic tables and outdoor furniture except cushions and wood frames.
- Tattoo equipment. (*Not for use on needles or other skin piercing instruments.*)
- Playground equipment.
- Automobile interiors.
- Maintenance equipment.
- 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, plastic rollers, washable nail files.
- Hard hats, headphones.
- Kennel runs, cages, kennel/cages floors, conductive flooring, examination tables, veterinary x-ray tables.
- Hatchers, setters, trays, racks, egg flats, walls, floors, ceilings, chick boxes, egg cases, vans and trash containers, seed houses.
- Wrestling and gymnastic mats, athletic training tables, physical therapy tables, exercise equipment.
- Crypton barrier fabric.
- Drinking fountains.
- Windows and mirrors.

Contains no abrasives so it won't scratch surfaces.

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

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

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

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

Effective sanitizer in the presence of soils.

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

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



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

Great for use in the kitchen, bathroom and other household areas. Eliminates odors. Deodorizes. Will not harm most surfaces.

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

Kills common kitchen and bathroom bacteria and viruses\*.

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.

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

Kills Avian Influenza A Virus H5N1 on pre-cleaned environmental surfaces.

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

This product meets AOAC Use – Dilution Test Standards for hospital disinfectants at 400 ppm water hardness.

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), a 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 surface sanitizer for cleanroom, and laboratory areas to disinfect washable, hard, non-porous non-food contact surfaces such as: Laminar-airflow equipment and Bio-Safety Cabinet work surfaces and exterior surfaces of the following: 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 disinfectant cleaner and odor neutralizer designed for general cleaning, disinfecting, deodorizing and controlling mold and mildew on hard, non-porous environmental surfaces. This product cleans quickly by removing dirt, grime, mold, mildew, body oils, dead skin, blood and other organic matter commonly

found in hospitals, in health care facilities, 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 and food processing plants. It also eliminates odors leaving surfaces smelling clean and fresh. Use where odors are a problem.

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.

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 is specially formulated to effectively eliminate offensive odors caused by mold and mildew.

This product is effective against household bacteria and odors caused by animal waste, septic tank or sewage backup, smoke and bathroom and kitchen odors.

This product 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 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 on shower curtains.

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

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

Eliminates odors caused by bacteria, mildew and non-fresh foods. Kills odor causing bacteria in the kitchen and 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 disinfectant cleaner that disinfects, cleans and deodorizes in one labor-saving step.

Kills Athlete's Foot fungus on bathroom surfaces.

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 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 rodent soiled areas.

This product is for use in Poultry Premise Sanitation/Hatcheries:

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

This product is for use in Swine Premise Sanitation:

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

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

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

This product can be used as a general purpose antimicrobial detergent in florist shops, wholesale florist, shippers, greenhouse packing areas and other commercial floriculture places for efficient cleaning and antimicrobial action against certain bacteria which cause. *Not for use in California:*

1. Plugging of stems with slime, which reduces uptake of water for various flowers including roses, chrysanthemums, gladioli and tulips.
2. Production of ethylene gas, which can injure blooms of the various sensitive flowers including carnations, snapdragons, some orchids, baby's breath, sweet peas, freesia and alstroemeria.

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

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

This product is formulated to provide effective cleaning strength that will not dull high gloss floor finishes with repeated use.

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 bacteria used in waterbed uses. Controls odors caused by bacteria. Prevents bubbles, preserves plasticizers, conditions vinyl interior, sequesters minerals. *(Not for use in CA.)*

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.

*Escherichia coli*, *Salmonella enterica*, and *Staphylococcus aureus* are common germs found where food is prepared and stored. This product kills these bacteria and helps prevent cross-contamination on treated non-food contact kitchen surfaces listed on this label. A potable water rinse is required after application on food contact surfaces. This product is not for use on dishes, glassware or eating utensils.

This product is effective against the control of small flies on non-food contact surfaces such as floors, walls, drains, countertops, metal surfaces, painted surfaces, glazed porcelain, glazed tile, glass, chrome, rubber and plastic in restaurants, kitchens, dishwashing areas and bar and wait station areas.

- Neutral (Neutral pH).

Will not harm sealed stone, sealed grout, or glazed tile.

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

This product is effective against Citrus Canker and Bacterial Spot of Tomatoes through the treatment of the handling, harvesting, storage and transportation equipment.

#### DIRECTIONS FOR USE

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

**DISINFECTION IN INSTITUTIONS (Hospitals, Dental Offices, Nursing Homes, and Other Health Care Institutions):** At 2 fluid ounces per gallon of water (or equivalent use dilution) and a 10-minute contact time, this product is effective against the following organisms on hard, non-porous inanimate surfaces:

*Burkholderia cepacia*  
*Campylobacter jejuni* – ATCC 29428  
*Corynebacterium ammoniagenes* – ATCC 6871  
*Enterobacter aerogenes* – ATCC 13048  
*Enterobacteriaceae* – with extended beta-lactamase resistance  
*Enterobacter cloacae*  
*Enterococcus faecalis* – ATCC 19433  
*Enterococcus faecium* – Vancomycin resistant  
*Escherichia coli* – ATCC 11229  
*Escherichia coli* – Antibiotic resistant  
*Escherichia coli* 0157:H7  
*Klebsiella pneumoniae* – ATCC 13883  
*Klebsiella pneumoniae* – Antibiotic resistant  
*Legionella pneumophila*  
*Listeria monocytogenes* – ATCC 984  
*Proteus mirabilis*  
*Proteus vulgaris*  
*Pseudomonas aeruginosa* – ATCC 15442  
*Pseudomonas aeruginosa* – Antibiotic resistant  
*Salmonella enterica* – ATCC 10708  
*Salmonella schottmuelleri* – ATCC 8759  
*Salmonella typhi* – ATCC 6539  
*Serratia marcescens* – ATCC 43861  
*Shigella dysenteriae* – ATCC 9361  
*Shigella flexneri*  
*Shigella sonnei*  
*Staphylococcus aureus* – ATCC 6538  
Community Acquired Methicillin Resistant  
*Staphylococcus aureus* – CA MRSA  
*Staphylococcus aureus* – Methicillin resistant – ATCC 33591  
*Staphylococcus epidermidis* – Antibiotic resistant

*Streptococcus pyogenes* – ATCC 19615

*Vibrio cholerae*

*Xanthomonas axonopodis* pv. *Citri* – Not for use in California

*Xanthomonas campestris* pv. *Vesicatoria* – Not for use in California

**FOR SCHOOLS, INDUSTRY AND NON-MEDICAL INSTITUTIONAL USES:** At 1 1/4 ounces per gallon of water (or equivalent use dilution), this product delivers cleaning and germicidal effectiveness. Treated surfaces must remain wet for 10 minutes, then allow to air dry or wipe. For heavily soiled areas, a preliminary cleaning is required. Prepare a fresh solution at least daily or more often if solution becomes diluted or soiled. It is effective against *Staphylococcus aureus*, *Salmonella enterica*, *Escherichia coli* and *Serratia marcescens*. The same AOAC tests used to confirm performance for hospitals were used.

**VIROCIDAL\* PERFORMANCE:** At 1 1/4 ounces per gallon of water use level (or equivalent use dilution) and a 10-minute contact time, this product was evaluated and found to be effective in the presence of 5% blood serum against the following viruses on hard, non-porous surfaces:

Avian influenza A/Turkey/Wisconsin virus – ATCC VR-798  
Herpes Simplex Type1 virus – ATCC VR260  
Herpes Simplex Type2 virus – ATCC VR734  
HIV-1 – AIDS virus  
Influenza A/Brazil Virus  
Vaccinia virus

At 2 ounces per gallon of water use level (or equivalent use dilution) and a 10-minute contact time, this product was evaluated and found to be effective against the following viruses on hard, non-porous surfaces:

Avian influenza A/Turkey/Wisconsin virus – ATCC VR-798  
Avian influenza A virus – H5N1  
Hantavirus  
Hepatitis B Virus – HBV  
Hepatitis C Virus – HCV  
Herpes Simplex Type1 virus – ATCC VR260  
Herpes Simplex Type2 virus – ATCC VR734  
HIV-1 – AIDS virus  
Human Coronavirus  
Influenza A/Brazil virus  
Influenza A H1N1 virus (Strain A/PR/8/34) (ATCC VR-1469)  
Respiratory syncytial virus  
Vaccinia virus

**NON-FOOD CONTACT SANITIZING PERFORMANCE:** At 1 ounce per 2 3/4 gallons of water use-level (or equivalent use dilution) and a 3-minute contact time, this product is an effective one-step sanitizer on hard, non-porous environmental surfaces against:

*Enterobacter aerogenes* (ATCC 13048)  
*Klebsiella pneumoniae* (ATCC 4352)  
*Staphylococcus aureus* (ATCC 6538)

**FUNGICIDAL ACTIVITY:** At 2 ounces per gallon use-level (or equivalent use dilution) and a 10-minute contact time, this product is effective against the following organisms:

*Candida albicans* (ATCC 10231)

*Trichophyton mentagrophytes* (ATCC 9533)

(Athlete's foot fungus) (a cause of Ringworm)

**GENERAL DISINFECTION DIRECTIONS:** For heavily soiled areas, a preliminary cleaning is required. Apply use solution of 1 1/4 ounce per gallon of water to hard, inanimate, non-porous surfaces, thoroughly wetting surfaces as required, with a cloth, brush, mop, sponge or mechanical spray device. For sprayer applications, use a coarse pump or trigger spray device. Spray 6-8 inches from surface. Do not breathe spray. Rub with brush, sponge, mop or cloth. Allow surfaces to remain wet for 10 minutes. Rinse or allow to air dry or wipe up -excess liquid. Prepare a fresh solution at least daily or when use solution becomes visibly dirty.

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

1. Pre-clean heavily soiled areas.
2. Apply use solution, 1 1/4 ounce per gallon (or equivalent use dilution) to hard, non-porous environmental surfaces using a sponge, brush, cloth, mop or mechanical spray device.
3. To disinfect, all surfaces must remain wet for 10 minutes.
4. Wipe surfaces and let air dry.
5. Prepare a fresh solution at least daily or when use solution becomes soiled.

**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 A (H5N1) VIRUS:**

For use in homes, hospitals, hotels, motels and schools, the directions for use for hospital disinfection must be followed using the rate of 2 ounces per gallon of water (or equivalent use dilution). For use in animal housing facilities, follow the animal premise directions.

**TO SANITIZE AND DEODORIZE:** Apply use solution of 2 ounces per 5 1/2 gallons of water to hard, inanimate, non-porous surfaces, thoroughly wetting surfaces as required, with a brush, cloth, mop, sponge or mechanical spray device or by immersion. 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, mop or cloth. Do not breathe spray. Let stand 3 minutes. Then wipe. Allow to air dry. Replace product if it becomes visibly dirty.

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

**GENERAL DISINFECTION/VIRUCIDAL\* USE DILUTION CHART**

Ounces of Product	Amount of Water
0.3125 ounces	1 quart
0.625 ounces	1/2 gallon
1 1/4 ounces	1 gallon
3.125 ounces	2 1/2 gallons
6 1/4 ounces	5 gallons
12 1/2 ounces	10 gallons

**HOSPITAL DISINFECTION/FUNGICIDAL/VIRUCIDAL\* USE DILUTION CHART**

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

**DILUTION CHART:**

For Hospital or Medical Environment claims	2 oz / 1 gal. water
For General or Broad Spectrum claims	1 1/4 oz / 1 gal. water
For Virucidal* claims	1 1/4 - 2 oz / 1 gal. water
For Animal Virucidal* claims	1 1/4 - 2 oz / 1 gal. water
For Non-Food Contact Sanitizing claims	1 oz / 2 3/4 gal. water
For Fungicidal claims	2 oz / 1 gal. water
For Mold and Mildew claims	1 1/4 oz / 1 gal. water

**HOSPITAL/HEALTH CARE**

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 can be used to pre-clean or decontaminate critical or semi-critical medical devices prior to sterilization or high-level disinfection.

This product is a Hospital Use Disinfectant at 2 ounces per gallon of water modified in the presence of 400 ppm hard water.

**HOSPITALS, DENTAL OFFICES, NURSING HOMES AND OTHER HEALTH CARE INSTITUTIONS:**

For disinfecting floors, walls, countertops, bathing areas, lavatories, bed frames, tables, chairs, garbage pails and other hard, non-porous surfaces.

**INSTITUTIONAL DISINFECTANT DIRECTIONS (Hospitals, Dental Offices, Nursing Homes, and Other Health Care Institutions):**

For heavily soiled areas, a preliminary cleaning is required. Add 2 ounces per gallon of water (or equivalent use dilution) and apply to disinfect hard, non-porous surfaces. Apply use solution to



hard, inanimate, non-porous surfaces, thoroughly wetting surfaces with a brush, cloth, mop, sponge or mechanical spray device. For sprayer applications, use a coarse spray device. Spray 6-8 inches from surface. Rub with brush, sponge, mop or cloth. Do not breathe spray. Treated surfaces must remain wet for 10 minutes. Rinse or allow to air dry. Prepare a fresh solution at least daily or when use solution becomes visibly dirty.

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

**\*VIRUCIDAL PERFORMANCE:** For heavily soiled areas, a preliminary cleaning is required. Apply 2 ounces per gallon of water use level (or equivalent use dilution) to treated surfaces, thoroughly wetting surfaces with a brush, cloth, mop, sponge or mechanical spray device. For sprayer applications, use a coarse spray device. Spray 6-8 inches from surface. Rub with brush, sponge, mop or cloth. Do not breathe spray. Treated surfaces must remain wet for ten minutes. Prepare a fresh solution at least daily or more often if solution becomes soiled.

At 1 1/4 ounce per gallon of water (or equivalent use dilution) in the presence of 5% blood serum and 400 ppm of hardness for a 2-minute contact time, this product was found to be effective against HIV-1 (AIDS Virus).

At 2 ounces per gallon of water (or equivalent use dilution) and in the presence of 400 ppm hard water (CaCO<sub>3</sub>) and 100% serum, this product was proven to be effective against (*Duck*) Hepatitis B Virus with a contact time of 10 minutes.

At 2 ounces per gallon of water (or equivalent use dilution) and in the presence of 400 ppm hard water (CaCO<sub>3</sub>) and 5% organic load, this product was proven to be effective against Bovine viral diarrhea virus (BVDV), a surrogate for human Hepatitis C virus with a contact time of 10 minutes.

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

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

**Personal Protection:** Specific barrier protection items to be used when handling items soiled with blood or body fluids are disposable latex gloves, gowns, masks, and eye protection.

**Cleaning Procedure:** Blood and other body fluids containing HIV-1, HBV & HCV must be thoroughly cleaned from surfaces and objects before application of this product.

**Disposal of Infectious Materials:** Blood and other body fluids, cleaning materials and clothing must be autoclaved and disposed of according to federal, state and local regulations for infectious waste disposal.

**Contact Time:** Leave surface wet for 2 minutes and 10 minutes for HIV-1 and HBV, respectively. This 2-minute contact time will not control other common type of viruses and bacteria listed on this label. For HCV, leave surface wet for 10 minutes.

**SURGICAL INSTRUMENT PRESOAK:** Add 2 ounces of this product to 1 gallon of water (or equivalent use dilution). 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 visibly dirty.

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

**ULTRASONIC BATH DISINFECTANT/FUNGICIDE DIRECTIONS:** Use this product to disinfect hard, non-porous, non-critical objects compatible with Ultrasonic cleaning units. Pour a fresh solution of 2 ounces of this product per gallon of water (or equivalent use dilution) directly into bath chamber. Pre-clean heavily soiled objects. Place objects into unit and operate for a minimum of 10 minutes, according to the manufacturers' use directions. Remove objects and wash with sterile water or allow to air dry. Prepare fresh solution for each use.

**FOR DISINFECTING / FUNGICIDAL ON 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) in the unit at this point. Briefly start the pump to circulate the solution. Turn off pump. Wash down the unit sides, seat of the chair lift, and any/all related equipment with a clean swab, brush or sponge. Product to surface contact time must be at least 10 minutes for proper disinfection. After the unit has been thoroughly disinfected, drain solution from the unit and rinse any/all cleaned/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. Apply a 2-ounce per gallon of water (or equivalent use dilution)

use 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 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 SANITIZING DIRECTIONS:** Use this product to sanitize hard, non-porous, non-critical objects compatible with Ultrasonic cleaning units. Pour a fresh solution of 1 ounce per 2 3/4 gallons of water (or equivalent use dilution) 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, or allow to air dry. Replace solution at least daily or when solution becomes visibly dirty.

**Note:** This product in its use solution is compatible with stainless steel, aluminum and most other surfaces. Before product use, it is recommended that you apply product to a smaller test area to determine compatibility before proceeding with its use.

#### **FOOD PROCESSING PREMISES**

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

**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 a 1 1/4 oz. per gallon of water use solution evenly over surface using a brush, cloth, mop, sponge or mechanical spray device. For sprayer applications, use a coarse spray device. Be sure to wet all surfaces thoroughly. Do not breathe spray.
3. Allow product to remain on surface for 10 minutes.
4. Wipe with clean cloth, sponge or paper towel.
5. For heavily soiled areas, thoroughly clean surface prior to disinfecting.

6. After 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, apply 2 oz. of this product per gallon of water. For heavily soiled areas, a pre-cleaning step is required. Apply solution with a brush, mop, cloth, sponge or hand pump trigger spray device so as to wet all surfaces thoroughly. For sprayer application, use a coarse spray device. 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 oz. per gallon of water. For heavily soiled areas, a pre-cleaning step is required. Apply solution with a brush, mop, cloth, sponge or hand pump trigger spray device so as to wet all surfaces thoroughly. For sprayer applications, use a coarse spray device. Allow surface to remain wet for 10 minutes. Then remove excess liquid and rinse the surface with potable water. Replace solution at least daily or when solution becomes visibly dirty. This product is not for use on dishes, glassware, eating utensils or interior surfaces of processing equipment.

#### **FOR USE ON NON-FOOD CONTACT SURFACES AS A GENERAL DISINFECTANT IN THE BREWERY INDUSTRY:**

Use 2 ounces of this product per gallon of water (or equivalent use dilution). Follow the general disinfectant directions above.

#### **DIRECTIONS FOR FOGGING IN DAIRIES, BEVERAGE AND FOOD PROCESSING PLANTS:**

Prior to fogging, food products and packaging material must be removed from the room or carefully protected. After cleaning, fog desired areas using 1 quart per 1000 cubic feet of room area with a product solution containing 3 ounces of product to 1 gallon of water (or equivalent use dilution). Wear a dust mist respirator when mixing the use solution and pouring it into the fogging apparatus. Vacate the area of all personnel during fogging and for a minimum of 2 hours after fogging. All food contact surfaces must be thoroughly rinsed prior to reuse with potable water. 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 and a minimum of 4 air exchanges (ACH) per hour in the facility. If the building must be entered, then the individuals entering the build-

ing must wear a self-contained respirator approved by NIOSH/MSHA, goggles, long sleeves and long pants.

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

**DISINFECTING POTATO STORAGE AREA AND EQUIPMENT:** Remove all potatoes prior to disinfection of potato storage area and equipment. Pre-clean hard surfaces by removing heavy soils or gross filth. Follow general disinfecting directions as outlined in that section. All treated surfaces must be thoroughly rinsed with potable water prior to reuse.

**FOR CONTROL OF THE *DROSOPHILA* SPP. AND PHORIDAE FAMILY OF FLIES ON NON-FOOD CONTACT SURFACES:** To control flies on non-food contact surfaces such as floors, walls, countertops, metal surfaces, painted surfaces, glazed porcelain, glazed tile, glass, chrome, rubber, and plastic in restaurants, kitchens, dishwashing areas, and bar and wait station areas. Remove food and food packaging prior to use. Cover exposed food-handling surfaces. After removing gross filth, apply a solution of 2 ounces of this product per gallon of water (or equivalent use dilution) to surfaces and locations where flies breed. Spray surfaces thoroughly or apply by pouring, mopping or sponging onto the surface. Repeat application 1-2 times per week or as needed. Do not contaminate food and food packaging.

**FOR CONTROL OF SMALL FLIES IN DRAINS:** For control of small flies: *Drosophila* spp. and the Phoridae family. Spray or pour solution of 2 ounces per gallon of water (or equivalent use dilution) into drain during time of lowest level of drain use. Add 14 ounces of solution daily to each drain to maintain fly control. Apply around the edge of the drain and coat all sides of inside of drain.

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

**SHOE / BOOT BATH SANITIZER DIRECTIONS:** To prevent cross contamination from area to area in animal areas, and the packaging and storage areas of food plants, shoe baths containing one inch of freshly made 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 1 ounce of this product per 2.75 gallons of water (or equivalent use dilution) use solution for 3 minutes prior to entering area. Change the sanitizing solution in the bath at least daily or sooner if solution appears visibly dirty.

**SHOE FOAM DIRECTIONS:** To prevent cross contamination from area to area in animal areas, and the packaging and storage areas of food plants, apply a foam layer approximately 0.5 to 2 inches thick made from a solution of 1 ounce per 2.75 gallons 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 manufacturer

of the foam generator/aerator. Scrape waterproof shoes. Stand and/or walk through foamed area for 3 minutes prior to entering area. Foam area must be washed and replaced at least daily or when it appears visibly dirty.

**ENTRYWAY SANITIZING SYSTEMS:** To prevent cross contamination from area to area, set the system to deliver 1 ounce per 2.75 gallons of water (or equivalent use dilution) of sanitizing solution. The spray or 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.

**MUSHROOM FARM INDUSTRY USE DIRECTIONS**

At 2 ounces per gallon use-level, this product is effective against:

*Dactylium dendroides* – ATCC 6676

**Site Preparation:** The first step in any on-going sanitation program should be the removal of gross contamination and debris. This can 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, pre-clean first. Prepare a fresh solution for each use.

**For Heavy Duty Cleaning:** When greater cleaning is desired, use 4 ounces of this product per gallon of water (or equivalent dilution). Heavily soiled areas will 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 1 1/4 oz. per gallon of water, treated surfaces must remain wet for ten minutes. For heavily soiled areas, a preliminary cleaning is required. Prepare a fresh solution at least daily or more often if solution becomes visibly dirty.

This product was evaluated and found to be effective in the presence of 5% blood serum at 1 1/4 oz. per gallon of water against the following viruses on hard, non-porous surfaces:

- Avian influenza A/Turkey/Wisconsin virus – ATCC VR-798
- Canine Distemper virus
- Infectious Bovine Rhinotracheitis virus – IBR – ATCC VR188
- Newcastle disease virus – ATCC VR109
- Porcine Respiratory & Reproductive virus – PRRSV
- Porcine Rotavirus
- Pseudorabies virus – ATCC VR135
- Transmissible Gastroenteritis virus – TGE

At 2 ounces per gallon of water use level, with treated surfaces remaining wet for 10 minutes, this product was evaluated and found to be effective against the following viruses on hard, non-porous surfaces:

Avian influenza A virus – H5N1

Canine Coronavirus

**SITE PREPARATION:** The first step in any on-going sanitation program must be the removal of gross contamination and debris. This can 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.

**APPLICATION:** Remove all animals and feeds from areas to be treated, vehicles and enclosures. 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. Saturate surfaces with disinfecting or Virucidal\* solution at 1 1/4 oz per gallon of water for a period of 10 minutes. Immerse all halters, ropes, and other types of equipment used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and -manure. Ventilate buildings, coops and other closed spaces. Do not house animals or employ equipment until treatment has been absorbed, set or dried. Thoroughly scrub all treated feed racks, troughs, automatic feeders, fountains and waterers and other equipment which can contact food or water with soap or detergent, and rinse with potable water before reuse.

**VETERINARY CLINICS / ANIMAL LIFE SCIENCE LABORATORY / ANIMAL CARE FACILITIES / ANIMAL RESEARCH CENTERS/ANIMAL LABORATORY / ANIMAL QUARANTINE AREAS / ANIMAL BREEDING FACILITIES / ZOOS / PET SHOP / ANIMAL HUSBANDRY / KENNELS / BREEDING AND GROOMING ESTABLISHMENT / TACK SHOPS DISINFECTION**

**DIRECTIONS:** For cleaning and disinfecting the following hard, non-porous surfaces: equipment not used for animal food or water, utensils, instruments, cages, kennels, stables, stalls and catteries. Remove all animals and feeds from areas to be treated, animal transportation vehicles, crates, etc. Remove all litter, droppings and manure from floors, walls and surfaces of facilities occupied or traversed by animals. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with a use solution of 2 oz. per gallon of water 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 and other closed spaces. Do not house animals or employ equipment until treatment has been ab-

sorbed, set or dried. Thoroughly scrub all treated feed racks, automatic feeders, waterers, and other equipment which dispenses food or water with soap or detergent, and rinse with potable water before reuse.

At 2 ounces per gallon of water in the presence of 400 ppm of hardness for a 10-minute contact time, this product was found to be effective against Hantavirus.

### **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. Disinfect Personal Protective gear upon removal at the end of the day. If the coveralls are not disposable, they must be laundered on site. If no laundry facilities are available, the coveralls must be immersed in liquid disinfectant until they can be washed.

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 waste.

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

- a. Air out the building for at least 30 minutes by opening windows and doors.
- b. Leave the building while it is airing out.
- c. Do not vacuum, sweep or dust. This can spread the virus through the air.
- d. Thoroughly wet the contaminated areas with 2 ounces per gallon of water and allow solution to stand undisturbed for 10 minutes.
- e. Carefully remove contaminated material and dispose by burial or burning. Contact your local and state health department for additional disposal methods.
- f. Treat the surface again following the label directions and allow solution to stand undisturbed for 10 minutes.

**RENDERING PLANT/DRESSING PLANT DISINFECTANT DIRECTIONS:** Cover or remove all food and packing materials. Remove all gross soils. Disinfect equipment, walls and floors in poultry and animal dressing plants. Disinfect ofal rooms, exterior walls and loading platforms of dressing plants. Saturate all surfaces with the use solution of 1 1/4 oz. per gallon of water. Scrub to loosen all soils. Allow to soak for 10 minutes and thoroughly rinse all wetted and cleaned surfaces with potable water.

## **RENDERING PLANT / DRESSING PLANT DISINFECTANT / FUNGICIDE / VIRUCIDE\* DIRECTIONS:**

Cover or remove all food packaging material before disinfection. Remove gross soils. Apply to equipment, walls and floors in poultry and animal dressing plants with a solution of 2 oz. per gallon of water. 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. Thoroughly rinse all wetted and cleaned 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 hard, non-porous cage furniture items inside your terrarium. This can result in high bacteria and ammonia levels that can lead to possible infection/disease in your animals. When used regularly this product can eliminate these high bacteria/ammonia levels in your cage and on your cage furniture items.

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 of 1 1/4 oz. per gallon of water for a period of 10 minutes. For smaller surfaces, use a trigger spray bottle to spray all surfaces with solution until wet. Then wipe surfaces dry.
4. Saturate gravel as above and let stand for 10 minutes. Place in bucket of clean water and swirl for 15-30 seconds. Thoroughly air dry before returning to terrarium.
5. Do not return animals to the habitat until it is dry and ventilated.
6. Thoroughly scrub all treated surfaces with soap or detergent and rinse with potable water before reuse.
7. Clean terrarium at least once weekly or more as needed.

**Note:** Do not apply this product directly onto the small animal. If this product comes into contact with the small animal's skin, then immediately wash the material off of the animal with lukewarm water. If the small animal ingests this product, contact your veterinarian immediately. Substrates for desert terrariums, i.e., gravel, must be completely dry before returning to terrarium to avoid high humidity levels. Always replace substrate if a foul odor persists.

## **FARM PREMISE DISINFECTION DIRECTIONS**

**FARM PREMISE DISINFECTION DIRECTIONS:** Do not use in milking stalls, milking parlors or milk houses. Remove all animals and feed from areas to be treated, ve-

hicles and enclosures. Remove all litter and manure from floors, walls and surfaces of barns, pens, stalls, stables, chutes and other facilities and fixtures occupied or traversed by animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Apply a use solution of 2 oz. per gallon of water 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.

## **VEAL, CALVING, HOG, CATTLE AND HORSE OPERATIONS:**

Between depopulations of facilities, cleaning and disinfection of pens, hutches, aisles and other environmental surfaces can 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 disinfecting or Virucidal\* solution at 2 oz. per gallon of water and allow to remain wet for a period of 10 minutes. Immerse all halters, ropes and other types of equipment used in handling and restraining animals as well as forks, shovels and scrapers used in removing litter and manure. Ventilate buildings, cars, trucks, boats and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed, set or dried. Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains and waterers with soap or detergent and rinse with potable water before reuse.

## **POULTRY AND SWINE PREMISE SANITATION**

**Site Preparation:** The first step in any on-going sanitation program should be the removal of gross contamination and debris. This can 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.

## **APPLICATION AND USE DILUTION ON POULTRY AND SWINE PREMISES:**

Remove all animals and feeds from areas to be treated, trucks, cars, coops and crates. Remove all litter, droppings and manure from floors, walls and surfaces of facilities occupied or traversed by animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Use 2 ounces of this product per gallon of water. Saturate surfaces with the disinfecting solution for a period of 10 minutes. Immerse all halters, ropes, and other types of equipment



used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and manure. Ventilate buildings, coops and other closed spaces. Do not house animals or employ equipment until treatment has been absorbed, set or dried. Thoroughly scrub all treated feed racks, troughs, automatic feeders, fountains and waterers and other equipment which can contact food or water with soap or detergent, and rinse with potable water before reuse.

**DISINFECTION / FUNGICIDE / VIRUCIDE\* OF POULTRY / TURKEY EQUIPMENT, SWINE QUARTERS, LIVESTOCK FARMS, EQUINE QUARTERS, ANIMAL QUARTERS AND KENNELS DIRECTIONS:**

Prior to disinfection, remove all poultry, other animals and their feed from areas to be treated, vehicles and enclosures. 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 2 ounces of this product per gallon of water (or equivalent use dilution). Saturate surfaces with the disinfecting solution for a period of 10 minutes. Immerse all halters, ropes and other types of equipment used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and manure. After application, ventilate buildings, coops and other closed spaces. Do not house poultry or other animals or employ equipment until treatment has been absorbed, set or dried. All treated equipment that will contact feed or drinking water must be thoroughly scrubbed with soap or detergent, then rinsed with potable water before reuse.

**HATCHERIES:** Use 2 oz. per gallon of water to treat the following hard, non-porous surfaces: hatchers, setters, trays, racks, egg flats, walls, floors, ceilings, chickboxes, egg cases, trash containers, carts, sexing tables, delivery trucks, vans and other hard non-porous surfaces. Leave all treated surfaces exposed to disinfectant solution for 10 minutes or more. Rinse surfaces with potable water before reuse. Allow surfaces to air dry.

**VEHICLES:** Clean all vehicles including mats, crates, cabs, and wheels with high-pressure water and this product. For sprayer applications, use a coarse spray device. Use 2 oz. per gallon of water to treat all vehicles. Leave all treated surfaces wet for 10 minutes or more and allow to air dry.

**SPECIAL INSTRUCTIONS FOR INACTIVATING AVIAN INFLUENZA A H5N1 VIRUS:** Remove all poultry and feeds from areas to be treated, 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 of 2 oz. per gallon of water for a period of 10 minutes. Immerse all halters,

ropes and other types of equipment used in handling and restraining animals as well as forks, shovels, scrapers used in removing litter and manure. Ventilate buildings, coops, and 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 and utensils before and after use on each animal with detergent and warm water or compatible cleaner to remove soil using a pre-scrape, pre-flush, or when necessary, pre-soak followed by a potable water rinse. To sanitize, prepare a 1 oz. of this product per 2 3/4 gallons of water (or equivalent use dilution) solution. Apply to pre-cleaned hard surfaces using a brush, cloth, mop, sponge or mechanical spray device 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 areas to be treated, 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 2 gallons of this product to 2 1/2 gallons water. Wear a dust mist respirator when mixing the use solution and pouring it into the fogging apparatus. Insert the nozzle of the fogger through a suitable opening into the room. With the setting in maximum output, fog for one minute for each 4000 cubic feet of space in the room. Vacate the room of all personnel during fogging for a minimum of 2 hours of actual fogging and a minimum of 4 air exchanges per hour 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 24 ounces of this product to 122 ounces of water (or equivalent use dilution). Wear a dust mist respirator when mixing the use solution and pouring it into the fogging apparatus. Fog 3-8 ounces of this into setters and hatchers immediately after transfer. Repeat daily in setters and every 12 hours in hatchers. Discontinue hatcher treatments at least 24 hours prior to pulling the hatchers. Do not allow people to contact or breathe this fog. It is acceptable to fog setters and hatchers with 2 ounces per gallon of water solution of this product (or equivalent use dilution) on an hourly or

every other hour basis. If this is done, fog for 30-90 seconds once per hour or once every two hours. When fogging is complete, ventilate buildings, and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed or dried. Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains and waterers with soap or detergent, and rinse with potable water before reuse. Only for treatment of setters and hatchers after poultry/chicks/eggs have been removed. Not for treatment of hatchers which contain chicks/eggs.

**Note:** The fog generated is irritating to the eyes, skin and mucous membranes. Under no circumstances must a room or building be entered by anyone within two hours of the actual fogging and a minimum of 4 air exchanges (ACH) per hour in the facility. If the building must be entered, then the individuals entering the building must wear a self-contained respirator approved by NIOSH/MSHA, goggles, long sleeves and long pants.

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

## **BARBER/SALON**

**DISINFECTION / FUNGICIDE / VIRUCIDE\* FOR BARBER / SALON TOOLS DIRECTIONS:** Immerse pre-cleaned barber/salon tools such as combs, brushes, plastic rollers, razors, clipper and trimmer blades, tweezers, manicure/pedicure tools, clippers, scissors and other hard, non-porous salon instruments and tools in a 2 oz. per gallon of water solution. Completely immerse instruments and tools for at least 10 minutes. Rinse thoroughly and dry before use. Prepare a fresh solution at least daily or more often if solution becomes visibly dirty.

**DISINFECTING / FUNGICIDE / VIRUCIDE\* GROOMING CLIPPERS:** Remove hair, dandruff and dust particles prior to disinfecting the blades. Turn the clipper off occasionally during use and spray between the teeth of blades with a solution of 2 oz. per gallon of water. Allow surface to remain wet for at least 10 minutes. Rinse surfaces thoroughly. Then wipe dry with a clean soft cloth.

**CLEANING HAIR CLIPPERS AND ELECTRIC SHEARS:** While clipper/shear is running, hold in the downward position and spray 1 1/4 oz. per gallon of water solution of this product directly onto the blades two or three times to thoroughly wet the blades. Do not spray on the clipper case or drip into clipper housing. Turn off clipper/shear. Allow surface to remain wet for at least 10 minutes. Rinse surfaces thoroughly. Then wipe dry with a clean soft cloth. Lubricate as per clipper/shear manufacturer's instructions.

**CLEANING BARBER / SALON SHEARS AND OTHER IMPLEMENTS:** Spray shear/implement until thoroughly wet. Wipe away visible debris using a soft bristle brush or cloth. Turn off clipper/shear. Immerse pre-cleaned shear/implement into a container of a 1 1/4 oz. per gallon of water solution of this product for at least 10

minutes. Rinse surfaces thoroughly. Remove shear/implement and wipe dry. Use fresh solution at least daily or when immersion tank solution becomes visibly dirty.

**Note:** Plastic instruments can 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 will cause damage to metal instruments.

**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 oz. per gallon of water to exposed surfaces with a brush, cloth, mop, sponge or mechanical spray device. Brush or swab thoroughly and allow solution to stand for 10 minutes. For spray applications, use a coarse pump or trigger 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.

## **RESTROOM/BATHROOM**

### **NON-ACID TOILET BOWL, URINAL & BATHROOM DISINFECTANT / CLEANER DIRECTIONS**

**FROM CONCENTRATE:** Remove gross filth prior to disinfection. Add 1 1/4 oz. of this product directly into the toilet bowl and mix. Brush thoroughly over exposed surfaces and under the rim with a brush, cloth, mop, sponge or mechanical spray device. Repeat and allow solution to stand for 10 minutes and flush.

**FROM USE SOLUTION:** Pre-clean surface. Empty water out of toilet bowl or urinal and apply a 2 oz. per gallon use solution to exposed surfaces including under the rim with a brush, cloth, mop, sponge or mechanical spray device. For sprayer application, use a coarse pump or trigger spray device. Brush or swab thoroughly and allow solution to stand for 10 minutes and flush. Refill toilet bowl or urinal with water.

**FOR HEAVY DUTY CLEANING:** Pre-clean surface. Empty toilet bowl or urinal of water and apply 8-12 ounces of use solution to exposed surfaces including under the rim with a brush, cloth, mop, sponge or mechanical spray device. Brush or swab thoroughly and allow solution to soak to aid in soil removal. For sprayer application, use a coarse spray device and swab all areas after spraying. Refill toilet bowl or urinal with water.

### **FOR USE TO CLEAN AND DISINFECT SHOWER ROOMS, LOCKER ROOMS AND OTHER LARGE OPEN AREAS WITH FLOOR DRAINS:**

1. Pre-clean heavily soiled areas.
2. Apply use solution of 1 1/4 oz. of this product with one gallon of water to floors, walls and ceilings, making sure not to over spray. To disinfect, all surfaces must remain wet for 10 minutes. **Special**

**instructions for foam guns:** Pour concentrate into foam gun bottle and attach bottle to spray nozzle and ensure gun is attached to hose. **Note:** See foam gun instructions for more information. Make sure the setting is set for a 1:103 dilution. Once in place, squeeze the handle to disperse foam solution. To disinfect, all surfaces must remain wet for 10 minutes. *Foam guns not for use in California.*

3. Scrub surface using 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.

## FUNGICIDAL / MOLD & MILDEW

**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) and *Candida albicans* on inanimate, hard, non-porous surfaces in the presence of 5% blood serum and 400 ppm water hardness as CaCO<sub>3</sub> in locker rooms, dressing rooms, shower and bath areas, and exercise facilities. Pre-clean all surfaces prior to using this product. Treated surface must remain wet for 10 minutes. Allow solution to air dry on surface and repeat treatment every seven days or when new growth appears.

**MOLD AND MILDEW CONTROL DIRECTIONS:** This product controls the growth of mold and mildew, *Aspergillus niger* and their odors on hard, non-porous surfaces. To control the growth of mold and mildew and their odors on hard, non-porous surfaces, apply use solution of 1 1/4 oz. of this product per one gallon of water. Thoroughly wet all treated surfaces completely. Allow surface to remain wet for 10 minutes. Let surface air dry. Repeat application weekly or when growth or odor reappears.

**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 1 1/4 oz. of this product per one gallon of water for a period of 10 minutes. Ventilate buildings and other closed spaces. Do not use equipment until treatment has been absorbed, set or dried.

**TO CONTROL THE GROWTH OF MOLD AND MILDEW ON NON-POROUS ATHLETIC EQUIPMENT:** For use on wrestling and gymnastic mats, athletic training tables, physical therapy tables, athletic helmets, wrestling/boxing headgear, athletic shoe soles. Thoroughly clean all surfaces with soap or detergent and rinse with

water. Saturate surfaces with a use solution of 1 1/4 oz. of this product per one gallon of water for a period of 10 minutes. Ventilate buildings and other closed spaces. Do not use equipment until treatment has been absorbed, set or dried.

**HUMIDIFIER DIRECTIONS:** Formulated for use in portable humidifiers. Thoroughly clean the hard, non-porous surfaces of the water tank and filters, before each heating season, or sooner if necessary. Add 2 oz. of this product per gallon of refill water. When you refill the tank, add 2 ounces of this product for every gallon of water added. Not for use in heat or atomizing type humidifiers.

## DEODORIZATION

**GENERAL DEODORIZATION:** To deodorize, add 1 1/4 ounce of this product to 1 gallon of water (or equivalent use dilution). Excess liquid must be wiped up or allowed to air dry.

**CLEANING / DEODORIZING DIRECTIONS:** Add 1 1/4 ounce per gallon of water (or equivalent use dilution) to clean and deodorize windows, mirrors and other surfaces. Apply solution with a brush, mop, cloth, sponge or mechanical spray device so as to wet all surfaces thoroughly. For sprayer applications, use a coarse spray device. Spray 6-8 inches from surface. Rub with sponge or cloth. Do not breathe spray. Allow surface to air dry or wipe up excess liquid.

**FOR DEODORIZING GARBAGE CANS, GARBAGE TRUCKS, INDUSTRIAL WASTE RECEPTACLES AND GARBAGE HANDLING EQUIPMENT:** It is especially important to pre-clean for the product to perform properly. Use 1 1/4 ounce per gallon (or equivalent use dilution) of this product or other suitable detergent system for pre-cleaning step. Then, apply a wetting concentration of 6 ounces of this product per gallon of water (or equivalent use dilution).

**FOR DEODORIZING SEPTIC STORAGE TANKS:** Pre-clean heavily soiled areas. When tanks are empty, pour 1 1/4 oz. per gallon of water (or equivalent use dilution) into septic storage tank on recreational vehicles, campers and boats to control odors. As tank fills with sewage and the vehicle is moving, this 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 food odors (garlic, fish, onions, etc.), automobile odors from tobacco, musty carpet smell, and beverage smells will be eliminated. A solution of 1 1/4 oz. per gallon of water (or equivalent use dilution) will effectively neutralize odors. Spray or apply onto seats, carpets, headliner and ashtray or into trunk and all vents to eliminate odors from tobacco, food, beverage spills and musty carpet. For sprayer applications, use a coarse spray device. Allow to air dry.

#### **RV HOLDING TANKS / RECREATIONAL VEHICLES:**

For toilet waste and holding tanks, cover bottom of holding tank with water and 1 1/4 to 2 ounces per gallon of water to deodorize. If odors return before time to empty, add 1 1/4 to 2 ounces to the tank. For kitchen waste, add 1 1/4 to 2 ounces to gray water tank as needed to control malodors created by dirty dishwasher.

**FOR ODORS CAUSED BY DOGS, CATS AND OTHER DOMESTIC ANIMALS:** Use on rugs, floors, walls, tile, cages, crates, mats, litter boxes, floor coverings, or any surface soiled by a pet. Test a small inconspicuous area first. Blot problem area. Then follow directions for "General Deodorization".

**GLASS CLEANING/DEODORIZING DIRECTIONS:** Use 1 1/4 ounce per gallon solution (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.

**WATERBED CONDITIONER:** When used as a waterbed conditioner, this product eliminates the odor caused by bacteria. Prevents bubbles, preserves plasticizers, conditions vinyl interior, sequesters minerals.

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

**Dosage:** To eliminate the odor caused by bacteria, add 10 fluid ounces in a free flow waterbed of 90 to 180 gallon capacity. Add 10 fluid ounces in a waveless/fiber waterbed mattress of 90 to 180 gallon capacity. Repeat application every 4 to 6 months.

#### **WATER/SMOKE DAMAGE RESTORATION**

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

**SEWER BACKUP & RIVER FLOODING:** To rid affected area of odors caused by sewer backup and river flooding, 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 affective areas with a sprayer using a coarse spray tip, before and after cleaning and extraction.

**CARPETS, CARPET CUSHIONS AND OTHER POROUS MATERIALS SUCH AS SUB FLOORS, DRY-WALL, TRIM AND FRAME LUMBER, TACKLESS STRIP AND PANELING:** Effective against odor caused by water damage. 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 ODORS CAUSED BY BACTERIA:** This product can be used to deodorize carpets in industrial and institutional, commercial and residential areas such as homes, motel & 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 colorfastness.

**For Portable Extraction Units:** Mix 2 ounces of this product per gallon of water (or equivalent use dilution).

**For Truck Mounted Extraction Machines:** Mix 24 ounces of the product per gallon of water and meter at 4 gallons per hour.

**For Rotary Floor Machines:** Mix 4 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 CLEANING / DEODORIZER AGAINST ODOR CAUSED BY BACTERIA, FOR HOME, INSTITUTIONAL, INDUSTRIAL AND HOSPITAL USE:** This product cleans and deodorizes the carpet by eliminating odors caused by bacteria. It can be used in industrial and institutional, commercial and residential areas such as homes, motels, hotel chains, nursing homes and hospitals.

Vacuum carpet thoroughly prior to application. Mix 2 ounces of product per gallon of water (or equivalent use dilution). Follow the injection and/or extraction procedures as specified for any conventional steam cleaning equipment you are using. For rotary floor machines, mix 16 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 colorfastness of carpet before use. Apply diluted product to a small, concealed spot, then rub with a clean white cloth. If color changes or transfers to the cloth, a water-based product must not be used.

After using the product, set carpet pile in one direction with a stiff brush. Place aluminum foil under the legs of furniture while carpet is drying. Over-wetting can cause carpet to shrink. Manufacturer assumes no responsibility for over-wetting misuse.

**Note:** This product must not be mixed with other cleaning products.

## OTHER USES

### **DISINFECTION / FUNGICIDE/VIRUCIDE\* 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 oz. per gallon of water. 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.

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

To cleanse away skin secretions and accompanying malodor, to insure the removal of all soil and bloodstains, and to remove and reduce surface contamination, apply 2 ounces of this product to 1 gallon of water to the surfaces and body openings, natural or artificial. Bathe the entire body using sponge or washcloth. A soft brush may be employed on surfaces other than the face. Allow a 10-minute contact time for optimal results. Prepare a fresh solution for application of each remains.

**FOR USE ON FINISHED FLOORS:** To limit gloss reduction, use this product at 1 1/4 oz per gallon of water use dilution (or equivalent use dilution). Apply with a damp mop or auto scrubber. Allow to air dry.

**COMMERCIAL FLORIST USE DIRECTIONS:** To clean, disinfect and deodorize hard, non-porous surfaces in one step, prepare use solution by mixing 2 oz. per gallon of water. For heavy-duty use, mix 8 ounces per gallon of water.

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

For heavily soiled areas, a preliminary cleaning is required.

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

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

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

### **CITRUS CANKER CONTROL AND CONTROL OF BACTERIA SPOT OF TOMATOES:**

*Not applicable in California:* For prevention of Citrus Canker and Bacterial Spot of Tomatoes Diseases through treatment of equipment. Effective against *Xanthomonas axonopodis pv. citri* (Citrus Canker) and *Xanthomonas campestris pv. vesicatoria* (bacteria spot of tomatoes) at 2060 ppm ac-

tive quat. Treat all trucks, vehicles, and equipment thoroughly at a dilution ratio of 1:27. 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 2060 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.

## DIRECTIONS FOR HOUSEHOLD USE

### **KITCHEN/BATHROOM/HOUSEHOLD CLEANING:**

Apply 2 oz. per gallon of water solution with a brush, cloth, sponge, mop or directly on surface with a mechanical spray device. If a mechanical spray is used spray must be coarse. Hold container 6 inches to 8 inches from surface and spray until thoroughly wet. Wipe the soiled area clean. This product is not to be used on dishware, glasses or eating utensils.

### **DISINFECT/DEODORIZE:**

To disinfect hard, non-porous surfaces such as floors, walls, counters, sinks, tubs, toilets, glazed tile, exterior surfaces of appliances, refrigerators or freezers, microwave exteriors, stove tops and hoods, tables, garbage pails, and faucets apply 2 oz. per gallon of water with cloth, sponge, mop or mechanical spray device. If a mechanical spray is used, spray must be coarse. Hold container 6 inches to 8 inches from surface and spray until thoroughly wet. Treated surface must remain wet for 10 minutes before wiping. For heavily soiled areas a pre-cleaning step is required. The pre-cleaning step must be done according to the instructions under Kitchen / Bathroom / Household Cleaning. 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:**

To remove body oils, dead tissue, soil and all other buildups or organic matter on inanimate surfaces after using the whirlpool unit, drain the water and refill with fresh water to just cover the intake valve. Add 1 oz per 2 3/4 gallons of water (or equivalent use dilution) solution in the unit 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. The unit is ready for reuse.

## SANITIZATION OF EXTERIOR HOUSEHOLD SURFACES DIRECTIONS



**Preparation of Use Solution:** Add 1 oz per 2 3/4 gallons of water (or equivalent use dilution) to sanitize hard, non-porous exterior surfaces such as vinyl, plastic, sealed concrete, painted or sealed woodwork, and sealed stucco. Surfaces to be treated include house siding, decks, patios, walkways and driveways.

**Application:** Preclean surfaces. Apply solution with a brush, mop, cloth, sponge, mechanical spray device, 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. For sprayer applications, use a coarse spray device. Wearing suitable respiratory protective equipment and protective eyewear to control exposure to spray, pressure wash surfaces to thoroughly clean all treated areas using a high-pressure spray. Do not breathe spray. One-half gallon of diluted product will treat 200-300 sq ft of surface. User must wear protective eyewear as well as respiratory protective equipment.

### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Open dumping is prohibited. Store only in original container. Do not reuse empty container. If a leaky container must be contained within another, mark the outer container to identify the contents. Store pesticides away from food, pet food, feed, seed, fertilizers and veterinary supplies. 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 Handling Disposal:** Non-refillable container. Do not reuse this container to hold materials other than pesticides or diluted pesticides. Triple rinse (or equivalent). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Offer for recycling if available or puncture and dispose in a sanitary landfill, or by other procedures approved by state and local authorities. If rinsate cannot be used, follow pesticide disposal instructions. If not triple rinsed, these containers are acute hazardous wastes and must be disposed in accordance with local, state and federal regulations.

**Residue Removal Instructions:** Triple rinse (or equivalent) container promptly after emptying. Triple rinse as follows: Fill the container 1/4 full with water and recap. Shake for 10 seconds. Follow Pesticide Disposal instructions for rinsate disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.



**Nisus Corporation**  
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800-264-0870

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# MATERIAL SAFETY DATA SHEET



Health Emergencies: CHEMTREC® 1-800-424-9300

## SECTION 1 – PRODUCT AND COMPANY INFORMATION

Manufacturer: Nisus Corporation  
100 Nisus Drive  
Rockford, TN 37853  
800-264-0870 FAX: 865-577-5825

Trade Name: Nisus DSV™  
EPA Registration No. 10324-80-64405  
Chemical Family: Quaternary Ammonium Compound

## Section 2: INGREDIENTS INFORMATION

	Weight %
Alkyl (C <sub>12</sub> -C <sub>16</sub> ) dimethyl benzyl ammonium chloride (CAS 68424-85-1)	2.200%
Octyl decyl dimethyl ammonium chloride (CAS 32426-11-2)	1.650%
Dioctyl dimethyl ammonium chloride (CAS 5538-94-3)	0.825%
Didecyl dimethyl ammonium chloride (CAS 7173-51-5)	0.825%
Ethanol (CAS 64-17-5)	<1%

## Section 3: HEALTH HAZARD INFORMATION

**EMERGENCY OVERVIEW:** Clear, colorless to straw colored liquid. Corrosive to the eyes, skin, gastrointestinal tract, and respiratory system.

**SKIN:** Causes corrosive burns. Brief exposures may cause irritation and defatting of the skin. Exposures not promptly washed off may lead to toxic effects similar to ingestion. Harmful if absorbed through skin.

**EYES:** Causes burns and may result in permanent injury to eyes including blindness.

**INHALATION:** Irritation of mucous membrane can be caused by solvent vapors or mists of products.

**INGESTION:** Mists and vapors can irritate the throat and respiratory tract. High vapor concentrations may cause central nervous system effects. Symptoms may include headaches, dizziness, and drowsiness. Harmful if inhaled.

**CHRONIC:** Ingestion of ethanol by pregnant women can cause reproductive toxicity to the fetus.

## Section 4: EMERGENCY AND FIRST AID PROCEDURES

**EYES:** Immediately flush eyes with water for 15-20 minutes, while holding eyelids open. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Seek medical attention at once.

**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.

**INHALATION:** If symptoms are experienced, move victim 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.

**INGESTION:** 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.

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

## Section 5: FIRE & EXPLOSION DATA

**Flash Point:** Over 201°F (94°C)

**Upper & Lower Flame Limits:** Not Determined

**Extinguishing Media:** Dry chemical, foam, carbon dioxide or water fog. Solid water streams may spread burning liquid.

**Special Fire Fighting Procedures:** Firefighters should wear full protective clothing including self-contained breathing apparatus. Cool fire exposed containers with spray

**Hazardous Combustion Products:** Irritating and toxic gases or fumes may be released during a fire.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### SPILL AND LEAK PROCEDURES

**EMERGENCY ACTION:** Isolate spill or leak area immediately. Keep unauthorized personnel away. Stay upwind. Keep out of low areas where vapors may accumulate. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area).

**SPILL CLEANUP:** Ventilate closed spaces before entering. All equipment used when handling the product must be grounded. Floor will be slippery. Do not touch or walk through spilled material. Stop leak if you can do it without risk. A vapor suppressing foam may be used to reduce vapors. Prevent entry into waterways, sewers, basements or confined areas. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material.

**LARGE SPILLS:** Dike far ahead of liquid spill for later disposal. Water spray may reduce vapor but will increase foaming. Water may not prevent ignition in closed spaces.

## SECTION 7: HANDLING AND STORAGE

**HANDLING PROCEDURES:** Avoid contact with skin and eyes. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Wash thoroughly after work using soap and water.

**STORAGE PROCEDURES:** Keep the container tightly closed and in a cool, well-ventilated place. Keep from freezing. Do not handle or store near an open flame, heat or other sources of ignition. Prevent electrostatic charge buildup by using common bonding and grounding techniques.

## SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

**VENTILATION TYPE:** Mechanical (Explosion proof)

**RESPIRATORY:** None required if good ventilation is maintained. For mist or vapor wear NIOSH Approved respirator.

**PROTECTIVE GLOVES:** Rubber or Neoprene

**EYE PROTECTION:** Splash proof safety goggles

**OTHER EQUIPMENT:** Impervious apron, eyewash facility, emergency shower, face shield

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

**BOILING POINT:** ND

**pH:** 12.4

**PERCENT VOLATILE (by weight):** ND

**EVAPORATION RATE:** ND (Butyl Acetate=1)

**SOLUBILITY IN WATER:** Soluble

**VAPOR PRESSURE:** ND

**APPEARANCE/ODOR:** Colorless to light straw in color; benzaldehyde odor

**DENSITY:** 8.4 lbs./gallon (H<sub>2</sub>O = 1)

## Section 10: STABILITY AND REACTIVITY

**STABILITY:** Stable

**CONDITIONS TO AVOID:** Keep away from heat and strong oxidizing agents.

**INCOMPATIBILITY:** Strong oxidizers or reducing agents

**HAZARDOUS POLYMERIZATION:** Will not occur

**HAZARDOUS DECOMPOSITION PRODUCTS:** Toxic hydrogen chloride fumes, oxides of carbon and nitrogen.

**Section 11: TOXICOLOGICAL INFORMATION**

**CARCINOGENITY:** No Carcinogenity data available for this product.  
**ACUTE ORAL LD<sub>50</sub>** - 2.72g/kg in rats  
**ACUTE DERMAL** – Greater than 2g/kg body weight  
**PRIMARY SKIN** – Corrosive  
**PRIMARY EYE** – Corrosive

**Section 12: ECOLOGICAL INFORMATION**

**ECOTOXICITY:** Very Toxic to aquatic organisms.  
**ENVIRONMENTAL FATE:** This product is biodegradable.

**Section 13: DISPOSAL CONSIDERATION**

**WASTE DISPOSAL:** Incinerate. Make sure that all federal, state and local regulations are observed.

**SECTION 14 – TRANSPORTATION INFORMATION**

**PROPER SHIPPING NAME:** Disinfectants Liquid Corrosive, NOS (Quaternary Ammonium Compound), 8, UN1903, PG III  
**DOT HAZARD CLASS:** 8 Corrosive  
**EXEMPTION:** This product can ship as a “Consumer Commodity” and be re-classed as “ORM-D” if packaged in < 1.3 gallons (5.0 Liter) containers. (Non Hazardous)  
**STATE & PROVINCIAL RIGHT TO KNOW & SELECTED REGULATORY LISTS:** The following ingredients appear on various state right to know lists and/or California’s Proposition 65 List:

Chemical Name	State List
Ethanol	AZ, CA, CT, FL, ID, MA, MN, NJ, PA, RI
Benzyl Chloride (trace impurity <10ppm)	AZ, CA, CAP65C, FL, IL, MA, MN, NJ, PA

**WHMIS CLASSIFICATION:** B3, E, D1B

**Section 15: REGULATORY INFORMATION**

**TSCA STATUS:** While all ingredients are listed on the TSCA Chemical Inventory, this product is regulated as a pesticide under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and not subject to the TSCA Inventory rules for FIFRA uses.

**OTHER CHEMICAL INVENTORIES:** All components of this product are listed on the following inventories: Canada (DSL), European Union, China, Korean and Philippines. One or more ingredients are not listed on the following inventories: Australia and Japan.

**CERSL/SARA:** SARA TITLE III, SECTIONS 311/312 – This act requires reporting under the Community Right-to-Know provisions due to the inclusion of the following components of this material in one or more of the five hazard categories listed in the 40 CFR 370:

**Classification Of This Product:** IMMEDIATE, FIRE

HAZARD RATING	HMIS	NFPA
Health	3	3
Flammability	0	0
Reactivity	0	0
PPE	B	

**Section 16: OTHER INFORMATION****Warranty Disclaimer**

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