



## FOOD SERVICE DISINFECTANT CLEANER

AVAILABLE IN USA ONLY

- Phosphate free formula
- For use as a sanitizer on food contact surfaces at 200-400 ppm quat active
- No rinse disinfectant cleaner

	ES24+
APPEARANCE	Clear pale yellow liquid
ODOR	None
SOLUBILITY	Soluble
RELATIVE DENSITY	~1.06
pH-VALUE	12.6-13.6
VISCOSITY	Similar to water
SHELF LIFE	3 Years

SIZES	
ES24+	4.73 L (1.25 U.S. gallon)

### ACTIVE INGREDIENTS

n-Alkyl (60% C14, 30% C16, 5% C12, 5% C18)  
 dimethyl benzyl ammonium chlorides.....2.25%  
 n-Alkyl (68% C12, 32% C14) dimethyl  
 ethylbenzyl ammonium chlorides .....2.25%

### EFFECTIVE CLEANING, DEODORIZING, SANITIZING & DISINFECTION IN:

- Athletic/Recreational Facilities
- Food Processing Plants
- Food Service Establishments
- Hospitals
- Lodging
- Establishments
- Manufacturing Facilities
- Nursing Homes
- Office Buildings
- Retail Businesses
- Schools

**BACTERICIDAL ACTIVITY** - When diluted at the rate of 2 ounces per gallon of water, this product exhibits effective disinfectant activity against the organisms:

Pseudomonas aeruginosa PRD 10  
 Brevibacterium ammoniagenes  
 Escherichia coli  
 Streptococcus faecalis  
 Klebsiella pneumoniae  
 Shigella dysenteriae  
 Salmonella (schottmuelleri) enterica  
 Enterobacter aerogenes  
 Salmonella (choleraesuis) enterica  
 Staphylococcus aureus  
 Streptococcus salivarius  
 Methicillin resistant Staphylococcus aureus (MRSA)  
 Listeria monocytogenes  
 Vancomycin intermediate resistant Staphylococcus aureus (VISA)  
 Streptococcus pyogenes (Clinical-Flesh Eating Strain, BIRD M3)

**FUNGICIDAL ACTIVITY** - At the 2 ounce per gallon dilution, this product is also fungicidal against:

Pathogenic fungi  
 Trichophyton mentagrophytes (Athlete's Foot Fungus)

**\*VIRUCIDAL ACTIVITY** - This product, when used on environmental, inanimate, hard, non-porous surfaces at 2 ounces per gallon of water, exhibits effective virucidal activity against:

Influenza A2/Japan (representative of the common flu virus)  
 Human Coronavirus  
 Herpes Simplex Type 1 (causative agent of fever blisters)  
 Hepatitis B Virus (HBV)  
 Adenovirus Type 2 (causative agent of upper respiratory infections)  
 Hepatitis C Virus (HCV)  
 Vaccinia virus (representative of the Pox virus group)  
 Norovirus (Norwalk Virus)  
 Human Immunodeficiency Virus Type I (HIV-1)  
 Feline calicivirus (FCV)  
 Bovine Viral Diarrhea Virus (BVDV)  
 SARS Associated Coronavirus  
 Porcine Respiratory & Reproductive Syndrome Virus (PRRSV)  
 Avian Influenza A

At 8 ounces per gallon or equivalent dilution rate (2812 ppm active quat), this product is effective against the following viruses on hard non-porous environmental surfaces:

Canine Parvovirus (CPV)  
 Porcine Parvovirus  
 Canine Adenovirus  
 Feline Rhinotracheitis  
 Canine Coronavirus  
 Feline Coronavirus  
 Canine Parainfluenza Virus  
 Feline Picornavirus  
 Feline Panleukopenia (Feline Parvovirus)

**MILDEWSTAT** - To control mold and mildew on pre-cleaned, hard, non-porous surfaces, add 2 ounces of this product per gallon of water.

## DIRECTIONS FOR USE

**DISINFECTION** - To disinfect inanimate, hard surfaces add 2 ounces of this product per gallon of water. Apply solution with a mop, cloth, sponge, hand pump trigger sprayer or low pressure coarse sprayer so as to wet all surfaces thoroughly. Allow to remain wet for 10 minutes, then remove excess liquid.

For heavily soiled areas, a pre-cleaning step is required.

**To disinfect toilet bowls:** flush toilet, add 2 ounces of this product directly to the bowl water. Swab the bowl completely using a scrub brush or toilet mop, making sure to get under the rim. Let stand for 10 minutes and flush.

**To disinfect food processing premises:** Before using this product, food products and packaging materials must be removed from the area or carefully protected. For floors, walls, and storage areas, add 2 ounces of this product per gallon of water. For heavily soiled areas, a pre-cleaning step is required. Apply solution with a mop, cloth, sponge, hand pump trigger sprayer or low pressure coarse sprayer so as to wet all surfaces thoroughly. Allow 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:** Before using this product, food products and packaging materials must be removed from the area or carefully protected. For countertops, appliances, tables, add 2 ounces of this product per gallon of water. For heavily soiled areas, a pre-cleaning step is required. Apply solution with a cloth, sponge, hand pump trigger sprayer or low pressure coarse sprayer so as to wet all surfaces thoroughly. Allow the surface to remain wet for 10 minutes, then remove excess liquid and rinse the surface with potable water. This product cannot be used to clean the following food contact surfaces: utensils, glassware and dishes.

**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) (703 ppm active quat). Follow the Disinfectant directions above.

**GENERAL CLEANING** – Apply this product to soiled area with a mop, cloth, sponge, hand pump trigger sprayer or low pressure coarse sprayer. This product can be diluted at 2 ounces per gallon or applied at full strength. Thoroughly wet soiled surface and scrub as necessary.

**SANITIZATION** – For use in restaurants, dairies, food processing plants, and bars. When used as directed, this product is an effective sanitizer against Escherichia coli and Staphylococcus aureus. Remove all gross food particles and soil from areas, which are to be sanitized, with a good detergent, pre-flush, pre-soak or pre-scrape treatment. Rinse with a potable water rinse. To sanitize previously cleaned and rinsed, non-porous food contact surfaces, prepare a 200 - 400 ppm active quaternary solution by adding 2 - 4 ounces of this product to 3.5 gallons of water (or equivalent use dilution).

**From a closed loop dilution center:** Apply 200 - 400 ppm active solution to the surface to be sanitized. Surfaces should remain wet for at least 1 minute, followed by adequate draining and air drying.

## DIRECTIONS FOR SANITIZING FOOD PROCESSING EQUIPMENT, UTENSILS, AND FOOD CONTACT ARTICLES REGULATED BY 40CFR sec 180.940.

1. Scrape, flush or pre-soak articles (whether mobile or stationary) to remove gross food particles and soil.
2. Thoroughly wash articles with an appropriate detergent or cleaner.
3. Rinse articles thoroughly with potable water.
4. Sanitize articles using a solution of 2 - 4 ounces of this product per 3.5 gallons of water (or equivalent dilution) (200 - 400 ppm active quaternary). Articles to be immersed in use-solution must remain in solution for 60 seconds. Articles too large for immersion must be thoroughly wetted by rinsing, spraying or swabbing.
5. Remove immersed items from use-solution to drain and then air dry. Non-immersed items must also be allowed to air dry.

## U.S. PUBLIC HEALTH SERVICE - FOOD SERVICE SANITIZATION RECOMMENDATIONS

### CLEANING AND SANITIZING:

Equipment and utensils shall be thoroughly pre-flushed or pre-scraped, and when necessary, pre-soaked to remove gross food particles and soil.

1. Thoroughly wash equipment and utensils in a hot detergent solution. Rinse utensils and equipment thoroughly with potable water.
2. Sanitize equipment and utensils by immersing in 2 - 4 ounces of this product per 3.5 gallons (or equivalent dilution) of water (200 - 400 ppm active quaternary) for at least 60 seconds at a temperature of 75°F. This dilution is equivalent to a solution containing 50 ppm available chlorine.
3. Allow sanitized surfaces to drain and air dry. Do not rinse.
4. For equipment and utensils too large to sanitize by immersion, apply 2 - 4 ounces of this product per 3.5 gallons of water (or equivalent dilution) (200 - 400 ppm active quaternary) by rinsing, spraying or swabbing. Allow the items to remain thoroughly wet for at least 60 seconds, then let air dry. Do not rinse.

**Sanitizing of Food Processing Equipment (Ice Machines) and Other Hard Surfaces In Food Contact Locations:**

For sanitizing food processing equipment, dairy equipment, refrigerated storage and display equipment and other hard, nonporous surfaces. Equipment and utensils must be thoroughly pre-flushed or pre-scraped and when necessary pre-soaked to remove gross food particles. NO POTABLE RINSE IS ALLOWED.

1. Turn off refrigeration.
2. Thoroughly wash surfaces with a compatible detergent or cleaner, then rinse thoroughly with potable water.
3. Apply a solution of 2 – 4 ounces of this product in 3.5 gallons of water (or equivalent use dilution) (200 - 400 ppm active quaternary) by low pressure coarse sprayer, direct pouring or by recirculating through the system. Surfaces must remain wet for at least one minute followed by complete draining and drying. Fresh solution must be prepared for each cleaning. No potable water rinse is required when product is used as directed.
4. Return machine to service.

**Directions for Restaurant and Bar Sanitizer:**

Equipment and utensils must be thoroughly pre-flushed or pre-scraped and when necessary pre-soaked to remove gross food particles and soil. Then thoroughly wash or flush objects with a good detergent or compatible cleaner followed by a potable water rinse before application of sanitizing solution.

For pre-cleaned dishes, glassware, silverware, cooking utensils, immerse in a solution containing 2 - 4 ounces of this product per 3.5 gallons of water (or equivalent use dilution) (200 - 400 ppm active quaternary). Allow surface to remain wet for at least 60 seconds. No rinse is allowed.

For use as a sanitizer on dishes, glassware, silverware, cooking utensils. For heavily soiled areas, remove gross food particles by pre-flush, pre-scrape and pre-soak when necessary. Wash thoroughly with detergent or compatible cleaner then rinse with potable water prior to application of this product. Then immerse in a sanitizing solution from Closed Loop Dilution Center (200 - 400 ppm active quaternary). Allow surface to remain wet for at least 60 seconds. Drain thoroughly before reuse. No rinse is allowed.

**Directions For Sanitizing Food Processing Equipment and Dairies:**

Equipment and utensils must be thoroughly preflushed or pre-scraped and when necessary pre-soaked to remove gross food particles. Thoroughly wash surfaces with a compatible detergent or cleaner, then rinse thoroughly with potable water. Apply sanitizing solution containing 2 - 4 ounces of this product per 3.5 gallons of water (or equivalent use dilution) (200 - 400 ppm active quaternary). Surfaces must remain thoroughly wet for at least 60 seconds by immersion or with a cloth, mop, sponge or sprayer. Allow equipment and utensils to drain thoroughly and air dry before reuse. No rinse is allowed.

**Beverage Dispensing Equipment Sanitizer Directions:**

For sanitizing of bottling or pre-mix dispensing equipment, thoroughly wash surfaces with a compatible detergent or cleaner, then rinse thoroughly with potable water. Fill equipment with a solution of 2 - 4 ounces of this product per 3.5 gallons of water (or equivalent use dilution) (200 - 400 ppm active quaternary). Allow use-solution to remain in equipment for at least 60 seconds, or until operations resume at which time the use-solution must be drained from the system. During changeover between products the system must be cleaned, rinsed and flushed with the use-solution for at least 1 minute to insure removal of flavors. Drain thoroughly and allow to air dry before reuse. No rinse is allowed.

**Sanitary Filling Equipment Sanitizer Directions:** For use in sanitizing bottles or cans in the final rinse application. The product is to be proportioned into the final rinse water line of the container washer or rinser in the concentration of 200 - 400 ppm active quaternary. Prepare a solution of 2 - 4 ounces of this product per 3.5 gallons of water (or equivalent use dilution) (200 - 400 ppm active quaternary) for the exterior application for the filler and closing machine. Allow surfaces to remain wet for at least 60 seconds. Drain thoroughly and allow to air dry before reuse. No rinse is allowed.

**Storage Tank Sanitizer Directions:** For sanitizing beer fermentation and holding tanks, citrus and food processing storage and holding tanks. Thoroughly wash surfaces with a compatible detergent or cleaner, then rinse thoroughly with potable water. Prepare a solution of 2 - 4 ounces of this product per 3.5 gallons of water (or equivalent use dilution) (200 - 400 ppm active quaternary) for mechanical or automated systems. Allow surfaces to remain wet for at least 60 seconds. Drain thoroughly before reuse. No rinse allowed. For mechanical operations or automated systems, the used sanitizing solution must not be reused for sanitizing.

**For Continuous Treatment of Meat and Poultry or Fruit and Vegetable Conveyors:**

Remove gross food particles and excess soil by a pre-flush or pre-scrape, wash with a good detergent or compatible cleaner, rinse equipment thoroughly with potable water, then rinse equipment with sanitizing solution. To sanitize the belt, apply this product at a 200 - 400 ppm quaternary level (2 - 4 ounces per 3.5 gallons of water) (or equivalent use dilution) to conveyors with suitable feeding equipment. Do not allow this use-solution to be sprayed directly on food. Controlled volumes of sanitizer are applied to the return portion of conveyor through nozzles so located as to permit maximum drainage of sanitizer from equipment and to prevent puddles on top of the belt. During interruptions in operation, coarse spray the equipment, peelers, collators, slicers and saws with this product at a dilution of 200 - 400 ppm active quaternary. Conveyor equipment must be free of product when applying this coarse spray.

**For Sanitizing In Fisheries, Milk, Citrus, Potato and Ice Cream Processing Plants:**

For use as a sanitizer on conveyor belts and equipment to reduce or eliminate odors in the processing area. Also, for use on filling equipment to reduce bacteria associated with condensation on equipment and pipes. Follow directions for sanitizing food contact surfaces.

**CAUTION:** Refer to label for complete instructions, dilutions, safety requirements and kill claims

**DISPOSAL**

Dispose of used/unwanted product according to state and local regulations. Offer container for recycling.

**PERSONAL PROTECTION**

Please refer to product label and SDS.