

Regulatory Documents and Resources:

**EPA List N: Disinfectants for Use Against SARS-CoV-2, the Cause of COVID-19,
EPA registration number, Disinfectant Product labels**

Proper Electrostatic Disinfecting

1. Purpose

- a. Define a protocol for a process of proper disinfecting of non-porous surfaces using electrostatic spray equipment.

2. Scope

- a. Proper disinfecting of surfaces requires an understanding of the process that takes into account application procedures, disinfectant contact time, dilutions, pathogens of concern and coverage rates.
- b. This SOP is specific to the use of Electrostatic Spray Equipment for application of EPA registered disinfectants.

3. Definitions

- a. **EPA: Environmental Protection Agency:** An agency of the U.S. Government that is responsible for regulating pesticides. Disinfectants are referred to as “Antimicrobial Pesticides” by the EPA.
- b. **EPA List N:** Disinfectants for use against SARS-Cov-2, the cause of COVID-19. A list of disinfectants that make Emerging Viral Pathogen Claims for the virus that causes COVID-19
- c. **EPA Registration Number:** xxx-xx-xxxx The first 2 sets of numbers defines the primary registrant and formula. The last four digits represents the EPA establishment number that can manufacture, package, and distribute the formulation under a company’s own brand name.
- d. **Hospital Grade Disinfectant:** Disinfectants that have minimum efficacy claims for *Pseudomonas Aeruginosa*, *Staphylococcus Aureus*, and *Salmonella*.
- e. **EPA Emerging Pathogens Policy:** A policy of the Environmental Protection Agency to address previously unknown pathogens. The policy allows licensed products to make off label claims of disinfection against a previously unknown (emerging pathogen) pathogen if the product has claims for a harder to kill pathogen.
- f. **Disinfectant Contact Time:** The time disinfectant should remain moist on a surface to kill a specific pathogen.
- g. **Spraying Devices:** These devices typically have wet droplet sizes of 40 microns or greater.
- h. **Fogging or Misting Devices:** These devices have wet droplet sizes of 5-15 microns.
- i. **Electrostatic Sprayers:** Low pressure devices capable of spraying a disinfectant in droplet sizes ranging from 40 to 110 microns. These devices are based upon established industrial technology and work by applying a positive electrical charge to spray droplets that cause the droplets to be attracted to oppositely charged surfaces. This results in more uniform surface coverage and the ability to cover surfaces out of the line of site.



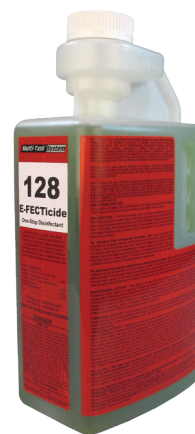
4.Equipment: E-Spray Back Pack and Hand Held Units

- a. **E-Spray Back Pack:** A 16V lithium ion re-chargeable battery electrostatic sprayer with capacity to hold 9 quarts of disinfecting solution.
- b. **E-Spray Hand Held:** A 16V lithium ion re-chargeable battery electrostatic sprayer with capacity to hold 1 quart of disinfecting solution.
- c. **Appendix:** Specifications and other details.



5.Disinfectant Chemicals

- a. **Types of Disinfectants:** Retail disinfecting products are designed for consumer/home use. Commercial Disinfectants are usually hospital grade disinfectants and specifically state “For Commercial and Industrial Use Only”.
- b. **Emerging Viral Pathogen Claims:** Multi-Clean offers a number of hospital grade disinfectants that meet the EPA’s Emerging Virus Pathogen Policy and therefore can be used against the novel human corona virus, SARS-CoV-2 Virus, the cause of COVID-19.
- c. **Emerging Viral Pathogen Claims**
- d. **All efficacy claims**
- e. **Verification of State Registrations**

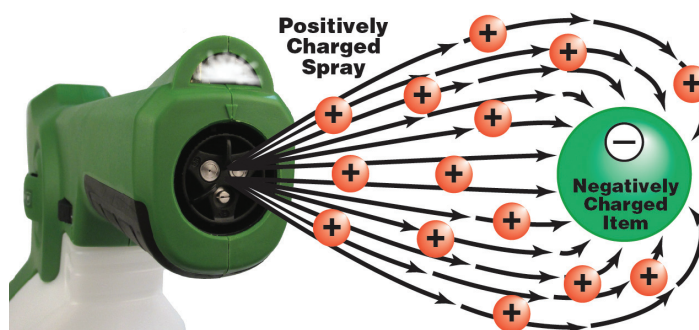


The Multi-Clean disinfectant cleaners that meet the criteria for the U.S. EPA’s Emerging Pathogen Policy and/or are listed on US EPA’s “List N” for use on non-critical, hard, non-porous surfaces are as follows:

Multi-Clean Product Name	EPA Reg No.	Supporting Viral Claim	Contact Time
64 Millennium Q	1839-95-5449	Norovirus	10 minutes
128 E-FECTicide	6836-365-5449	Norovirus	5 minutes
256 Century Q	47371-129-5449	Adenovirus	10 minutes
Microcide TB	1839-83-5449	Canine Parvovirus	10 minutes

6.Frequency

- a. Frequency of disinfection will take into account seasonal factors (flu season, pandemics), traffic counts, high touch point surfaces, social distancing strategies, and area/room turnovers.



7. Process: E-Spray

- a. Preparation for Application
- b. Charging and insertion of Battery
- c. Proper Disinfectant Dilution
- d. Filling reservoir with disinfecting solution
- e. Using PPE
- f. Pre-Cleaning of Soiled Surfaces.
- g. Covering or stowing of Food items.
- h. Set Up of Unit in Preparation for use.
- i. Testing of unit for proper operation
- j. Application of Disinfecting Solution
- k. Troubleshooting
- l. End of application system maintenance
- m. Storage



8. Process: E-Spray System - Preliminary

• **Charge Battery:** Place battery on charger when project is complete. Re-charge time is about 3 hours. Remove from charger and insert into the unit.

• **Dilute disinfectant in accordance with the direction on the label.** Note it is a violation of federal law to use a disinfectant that is inconsistent with label instructions. Concentrated disinfectant must be measured accurately and only mixed with water. Do not mix with our cleaning compounds. Use a measuring cup. Alternatively, some disinfectant packaging allows for accurate measurement with a built in squeeze and pour OR through an automatic dispensing system to obtain precision dilutions.



• **Filling Reservoir:** Fill reservoir of E-Spray unit only with the properly diluted disinfectant.

• **Set the Spray Nozzle:** Select the appropriate droplet size on the adjustable nozzle to 80 microns for disinfectants with a 10 minute contact time or 40 microns for disinfectants with a contact time of 5 minutes or less.



• **PPE:** Technician conducting disinfection should wear a dust/mist mask (N95 or equivalent), eye protection and disposable gloves. Anyone in the area should also wear PPE or be at least 20 feet away from the Technician.



Application

Step 1: Prepare the area

Pre-Cleaning of Soiled Surfaces: Surfaces that are visibly soiled require a pre-cleaning step. Remove debris by wiping with a cloth moistened with an appropriate cleaning product.

Cover or stow food items: Any food items should be stowed away or covered prior to E-Spray disinfectant application.

Consider removing paper products from the area to be treated.

Signs or warning indicators: Place signage or secure area to keep bystanders outside the treatment area while E-Spray disinfection is in progress.



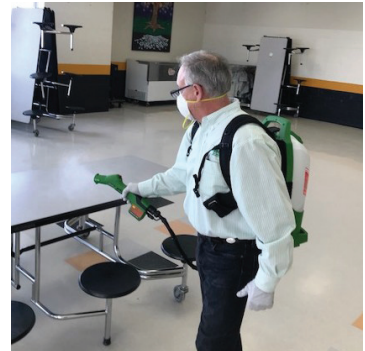
Step 2: E-Spray Disinfection Application

1. Standing with the sprayer nozzle approximately 2–4 feet away from surfaces, spray individual surfaces and objects, working from high to low areas using a slow, side to side motion until surfaces are covered with disinfectant.

2. When using the Multi-Clean disinfectant¹, spray surfaces to ensure visible wetness for the desired contact time. Allow surfaces to air dry.

3. Wiping or rinsing is not required after E-Spray disinfection in most cases; however, you may choose to wipe specific surfaces to polish them (e.g., glass, mirrors) or to remove visible residue after the contact time is achieved. Primary food preparation surfaces must be rinsed with potable water after the specified contact time.

4. Bystanders can immediately enter the area after 10 minutes.



Step 3: Completion and System Maintenance

- Open area to traffic after surfaces dry (10 minutes)

Perform System Maintenance

- Empty Reservoir: Do not store unit with disinfectant in tank.
- Fill Reservoir with water and attach to sprayer.
- Activate unit and spray for 5 seconds to flush unit, then empty tank.
- Weekly: Remove nozzle, rinse with water, then re-install.
- Monthly: Remove nozzle, soak in delimer or white vinegar for two hours to remove hard water residue.



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