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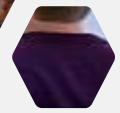
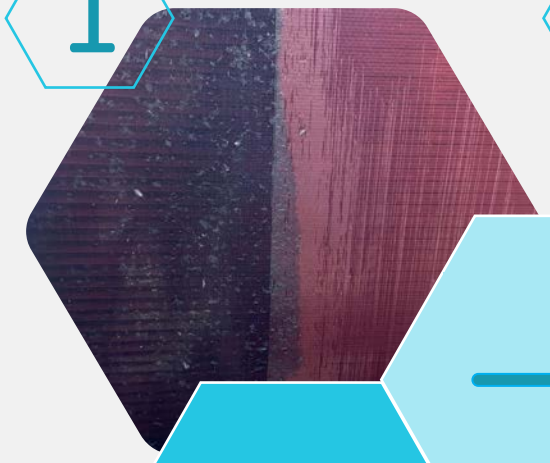
Sanitizing Division



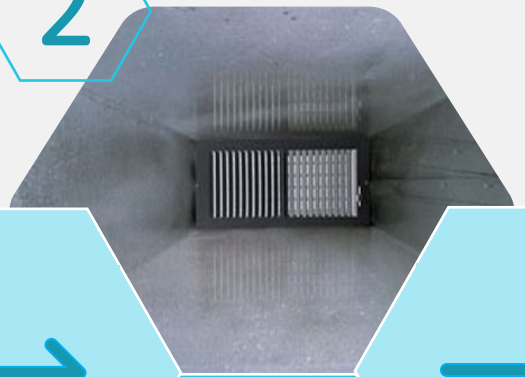
Our 4 Step Approach To Effectively Sanitize HVAC Systems

1



Power wash HVAC Coils

2



Clean Ductwork

3

Purify and decontaminate Air Circulation

4

Place UVC Germicidal Light

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Specialized Cleaning Unit

Self-Contained Cleaning Unit To Thoroughly Power-wash HVAC Coils

Is Coil Power-wash Effective?

Clean coils you get maximum unit tonnage per energy dollar spent, dirty coils prevent efficient heat exchange as discharge temperature rise and cooling capacity shrinks.

Cleaning Coils Thoroughly can prevent permanent damage to compressors, motors, and other operating components and greatly extend life cycle.

KEY aspects:

- RECAPTURE COOLING CAPACITY
- RECAPTURE WASTED ENERGY DOLLARS
- IMPROVE INDOOR AIR QUALITY
- REDUCE RISK OF "SICK BUILDING SYNDROME"
- PREVENT EQUIPMENT DAMAGE AND KEEP SERVICE CALLS DOWN
- PROTECTS THE ENVIRONMENT
- REDUCE REPAIRS
- BRING THE UNITS PERFORMANCE BACK UP TO DESIGN ENGINEERING SPECIFICATIONS

Our cleaning unit is **self-contained** fully equipped with a 525 gallon water tank, a power generator, and the hose is over 600 ft reach range

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HVAC DUCT CLEANING

Removal of dust and microbial spores in ductwork

How Ductwork Cleaning Is Performed?

Negative pressure, rotary brush and vacuum method is used to remove particulates, debris, and surface contamination from inside the ductwork in accordance with NADCA ACR 2013 Standard.

- During the cleaning process, the HVAC system & associated air ducts will be kept at an appropriate negative pressure differential relative to the indoor non-work area.
- Using mechanical agitation methods via rotary brush & extra soft bristles will remove small particulates.

Vacuum collection equipment will be operated continuously during cleaning. It will be used in conjunction with agitation tools and HEPA filter vacuum cleaners to collect debris and prevent cross-contamination of dislodged particulate during the mechanical cleaning process.

- Ductwork will be decontaminated using EnviroCON® with a Ultra Low Volume Machine (ULV)

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Antimicrobial Air Purifying Treatment

Effectively eliminates 99% of bacteria and viruses

Air Conditioner Antimicrobial Treatment

Your Air Conditioning System Is breeding millions of harmful bacteria and mold spores which can lead to illnesses and respiratory problems

bactakleen
ANTI-BACTERIAL SCIENCE

- KILLS 99.9% OF BACTERIA, MOLD AND FUNGUS
- REDUCES THE SPREAD OF THE COMMON COLD, INFLUENZA & OTHERS
- REDUCES BAD ODOR
- IMPROVES INDOOR QUALITY
- REMOVES BUILD UP OF BACTERIA COLONIES
- ELIMINATES SICK BUILDING SYNDROME

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How does BACTAKLEEN work?

BACKTAKLEEN ULTRA MIST SOLUTION and Nisus DSV Sanitizing and Virucide Solution (view datasheet on CORONAVIRUS) is added to the bactakleen ultra mist machine, it is powered on delivering a mist to the air; while the air conditioning system is on the ultra fine mist will go through the system's returns, passing through the ducts and recirculating clean air back through the a/c supply.

bactakleen
ANTI-BACTERIAL SCIENCE

- 100% SAFE NON-TOXIC AND ENVIRONMENTALLY SAFE
- IMPROVES AIR CONDITIONING EFFICIENCY
- REDUCES ELECTRICITY COSTS
- PROVIDES IMMEDIATE AND LONG-TERM PROTECTION AGAINST BACTERIA AND VIRUSES
- CLINICALLY TESTED & PROVEN BY CHEMLAB, SIRIM AND SGS

FOR MORE INFO VISIT: WWW.BACTAKLEEN.COM/HVAC

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AIR LOGIX
COMMERCIAL AIR SYSTEMS

UVC HVAC LAMPS

Effectively eliminates 99% of bacteria and viruses

Why STERIL-AIRE?

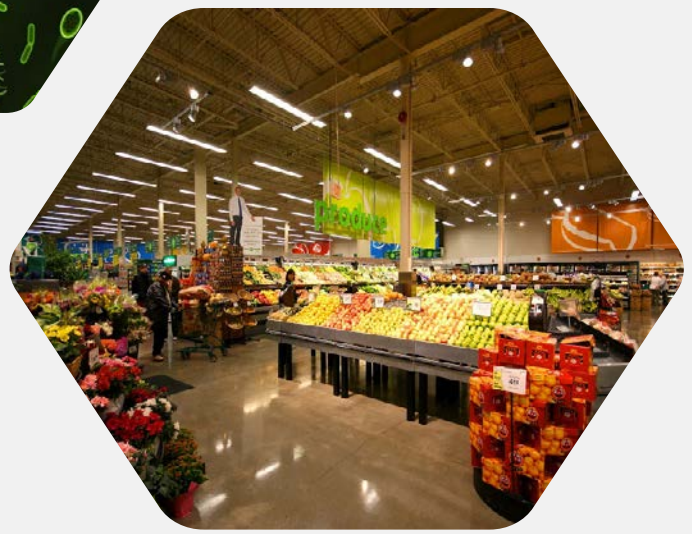
Steril-Aire, ISO Certified in both 9001:2015 & 14001:2015, UVC energy, clinically validated technology, destroys surface biofilm and airborne microorganisms amplifying in air conditioning coils before they circulate throughout the HVAC system. Numerous studies have demonstrated that the HVAC system is a viable reservoir of pathogenic and opportunistic bacteria and mold.

Science based & technology backed solutions that create a better and safer environment to live, work and breathe.

STERIL-AIRE

High Energy Germicidal UVC

- SAVINGS OF UP TO 15% IN ENERGY COSTS: LOWERS ENERGY COSTS BY RESTORING HEAT TRANSFER AND AIRFLOW UNIFORMITY ACROSS THE COILS
- EXTENDS FOOD SHELF LIFE AND QUALITY
- REDUCES WATER USE
- COST EFFECTIVE: ROI IS TYPICALLY LESS THAN 2 YEARS
- QUALITY: UL, CUL, CE AND OTHER AGENCY LISTINGS
- SAFE: PRODUCES NO OZONE OR SECONDARY CONTAMINANTS, UVC DEVICES DO NOT PRODUCE ANY UVV



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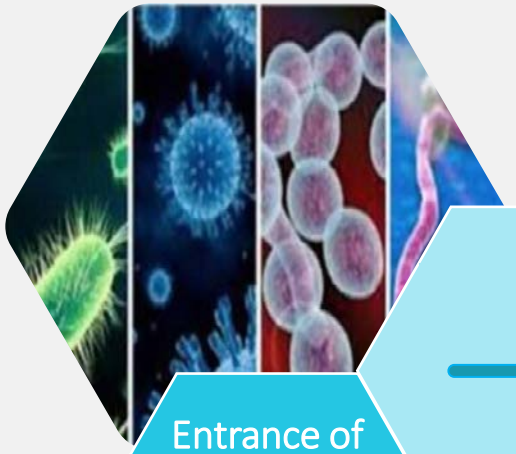
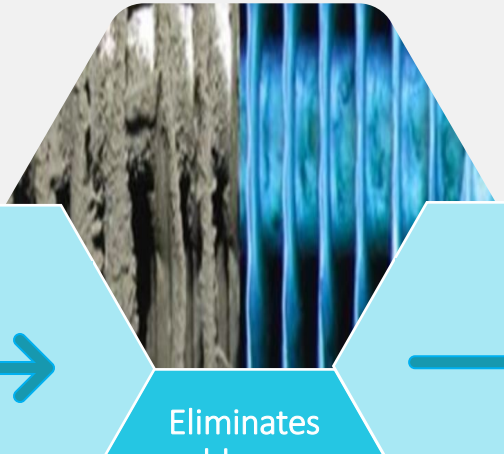
How does STERIL-AIRE work?

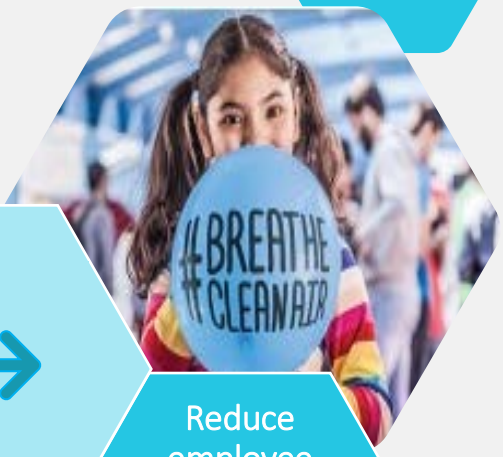


Entrance of exterior bacteria and virus microbes

Microbes die in the interior of a/c with UVC light



Eliminates mold spores and microorganisms from the coils and ducts



Reduce employee absences

Eliminate sick building syndrome

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How does STERIL-AIRE work?

The C wavelength of the UV spectrum targets the DNA of microorganisms, destroying their cells and making replication impossible. Directed at a cooling coil or drain pan, UVC energy destroys surface biofilm, a gluey matrix of microorganisms (bacteria, fungi, debris, et al.) that grows in the presence of moisture. **VIEW DATASHEET ON CORONAVIRUS**

- UVC HELPS RESTORE OLDER HVAC SYSTEM TO EFFICIENT OPERATION
- MAINTAINS NEW SYSTEMS AT FACTORY DESIGN EFFICIENCY
- PROTECTS SYSTEM COMPONENTS AGAINST THE ACIDS THAT ARE EMITTED FROM THE BIOFILM AND THE CORROSIVE EFFECTS OF CHEMICAL COIL CLEANING.
- **IMPROVES OPERATIONAL EFFICIENCY:** ELIMINATES COSTLY HVAC CLEANING PROGRAMS AND EXTENDS EQUIPMENT LIFE

STERIL-AIRE
High Energy Germicidal UVC

FOR MORE INFO VISIT: www.steril-aire.com

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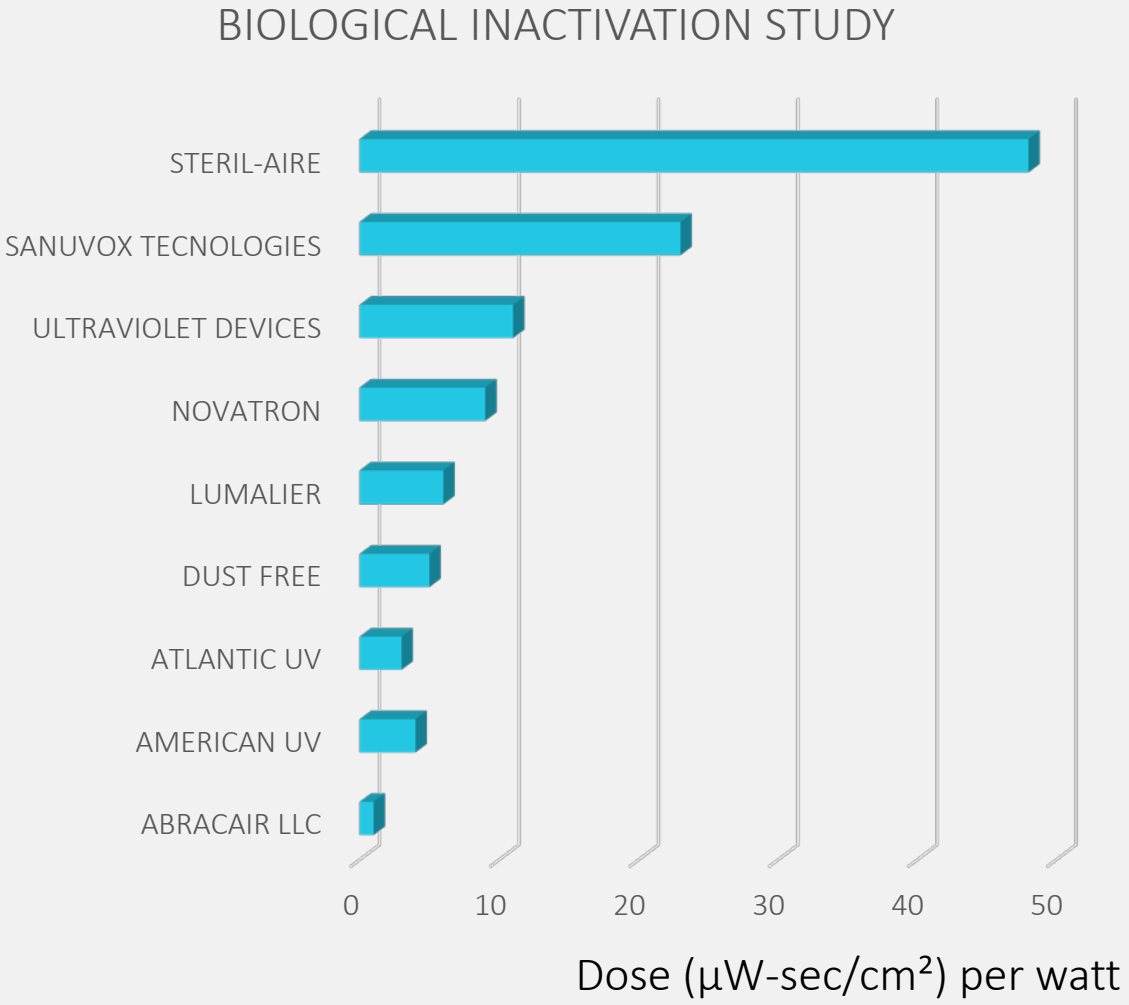
U.S. HOMELAND SECURITY RESEARCH:

Homeland Security/EPA tests confirm that on average, Steril-Aire Emitters™ are, 6 times more effective than the tested competition lamps, on a Kill/Watt basis.



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CERTIFICATIONS

STERIL-AIRE

WE ARE NOW CERTIFIED TO PROVIDE YOU WITH THIS SERVICE

Our team members are CERTIFIED STERIL-AIRE

AIR LOGIX COMMERCIAL AIR SYSTEMS

Disinfectant, Sanitizer & Virucide

Nisus DSV™ kills Hantavirus, Avian Flu, HIV-1, Hepatitis B & C and Much More.

Nisus DSV™ is a broad spectrum disinfectant, sanitizer, virucide, mildewstat, fungicide and deodorizer that is labeled to kill 31 strains of bacteria and 19 different viruses.

- **Labeled for use in hundreds of commercial establishments, including:**
  - **farms & agribusinesses**
  - **kennels**
  - **veterinary practices**
  - **hospitals**
  - **day care centers & nurseries**
  - **nursing homes**
  - **restaurants, institutional kitchens, food processing areas**
  - **supermarkets**
- **Labeled for many residential area uses, including:**
  - **kitchens**
  - **bathrooms**
  - **whirlpools**
  - **humidifers**
  - **floors & carpeting**

Nisus DSV comes in an economical concentrate that is diluted and applied by spraying, using a mop and bucket or by soaking.

As a multipurpose solution, Nisus DSV can be used both for everyday cleaning as well as a wide variety of critical or emergency situations. For example, it's not only perfect for disinfecting water damaged areas prior to reconstruction, but also for eliminating Hantavirus in the Southwest *(see the label for specific instructions on using Nisus DSV against Hantavirus).*

Nisus CORPORATION
Nisus Corporation • 100 Nisus Drive • Rockford, TN 37853
(800) 264-0870 • www.nisuscorp.com

Nisus® DSV

Disinfectant, Cleaner, Mildewstat, Fungicide, Sanitizer (nonfood contact surfaces) Virucide*, Deodorizer for Hospitals, Nursing Home, Whirlpool, Home, 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 hardness (Calculated as $CaCO_3$) in the presence of 5% serum contamination.
Formulated for effective Poultry Sanitation.
Formulated for effective Swine Premise Sanitation.
Formulated for effective Mushroom Farm Sanitation

ACTIVE INGREDIENTS:

Octyl Decyl Dimethyl Ammonium Chloride	1.650%
Didecyl Dimethyl Ammonium Chloride	0.825%
Dioctyl Dimethyl Ammonium Chloride	0.825%
Alkyl (C_{14}, 50%; C_{12}, 40%; C_{16}, 10%) dimethyl benzyl ammonium chloride	2.200%
INERT INGREDIENTS:	94.500%
TOTAL	100.000%

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

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.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER. Keep Out of Reach of Children. Corrosive. Causes irreversible eye damage and skin burns. May be fatal if absorbed through the skin. Harmful if swallowed. 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 or using tobacco. Remove contaminated clothing and wash clothing before reuse.

PHYSICAL OR CHEMICAL HAZARDS

Do not mix with oxidizers, anionic soaps and detergents.

STORAGE AND DISPOSAL

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

This product contains no phosphorous.

This product is a phosphate free formulation designed to provide effective cleaning, deodorizing and disinfection in areas where housekeeping is of prime importance in controlling the hazard of cross contamination on treated surfaces.

This product maximizes labor results by effectively controlling odors.

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

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.

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

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

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

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

This product will not leave a grit or soap scum.

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

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

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

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 recommended for use in household and commercial humidifiers. Use of this product will control unpleasant odors. *Not for use in California.*

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

This product is a broad spectrum disinfectant formulated for use in Ultrasonic cleaning units.

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

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

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

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

This product neutralizes musty odors and tough odors from smoke, pet accidents, and spills on contact.

This product is specially formulated to effectively eliminate offensive odors cause by mold and mildew.

This product neutralizes odors to make your home, kitchen and bathroom sanitary.

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

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

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

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

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

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

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

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

Use this product to clean, sanitize and disinfectant non-porous personal protective safety equipment, protective headgear, hard hats, half mask respirators, full face breathing apparatus, gas masks, goggles, spectacles, face shields, hearing protectors and ear muffs. Rinse all equipment that comes in prolonged contact with skin before reuse with clean warm water and allow to air dry.

This product is an effective antimicrobial cleaner, designed for use by wholesale and retail florists, shippers and green houses. *Not for use in California.*

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. *Not for use in California.*

This product may be relied on to deodorize coolers, buckets, garbage pails and other areas where obnoxious odors may develop. *Not for use in California.*

Use this product to clean, disinfect and deodorize flower buckets, walls, floors of coolers, shippers, greenhouse packing areas, garbage pails and other areas where obnoxious odors may develop. *Not for use in California.*

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

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

This product is an effective one-step sanitizer-cleaner for use on non-food contact surfaces.

Floor cleaner.

One-step cleaner.

Cleans everyday kitchen messes.

Cleans non-food contact kitchen surfaces and food preparation areas.

Cleans and shines.

Great for use in the kitchen, bathroom, floors and other household areas. Eliminates odors. Deodorizes. Safe for most surfaces.

Safe for most surfaces. For a cleaner, fresher household. Removes stains. Removes dirt. Non-staining. Clear formula.

Eliminates odors caused by bacteria and mildew. Kills odor causing bacteria in the kitchen and bathroom.

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

Escherichia coli (E. coli), Salmonella choleraesuis (Salmonella), and *Staphylococcus aureus (Staph)* are common germs found where food is prepared and stored. This product kills these harmful germs and helps prevent the spread of food borne contamination on treated kitchen surfaces listed on this label. A potable water rinse is required after application on food contact surfaces. This product is not for use on dishes, glassware or eating utensils.

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

Antibacterial. Kills Athlete's Foot fungus on bathroom surfaces.

Hospital use Disinfectant. Institutional Disinfectant Sanitizer.

Kills common kitchen, bathroom germs and viruses*.

Effective sanitizer in the presence of 5% serum contamination. (This product is an effective disinfectant/sanitizer in the presence of 5% serum contamination.)
This product is an effective sanitizer in the presence of soils.
This product is effective against Citrus Canker and Bacterial Spot of Tomatoes through the treatment of the handling, harvesting, storage and transportation equipment. *Not for use in California.*
This product is recommended for Poultry Premise Sanitation (Hatcheries)

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

This product is recommended for Swine Premise Sanitation:

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

Nisus DSV for use in:

- Hospitals, nursing homes, medical and dental offices and clinics, physician offices, operating rooms, isolation wards, and medical research facilities.
- Patient care rooms & facilities, recovery, anesthesia, Emergency Rooms, X-ray cat labs, newborn nurseries, orthopedics, whirlpools, footbath surfaces, respiratory therapy, surgi-centers, labs, blood collection rooms, central supply, housekeeping & janitorial rooms.
- EMS & fire facilities, emergency vehicles, ambulances and police cars.
- Day care centers and nurseries, sick rooms.
- Acute care institutions, alternate care institutions, home healthcare institutions.
- Life care retirement communities.
- Restaurants, restaurants and bars, bars, cafeterias, institutional kitchens, fast food operations and food storage areas.
- Supermarkets, convenience stores, retail and wholesale establishments, department stores, shopping malls, gift shops, video stores, bookstores, dressing rooms and laundries, photocopy centers, bicycle shops, auto repair centers.
- Computer manufacturing sites, toy factories.
- Food establishments, coffee shops, donut shops, bagel stores, pizza parlors, liquor stores.
- Crime scenes and funeral homes, mortuaries, burial vaults, mausoleums, autopsy rooms.
- Police stations, courthouses, correctional facilities, jails, prisons, municipal government buildings, bus stations, train stations.
- Institutional facilities, laboratories, factories, business and office buildings, restrooms, hotels and motels, and transportation terminals.
- Public restrooms, public facilities, waysides, travel rest areas, shower rooms, shower stalls, bathrooms.
- Hotel, motels, dormitories.
- Kitchens, bathrooms and other household areas.
- Homes.
- Institutions, schools and colleges, churches, classrooms, community colleges, universities, athletic facilities and locker rooms, exercise rooms, exercise facilities, gyms, gymnasiums.
- Cosmetic manufacturing facilities, medical device manufacturing facilities, biotechnology firms, pharmaceutical manufacturing facilities.
- Heath clubs, spas, tanning spas/beds, footbath surfaces, massage/facial salons, hair/nail/pedicure salons, barber/beauty shops, salons, tattoo parlors.
- Museums, art galleries, post offices, performance/theater centers, banks, libraries, movie houses, bowling alleys.
- Recycling centers.
- Humidifier water tanks.
- Campgrounds, playgrounds, recreational facilities, picnic facilities, sports arenas, sports complexes.
- Food processing plants, USDA inspected food-processing facilities, dairy farms, hog farms, equine farms, poultry and turkey farms and egg processing plants, meat/poultry processing plants, meat/poultry producing establishments, mushroom farms, rendering plants.
- Processing facilities for Fish, Milk, Citrus, Fruit, Vegetable, Ice Cream, and Potatoes and beverage plants.
- Tobacco plant premises.
- Veterinary clinics, animal life science laboratories, kennels, dog/cat animal kennels, breeding and grooming establishments, pet animal quarters, zoos, pet shops, tack shops and other animal care facilities.
- Household and automotive garages, boats, ships, barges, campers, trailers, mobile homes, cars, trucks, buses, trains, taxis and airplanes.
- Cruise lines, airline terminals, shipping terminals, public transportation.
- Commercial florist and flower shops.
- Basements, cellars, bedrooms, attics, living rooms and porches.
- This product may be used on washable hard non-porous surfaces such as:
- Food preparation and storage areas.
- Counters, stoves, sinks, tub surfaces, non-food contact surfaces of Slurrpy® machines, and exterior surfaces of appliances, refrigerators, and ice machines.
- Glass, metal, stainless steel, glazed porcelain, glazed ceramic, granite, marble, plastic, sealed limestone, sealed slate, sealed stone, sealed terra cotta, sealed terrazzo, chrome and vinyl.
- Enameled surfaces, painted woodwork, Formica®, vinyl and plastic upholstery.
- Foundations, steps, plumbing fixtures, finished baseboards and window sills.
- Tables, chairs, desks, lifts, washable walls, cabinets, doorknobs and garbage cans, cuspidors and spittoons.
- Exhaust fans, refrigerated storage and display equipment, coils and drain pans of air conditioning and refrigeration equipment and heat pumps.

- Large, inflatable, non-porous plastic and rubber structures: animals, promotional items, moonwalks, slides, obstacle course play and exercise equipment.
- Picnic tables and outdoor furniture.
- Telephones and Telephone booths.
- Highchairs.
- Drinking fountains.
- Shower stalls, shower doors and curtains, bathtubs and glazed tiles, chrome plated intakes, toilets, toilet bowls, toilet bowl surfaces, urinals, empty diaper pails, portable and chemical toilets and latrine buckets, porcelain tile and restroom fixtures.
- Ultrasonic baths, whirlpools, whirlpool bathtubs.
- Kennels, kennel runs, kennel/cages floors, conductive flooring.

This product meets AOAC Use – Dilution Test Standards for hospital disinfectants at 400 ppm water hardness.
This product meets AOAC efficacy standards for hard surface non-food contact sanitizers.
This product has passed the Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces Utilizing Hepatitis B Virus.
This product has passed the Virucidal Effectiveness Test using Bovine viral diarrhea virus (BVDV) (Surrogate for human Hepatitis C virus).
This product has passed the Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces Utilizing Human Coronavirus.
For larger areas such as operating rooms and patient care facilities, this product is designed to provide both general cleaning and disinfection.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.
This product is not for use on Medical device surfaces.

Before use in federally inspected meat and poultry food processing plants and dairies, food products and packaging materials must be removed from room or carefully protected. A potable water rinse is required.

Apply this product with a cloth, mop or mechanical spray device. When applied with a mechanical spray device, surfaces must be sprayed until thoroughly wetted. Treated surfaces must remain wet for 10 minutes. For sprayer applications, use a coarse mist pump or trigger sprayer. Spray 6-8 inches from surface and rub with brush, sponge or cloth. Do not breathe spray mist.

NOTE: With spray applications cover or remove all food products. Prepare a fresh solution at least daily or when visibly soiled or diluted. For heavily soiled areas, a preliminary cleaning is required.

DISINFECTION

PREPARATION OF USE SOLUTION: For water hardness up to 400 ppm add 2 ounces of this product per gallon of water (1:64) to disinfect hard non-porous surfaces. Treated surfaces must remain wet for 10 minutes.

This product is a Hospital Use Disinfectant at 2 ounces per gallon (1:64 dilution) modified in the presence of 400 ppm hard water.

This product is bactericidal according to the AOAC Use Dilution Test method on hard inanimate surfaces modified in the presence of 5% organic serum against:

Campylobacter jejuni
Corynebacterium ammoniagenes
Enterobacter aerogenes
Enterobacter cloacae
Enterococcus faecalis
Enterococcus faecium (Vancomycin resistant)
Escherichia coli
Escherichia coli (Antibiotic resistant)
Escherichia coli 0157:H7
Legionella pneumophila
Klebsiella pneumoniae
Klebsiella pneumoniae (antibiotic resistant)
Staphylococcus epidermidis (antibiotic resistant)
Listeria monocytogenes
Proteus mirabilis
Proteus vulgaris
Pseudomonas aeruginosa
Pseudomonas aeruginosa (antibiotic resistant)
Salmonella choleraesuis
Salmonella typhi
Serratia marcescens
Shigella dysenteriae
Shigella flexneri
Shigella sonnei
Staphylococcus aureus
Staphylococcus aureus (Methicillin resistant)
Streptococcus pyogenes
Xanthomonas axonopodis pv. Citri (Not for use in California)
Xanthomonas campestris pv. Vesicatoria (Not for use in California)

Fungicidal against:
Trichophyton mentagrophytes
Candida albicans

Hospital Disinfection Use Dilution Chart

Ounces of Product	Amount of Water
½ ounce	1 quart
1 ounce	½ Gallon
2 ounces	1 gallon
5 ounces	2½ gallons
10 ounces	5 gallons
20 ounces	10 gallons

***Virucidal Performance**: At 1¼ ounces per gallon of water use level, 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 diluted or soiled.
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
Canine Distemper
Herpes Simplex Type1
Herpes Simplex Type2
HIV-1 (AIDS virus)
Influenza A/Brazil Virus
Infectious Bovine Rhinotracheitis virus (IBR)
Newcastle disease virus
Porcine Respiratory & Reproductive Virus (PRRSV)
Porcine Rotavirus
Pseudorabies virus
Transmissible Gastroenteritis (TGE)
Vaccinia virus

At 2 ounces per gallon of water use level (850 ppm active quat), with treated surfaces remaining wet for 10 minutes, this product was evaluated and found to be effective in against the following viruses on hard non-porous surfaces:

Canine Coronavirus
Human Coronavirus
Hepatitis B Virus (HBV)
Heptatitis C Virus (HCV)
Hantavirus

Disinfection Directions: Apply use solution to hard inanimate, non-porous surfaces thoroughly wetting surfaces as recommended and required, with a cloth, mop, sponge or sprayer. For heavily soiled areas, a preliminary cleaning is required. For sprayer applications use a coarse spray device. Spray 6-8 inches from surface. Rub with brush, sponge or cloth. Do not breathe spray mist.
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.

General Disinfection Use Dilution Chart

Ounces of Product	Amount of Water
0.3125 ounces	1 quart
0.625 ounces	½ gallon
1¼ ounces	1 gallon
3.125 ounces	2½ gallons
6¼ ounces	5 gallons
12½ ounces	10 gallons

At 2 ounces per gallon (or equivalent use dilution) in the presence of 400 ppm hard water ($CaCO_3$) 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 in the presence of 400 ppm of hardness for a 10 minute contact time, this product was found to be effective against Hepatitis C virus (HCV). *(Not for use in California.)*

For Schools, Industry and Non-Medical Institutional Uses: At 1¼ ounces per gallon of water, 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 choleraesuis, Escherichia coli and Serratia marcescens. The same AOAC tests used to confirm performance for hospitals were used.

***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 Hepatitis B Virus (HBV), human immunodeficiency virus Type 1 (HIV-1) (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, or eye coverings. (Clean up should always be done wearing protective 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, body fluids, cleaning materials and clothing should 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.

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

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

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

All potential infective waster 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 waster.

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

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

General Deodorization: To deodorize, add a 1¼ ounces of this product to 1 gallon of water. Excess material should be wiped up or allowed to air dry.

For Deodorizing Garbage Cans, Garbage Trucks, Industrial Waste Receptacles and Garbage Handling Equipment: It is especially important to preclean for the product to perform properly. Use 1¼ ounces per gallon 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.

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".

Fungicidal Activity: At 2 ounces per gallon use-level, this product is effective in locker rooms, dressing rooms, shower and bath areas and exercise facilities against *Trichophyton mentagrophytes,* a cause of Ringworm, *Candida albicans* on inanimate hard non-porous surfaces in the presence of 5% blood serum and 400 ppm water hardness as $CaCO_3$. Treated surface must remain wet for 10 minutes. Allow to air dry.

Mold and Mildew Control Directions: Add 1¼ ounces per gallon of water to control the growth of mold and mildew (*Aspergillus niger)* and their odors on hard, non-porous surfaces. Thoroughly wet all treated surfaces completely. Let air dry. Repeat application weekly or when growth or odor reappear.

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. Allow a 10 minute contact time for optimal results. Bathe the entire body using sponge or washcloth. A soft brush may be employed on surfaces other than the face. Prepare a fresh solution for application of each remains.

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 1¼ ounces per gallon of water for a period of 10 minutes. Ventilate buildings and other closed spaces. Do not house employ equipment until treatment has been absorbed, set or dried.

Disinfection/Fungicide/Virucide for Barber/Salon Tools Directions: Immerse pre-cleaned barber/salon tools (such as combs, brushes, razors manicure/pedicure tools, clippers, tweezers, clipper and trimmer blades, and scissors) in 2 ounces per gallon solution of the product. Completely immerse instruments and tools for at least 10 minutes. Rinse thoroughly and dry before use. Prepare a fresh solution at least daily or more often if solution becomes cloudy or soiled.

NOTE: Plastics may remain immersed until ready to use. Stainless steel shears and instruments must be removed after 5 minutes, rinsed, dried, and kept in a clean non-contaminated receptacle. Prolonged soaking may cause damage to metal instruments.

Disinfection of Hard, Non-Porous Surfaces in Footbaths: To remove body oils, dead tissue, soil and all other buildups or organic matter on inanimate surfaces after using the footbath, drain the water and thoroughly clean all hard, non-porous surfaces with soap or detergent, then rinse with water. Saturate surfaces with a use solution of 2 ozs per gallon of water to exposed surfaces with a cloth, mop, sponge or sprayer. Brush or swab thoroughly and allow solution to stand for 10 minutes. For spray applications, use a coarse spray device. Do not breathe spray. After the unit has been thoroughly disinfected, rinse all cleaned surfaces with fresh water. Do not use equipment until treatment has been absorbed, set or dried.

NON-ACID TOILET BOWL AND URINAL DISINFECTION/CLEANER DIRECTIONS

Remove gross filth prior to disinfection.

From Concentrate: Add 1½ ounces to the toilet bowl (0.75 gallons) and mix. Brush thoroughly over exposed surfaces and under the rim with a cloth, mop, or sponge. Allow to stand for 10 minutes and flush.

From Use solution: Empty toilet bowl or urinal and apply 2 ounces per gallon use solution to exposed surfaces including under the rim with a cloth, mop, sponge or sprayer. Brush or swab thoroughly and allow to stand for 10 minutes and flush. For sprayer application, use a coarse spray device.

For Heavy Duty Cleaning: Empty toilet bowl or urinal and apply 8 ounces per gallon use solution to exposed surfaces including under the rim with a cloth, mop, sponge or sprayer. Brush or swab thoroughly and allow to stand for 10 minutes and flush. For sprayer application, use a coarse spray device.

Cleaning/Deodorizing Directions: Add 1¼ ounces per gallon of water to clean and deodorize windows, mirrors and non-food contact glass surfaces. Apply solution with a mop, cloth, sponge or mechanical sprayer so as to wet all surfaces thoroughly. Allow to air dry or wipe up excess liquid.

Ultrasonic Bath Disinfectant Directions: Use this product to disinfect hard inanimate non-porous non-critical objects compatible with Ultrasonic cleaning units. Pour fresh solution of 2 ounces of this product per gallon of water (1:64) directly into bath chamber. Pre-clean heavily soiled objects. Place objects into unit and operate for a minimum of 10 minutes, according to the manufactures' directions. Remove objects and rinse with sterile water (sterile water for injection) or allow to air dry. Prepare fresh solution for each use.

Disinfection of Hard Non-Porous Surfaces in Whirlpool Units: After using the whirlpool unit, drain and refill with fresh water to just cover the intake valve. Add 2 ounces of this product for each gallon of fresh water added. 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.

For Disinfecting Hard, Non-porous (Fiberglass) Bath and Therapy Equipment: To remove body oils, dead tissue, soil and all other buildups or organic matter on inanimate surfaces after using the whirlpool unit, drain the water and refill with fresh water to just cover the intake valve. Add 10 ounces of this product for each 5 gallons of water (2 ounces per one gallon) in the unit at this point. Briefly start the pump to circulate the solution. Turn off pump. Wash down the unit sides, seat of the chair lift, and

any/all related equipment with a clean swab, brush or sponge. Product to surface contact time must be at least 10 minutes for proper disinfection. After the unit has been thoroughly disinfected, drain solution from the unit and rinse any/all cleaned surfaces with fresh water. The unit is ready for reuse.

To Disinfect Food-Processing and Tobacco Premises: For floors, walls and storage areas, add 2 ounces of this product to gallon of water. For heavily soiled areas, a pre-cleaning step is required. Apply solution with a mop, cloth, sponge or hand pump trigger sprayer so as to wet all surfaces thoroughly. For sprayer applications, use a coarse mist or spray. Allow to remain wet for 10 minutes, then remove excess liquid. Before using this product, food products and packaging materials must be removed from area or carefully protected. After use, all surfaces in the area must be thoroughly rinsed with potable water.

To Disinfect Food Service Establishment Food Contact Surfaces: For countertops, appliances, and tables. Before using this product food products and packaging materials must be removed from area or carefully protected. Add 2 ounces of this product to 1 gallon of water. For heavily soiled areas, a pre-cleaning step is required. Apply solution with a mop, cloth, sponge or hand pump trigger sprayer so as to wet all surfaces thoroughly. Allow to remain wet for 10 minutes. Then remove excess liquid and rinse the surface with potable water. For sprayer applications, use a coarse spray device. This product is not for use on dishes, glassware or eating utensils. After use, all surfaces in the area must be thoroughly rinsed with potable water.

For use on non-food contact surfaces as a general disinfectant in the brewery industry: Use 2 ounces of this product per gallon of water. Follow the general disinfectant directions above.

Directions for Fogging: For use in dairies, beverage and food processing plants. Prior to fogging, food products and packaging material must be removed from the room or carefully protected. After cleaning, fog desired areas using one quart per 1000 cubic feet of room area with a product solution containing 3 ounces product to 1 gallon of water. Vacate the area of all personnel during fogging and for a minimum of 2 hours after fogging. All food contact surfaces must be thoroughly rinsed prior to reuse with potable water.

NOTE: The fog generated is irritating to the eyes, skin and mucous membranes. Under no circumstances should a room or building be entered by anyone within two hours of the actual fogging. If the building must be entered, then the individuals entering the building must wear a self-contained respirator approved by NIOSH/MSHA, goggles, long sleeves and long pants.

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

Disinfection of Poultry/Turkey Equipment, Swine Quarters, Animal Quarters and Kennels: Prior to disinfection, remove all poultry, other animals and their feed from premises, trucks, coops and crates. Remove all litter, droppings and manure from floors, walls and surfaces of barns, pens, stalls, chutes and other facilities and fixtures occupied or traversed by animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Use 1¼ ounces of this product per gallon of water. Saturate surfaces with the recommended disinfecting solution for a period of 10 minutes. Immerse all halters, ropes and other types of equipment used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and manure.

After disinfection, ventilate buildings, coops and other closed spaces. Do not house poultry or other animals or employ equipment until treatment has been absorbed, set or dried.

All treated equipment that will contact feed or drinking water (racks, troughs, automatic feeders, fountains and waterers) must be thoroughly scrubbed with soap or detergent then rinsed with potable water before reuse.

Disinfection/Fungicide/Virucide of Poultry/Turkey Equipment, Swine Quarters, Animal Quarters and Kennels Directions: Remove all animals and feeds from premises, vehicles and enclosures such as coops and crates. Remove all litter, droppings and manure from floors, walls and surfaces of barns, pens, stalls, chutes and other facilities and fixtures occupied or traversed by animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Use 2 ounces of this product per gallon of water. Saturate surfaces with the recommended 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 (racks, troughs, automatic feeders, fountains and waterers) must be thoroughly scrubbed with soap or detergent, then rinsed with potable water before reuse.

HATCHERIES: Use 2 ounces of this product per gallon of water to treat the following hard non-porous surfaces: hatchers, setters, trays, racks, carts, sexing tables, delivery trucks and other hard surfaces. Leave all treated surfaces exposed to disinfectant solution wet for 10 minutes or more. Rinse with potable water before reuse. Then allow to air dry.

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

DRESSING AND RENDERING PLANT USE (RENDERING PLANT/DRESSING PLANT DISINFECTANT DIRECTIONS): Disinfect equipment, walls and floors in poultry and animal dressing plants.

Disinfect offal rooms, exterior walls and loading platforms of dressing plants. Cover or remove all food and packaging materials. Remove all gross soils. Saturate all surfaces with the recommended use solution, 1½ ounces of this product 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 ounces of this product per gallon of water. Equipment and utensils 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 with potable water.

FARM PREMISE DISINFECTION DIRECTIONS

For use in Equine, Dairy and Hog Farms:

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

POULTRY AND SWINE PREMISE SANITATION

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

Application and Use Dilution Poultry and Swine Premise: Remove all animals and feeds from premises, 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 recommended disinfecting solution for a period of 10 minutes. Ventilate buildings, coops and other closed spaces. Do not house animals or employ equipment until treatment has been absorbed, set or dried. Thoroughly scrub treated feed racks, troughs, automatic feeders, fountains and waterers and other equipment which may contact food or water with soap or detergent, and rinse with potable water before reuse. 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.

Veterinary Clinics/Animal Care Animal Laboratory/Animal Life Science Laboratory/Zoos/Pet Shop/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 premises, animal transportation vehicles, crates, etc. Remove all litter, droppings and manure from floors, walls and surfaces occupied or transversed by animals. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with a use solution of 2 ounces of this product per gallon of water for a period of 10 minutes. Ventilate buildings and other closed spaces. Do not house animals or employ equipment until treatment has been absorbed set or dried.

COMMERCIAL FLORIST USE DIRECTIONS (*Not for use in California).***:** To clean, disinfect and deodorize hard non-porous surfaces in one step, prepare Use solution by adding 2 ounces per gallon of water (1:64). For heavy-duty cleaning, add 8 ounces per gallon of water (1:16).

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 recommended and required, with a cloth, mop, brush, sponge or sprayer.

For heavily soiled areas, a preliminary cleaning is required.

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

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 active quat. Treat all trucks, vehicles, and equipment thoroughly at a dilution ratio of 1:27 (2060 ppm active quat). Treatment can be applied to trucks, attached trailers, field harvesting equipment; including cargo area, wheels, tires, under carriage, hood,

roof, fenders and any other part of transportation equipment that can be taken into infested areas. To prevent the spread of Citrus Canker by this artificial means of transportation, treatments are made by trigger spraying, dipping or brushing, using maximum rate 2060 ppm quat. For sprayer applications use a coarse spray. After use, all surfaces which come in contact with food or crop must be rinsed with potable water. Clothing should be either thoroughly rinsed or laundered before reuse. Footwear should be rinsed before reuse.

SANITIZING NON-FOOD CONTACT SURFACE DIRECTIONS

Preparation of Sanitizer Use Solution: Add 1 ounce per 2¾ gallons of water to sanitize hard non-porous environmental surfaces. Treated surfaces must remain wet for 5 minutes. Allow to air dry.

Staphylococcus aureus
Klebsiella pneumoniae

To Sanitize and Deodorize: Apply use solution to hard inanimate, non-porous surfaces, thoroughly wetting surfaces as recommended and required with a cloth, mop, sponge or sprayer. For heavily soiled areas, a preliminary cleaning is required. For sprayer applications, use a coarse spray device. Spray 6-8 inches from surface. Rub with brush, sponge or cloth. Do not breathe spray (mist). Let stand for 5 minutes. Then wipe. Allow to air dry.

SHOE BATH SANITIZER DIRECTIONS: To prevent tracking harmful organisms into animal areas, and the packaging and storage areas of food plants, Shoe baths containing one inch of freshly made solution should 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 2 ounces of this product per gallon of water solution for 5 minutes prior to entering area. Change the sanitizing solution in the bath at least daily or sooner if solution appears dirty.

SANITIZING HATCHERY ROOMS USING FOGGING DEVICES: Remove all animals and feed from premises, vehicles and enclosures. Remove all litter and manure from floors, walls and surfaces of the room to be treated. Empty all troughs, racks and other feeding and watering appliances. Close room off so fog is confined to room to be treated. Mix 2 gallons this product to 2½ gallons water. Insert the nozzle of the fogger through a suitable opening into the room. With the setting in maximum output, fog for one minute for each 4000 cubic feet of space in the room. When fogging is completed ventilate buildings and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed or dried. Thoroughly clean all surfaces with soap or detergent and rinse with water.

SANITIZING INCUBATORS AND HATCHERS USING FOGGING DEVICES: Mix 24 ounces of this product to 122 ounces of water. Fog 3-8 ounces of this into setters and hatchers immediately after transfer. Repeat daily in setters and every 12 hours in hatchers. Discontinue hatcher treatments at least 24 hours prior to pulling the hatch. It is acceptable to fog setters and hatchers with 2 ounces per gallon solution of this product 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. Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains and waterers with soap or detergent, and rinse with potable water before reuse.

FOOD PROCESSING PLANTS USING FOGGING DEVICES

Prior to fogging, food products and packaging material must be removed from the room or carefully protected. After cleaning, fog desired areas using 1 quart per 1000 cubic feet of room area with a solution containing 3 ounces of product to 1 gallon of water (1,200 ppm). Vacate the area of all personnel for a minimum of 2 hours after fogging. All food contact surfaces must be thoroughly rinsed prior to reuse with potable water.

NOTE: The fog generated is irritating to the eyes, skin and mucous membranes. Under no circumstances should a room or building be entered by anyone within two hours of the actual fogging. If the building must be entered, then the individuals entering the building must wear a self-contained respirator approved by NIOSH/MSHA, goggles, long sleeves and long pants.

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

SALON/BARBER INSTRUMENTS AND TOOLS SANITIZER DIRECTIONS: Pre-clean soiled instruments and tools. Completely immerse water safe nonporous instruments and tools in a solution of 1 ounce per 2¾ gallons of water for at least 5 minutes. Rinse thoroughly and dry before use. Prepare a fresh solution at least daily or more often if solution becomes cloudy or soiled.

NOTE: Plastics may remain immersed until ready to use. Stainless steel shears and instruments must be removed after 5 minutes, rinsed, dried, and kept in a clean non-contaminated receptacle. Prolonged soaking may cause damage to metal instruments.

Footbath Sanitizer Directions: To remove body oils, dead tissue, soil and all other buildups or organic matter on inanimate surfaces after using the footbath, drain the water and thoroughly clean all hard, non-porous surfaces with soap or detergent, then rinse with water. Saturate surfaces with a use solution of 1 oz per 2¾ gallon of water to exposed surfaces with a cloth, mop, sponge or sprayer. Brush or swab thoroughly and allow solution to stand for 5 minutes. For spray applications, use a coarse spray device. Do not breathe spray. After the unit has been thoroughly sanitized, rinse all cleaned surfaces with fresh water. Do not use equipment until treatment has been absorbed, set or dried.

Humidifier Sanitizer Directions *(Not for use in California.)***:** Thoroughly clean water tank and filters. Add 2 ounces of this product per gallon of refill water. Not for use in heat or atomizing type humidifiers.

WATER/SMOKE DAMAGE RESTORATION

(Not Applicable in California)

Effective against odor causing bacteria and fungi for home, institutional, industrial and hospital use. This product is particularly suitable for use in water damage restoration situations against odor causing bacteria on the following

porous and semi-porous materials: carpets, carpet cushion, sub floors, drywall, trim, and frame lumber, tackless strip and paneling. Using solutions recommended, saturate affected materials with enough product to remain wet for at least 10 minutes. Use proper ventilation.

Sewer backup & river flooding: During mitigation procedures, dilute 2 to 4 ounces of this product per gallon of water allowing for the diluting effect of absorbed water within saturated materials. Remove gross filth or heavy soil along with non-salvageable materials. Saturate all affective areas with a sprayer using a coarse spray tip, before and after cleaning and extraction.

Carpets, Carpet cushions and other porous materials such as sub floors, drywall, trim and frame lumber, tackless strip and paneling: For water damage from a clean water source, extract excess water. Test hidden area for colorfastness. Dilute 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 through extraction. Dry rapidly and thoroughly.

Special Instructions for Cleaning Carpet Against Odor Causing Bacteria: This product may be used in industrial and institutional areas such as homes, motels & hotel chains, nursing homes, schools and hospital. For use on wet cleanable synthetic fibers. Do not use on wool. Vacuum carpet thoroughly prior to cleaning. Test fabric for color fastness.

For portable extraction units: Mix 2 ounces of this product per gallon of water.

For truck mounted extraction machines: Mix 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 SANITIZER AGAINST ODOR-CAUSING BACTERIA, FOR HOME, INSTITUTIONAL, INDUSTRIAL AND HOSPITAL USE *(Not Applicable in California)*
This product sanitizes the carpet by controlling/reducing the growth of odor-causing bacteria. It can be used in industrial and institutional areas such as homes, motels, hotels chains, nursing homes and hospitals.

Vacuum carpet thoroughly prior to application. Mix 2 ounces of product per gallon of water. 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 color fastness of carpet before use. Apply diluted product to a small concealed spot, then rub with a clean white cloth. If color changes or transfers to cloth, a water-based product should not be used.

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

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

SMOKE DAMAGE RESTORATION *(Not Applicable in California)***:** Effective against odor causing bacteria and fungi for home, institutional, industrial and hospital use: This product is particularly suitable for use in smoke damage restoration situations against odor causing bacteria on the following porous and semi-porous materials: carpets, carpet cushion, sub floors, drywall, trim, and frame lumber, tackless strip and paneling. Follow directions as outlined in the Water Damage Restoration section. Using solutions recommended, saturate affected materials with enough product to remain wet for at least 10 minutes. Use proper ventilation.

MUSHROOM FARM INDUSTRY USE DIRECTIONS
Site Preparation: The first step in any on going sanitation program should be the removal of gross contamination and debris. This may be accomplished by using a shovel, broom, or vacuum, depending on the area to be disinfected.

Disinfection: Use 2 ounces of this product per gallon of water (or equivalent dilution). Wet all surfaces thoroughly. Treated surfaces should be allowed to remain wet for 10 minutes. Let air-dry. For heavily soiled areas, preclean first. Prepare a fresh solution for each use.
For Heavy Duty Cleaning: When greater cleaning is desired, use 4 ounces of this product per gallon of water (or equivalent dilution). Heavily soiled areas may require repeated cleaning before treatment.

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

100 Nisus Drive
Rockford, TN 37853
800-264-0870
www.nisuscorp.com

MATERIAL SAFETY DATA SHEET

Issue Date 9/05

Nisus DSV

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

Section 1: PRODUCT IDENTIFICATION

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 Formula: $[R_1\text{-}N(CH_3)_2CH_2C_6H_5]^+Cl^-{}^+[R_2\text{-}N(CH_3)_2CH_2C_6H_4C_2H_5]^+Cl^-$
C.A.S. No.: (See Below)
D.O.T. Proper
Shipping Name: Disinfectants, Liquid, Corrosive NOS (Quaternary Ammonium Compound), 8, UN 1903, P.G.III

Section 2: HAZARDOUS INGREDIENTS

	Weight	TWA/TLV
Alkyl (C_{12}-C_{16}) dimethyl benzyl ammonium chloride (CAS 68424-85-1)	2.200%	ND
Octyl decyl dimethyl ammonium chloride (CAS 32426-11-2)	1.650%	ND
Dioctyl dimethyl ammonium chloride (CAS 5538-94-3)	0.825%	ND
Didecyl dimethyl ammonium chloride (CAS 7173-51-5)	0.825%	ND
Sodium Carbonate Soda Ash (CAS 497-19-8)	0.500%	ND
Tetrasodium ethylenediamine tetraacetate (CAS 64-02-8)	1.900%	ND
Polyethylene glycol 9 moles (CAS 68131-40-8)	2.500%	ND

Section 3: PHYSICAL AND CHEMICAL CHARACTERISTICS (FIRE & EXPLOSION DATA)

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 and Odor: Colorless to light straw in colorBenzaldehyde Odor
Density: 8.4 lbs./gallon (H_2O = 1)
Flash Point: over 200°F
Auto Ignition Temp.: ND
Lower Explosion (%): ND
Upper Explosion (%): ND
Extinguishing Media: Dry Chemical, Water Fog, CO_2, Foam
Special Fire Fighting Procedures: Cool fire exposed containers with spray, Must wear MSHA/NIOSH approved self contained breathing apparatus.
Unusual Fire Explosion Hazards: Explosive mixtures can form with air. Combustion products are toxic. Solvents vapors can travel to an ignition source and flash back.

Section 4: PHYSICAL HAZARDS

Stability: Stable
Conditions to avoid: NA
Incompatibility: Strong oxidizers or reducing agents
Conditions to avoid: Mixing with strong oxidizers or reducing agents
Hazardous Polymerization: Will not occur
Hazardous Decomposition Products: Toxic hydrogen chloride fumes, oxides of carbon and nitrogen.

Section 5: HEALTH HAZARDS

Routes of Entry: Skin Contact, Inhalation, Eye Contact.
Inhalation: Irritation of mucous membrane can be caused by solvent vapors or mists of products. **Eye Contact:** Corrosive. Severe eye damage can result from direct contact. **Skin Contact:** Severe Irritation **Ingestion:** May be fatal. Burning pain in the mouth, throat, abdomen, severe swelling of the larynx, skeletal muscle paralysis affecting the ability to breathe, circulatory shock, convulsions.

First Aid

Skin and eye: In case of contact, immediately flush the eyes and skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before reuse. **Ingestion:** If swallowed drink promptly, a large quantity of egg whites, gelatin solution or, if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately. Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

Chemicals Listed as Carcinogen by:

OSHA	-NO
I.A.R.C. Monographs	-NO
National Toxicology Program	-NO

Section 6: TOXICITY

Acute Oral LD_{50} - 2.72g/kg. **Acute Dermal** – ND **Primary Skin** – Corrosive **Primary Eye** - Corrosive

Section 7: SPECIAL PROTECTION INFORMATION

Ventilation type: Mechanical (Explosion proof)
Respiratory Protection: None required if good ventilation is maintained. For mist or vapor wear NIOSH Approved respirator.
Protective Gloves: Rubber or Neoprene
Eye Protection: Splashproof safety goggles
Other Equipment: Impervious apron, eyewash facility, emergency shower, faceshield.

SECTION 8: SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURE

Handling and Storage: Keep from freezing. Store in original container. **Spill and Leak Procedure:** Remove ignition sources. Wear respirator. Small spills may be mopped up, flushed away with water or absorbed on some absorbent material and incinerated. Large spills should be contained; the material then moved into containers and disposed of by approved methods for hazardous wastes. **Waste Disposal:** Incinerate. Make sure that all federal, state and local regulations are observed.

Nisus CORPORATION

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Coronavirus and UVC

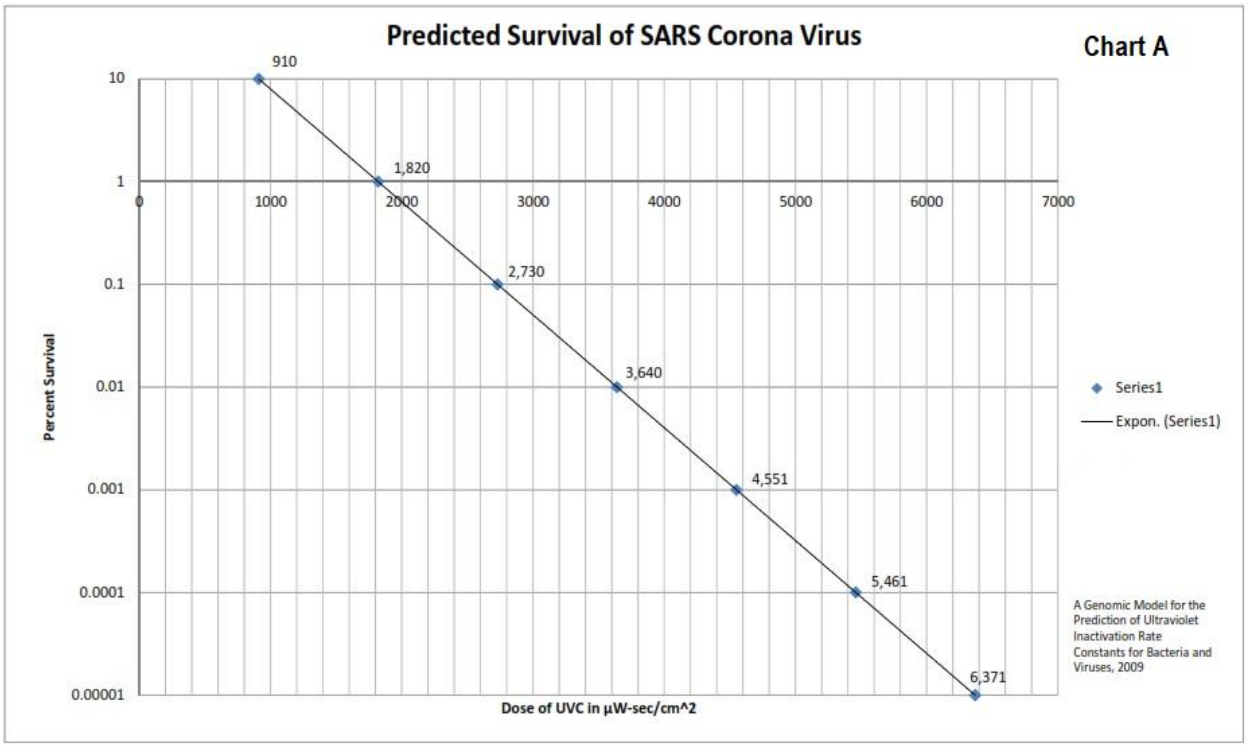
The 2019 Novel Coronavirus, or COVID-19, is a new respiratory virus first identified in Wuhan, Hubei Province, China.

Coronaviruses are a large family of viruses that are common in many different species of animals, including swine, cats, cattle, camels and bats. Rarely, animal coronaviruses can infect people and then spread between people such as with MERS, SARS, and now with COVID-19.

It's important to note that how easily a virus spreads person-to-person can vary. Some viruses are highly contagious, while other viruses are less so. There is much more to learn about the transmissibility, severity, and other features associated with COVID-19 and investigations are ongoing.

Most often, spread of novel coronavirus from person-to-person is believed to happen among close contacts (about 6 ft or 2m). Person-to-person spread is thought to occur mainly via respiratory droplet nuclei produced when an infected person coughs or sneezes, like how influenza and other respiratory pathogens spread. These droplet nuclei can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs. If these droplets are hearty enough to survive a period of time in the air, they can be spread in a building by the air handling system.

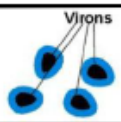
Previous Corona family of viruses have shared similar traits of vulnerability to UVC at varying dosage (see chart A). Viruses that are airborne can be safeguarded against with high doses of UVC in the Airstream. Steril-Aire has control mechanisms to stop that spread.



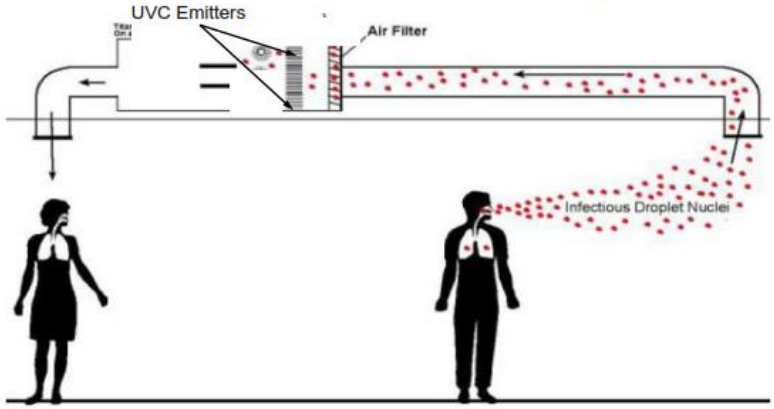
For the most effective microbial control, Steril-Aire UV germicidal Emitters are installed on the supply side of the system, downstream from the cooling coil and above the drain pan. This location provides more effective biofilm and microbial control than in-duct UVC installations.

The recirculating air in HVAC systems creates redundancy in exposing microorganisms to UVC, ensuring multiple passes so the light energy is effective against large quantities of airborne microorganisms. Steril-Aire UVC delivers the highest UVC output, driving HVAC system efficiency while improving indoor air quality.

Stages of Infectious Droplets & Droplet Nuclei:

	Large Infectious Droplets: Mucus/water encased Viruses are aerosolised by the infector or by toilet water. These quickly fall to the ground after traveling up to 3 feet (1 m)
	Small Infectious Droplets: Mucus/water coating starts to evaporate. These will travel 3 to 6 Feet (1-2 m) before falling to the ground. These droplets can become **Droplet Nuclei**
	**Infectious Droplet Nuclei:** Mucus/water coating has totally evaporated leaving only the VIRON. **This is a Droplet Nuclei** Droplet Nuclei are so microscopic they can float in the air indefinitely

How Steril-Aire Emitters inactivate airborne Infectious Droplet Nuclei:



Steril-Aire is the first manufacturer of UVC solutions for the air and air handlers. Since 1994, solutions from this company have consistently been found to be the highest intensity output of UVC of any commercially available products. Steril-Aire also utilizes a software configuration tool that allows a customized solution to be easily configured and shows the intensity of UVC being generated. Steril-Aire's SmartTool™ provides an environment to design the system that best addresses the needs for a science based UVC solution to the problems of airborne viruses.

If your goal is to maintain higher indoor air quality and protect those in your environment, then your best option is to contact a Steril-Aire Authorized distributor or Steril-Aire directly at 818-565-1128 or Coronavirus@steril-aire.com

Breathe Pure Air

- Air Logix Sanitizing Division
- 787.305.0025
- office@www.airlogixpr.com
- www.airlogixpr.com

AIR LOGIX
COMMERCIAL AIR SYSTEMS