

Disinfectant Application Methods and Approved Disinfectants

The current information available on SARS-CoV-2 virus (COVID-19) transmission indicate that the virus may be transmitted through contaminated surfaces. Although not the most common mode of transmission, the virus may remain viable on surfaces up to 7 days depending on the surface and surface conditions. The Environmental Protection Agency (EPA) has compiled a list ([List N](#)) of approved disinfectants to be used to control COVID-19. The disinfectant application methods also vary from electrostatic sprayers, air sprayers, hand held sprayers to cloth/wipes dipped in disinfectant solutions. The use of disinfectants regardless of method of application poses risks to applicators and building occupants if not used properly. All individuals involved in the use of disinfectants must be trained and informed of the hazards and manufacturer recommended use protocols. At Job Corps facilities the disinfectant application methods must be selected based on the extent (size) of area requiring disinfection. The electrostatic spraying or fogging method is used to disinfect large contaminated areas. This type of spray application must be limited to indoor spaces. Based on Centers for Disease Control and Prevention (CDC) guidelines spray application of disinfectants should not be done outdoors. Disinfection of smaller areas may be done by wiping with a cloth saturated with disinfectant solution or complete coverage of small area or object with a hand held disinfectant spray bottle and wiping down.

The following table lists four commercially available disinfectant sprayers and related information.

Product name	Key features	Manufacturer	Cost
OW – DS-3000 – Battery Powered	<ul style="list-style-type: none"> • 22-feet of Spraying Range • ULV cold fogging technology • Battery-powered & Portable • Rechargeable Lithium-Ion Battery • Operating Time Up To 3 hours • 300ml/ Minute Atomization Rate • 10-150 UM Adjustable Droplet Size 	Oil Works & Company https://oilworks.co/product/disinfectant-sprayer-300/	\$749.99
Disinfect Blast Pro ES790 Electrostatic Sprayer	<ul style="list-style-type: none"> • Effectively and efficiently cover up to 21,500 square feet on a single tank of fluid. • Electrostatic functionality charges particles that causes them to evenly coat and spread out on surfaces. • Able to function with fan on and fan off giving the sprayer extended range when needed. • 3.5 hour working time allows for ample disinfection time without being restrained by a power cord. • Variety of nozzle sprayer sizes enables droplet size customization for best application of disinfectant. 	RehabMart https://www.rehabmart.com/product/professional-electrostatic-backpack-disinfectant-sprayer-48819.html	\$2,295.00
Victory Professional	<ul style="list-style-type: none"> • Patented electrostatic charge penetrates chemical providing 	Pittsburgh Spray Equipment Company.	\$1,799.99

Product name	Key features	Manufacturer	Cost
Cordless Electrostatic Disinfectant Backpack Sprayer	<ul style="list-style-type: none"> a thin, even spray pattern on all surfaces Removable Easy Fill HDPE tank holds 2.25 gallons of chemical, allowing you to coat up to 23,000 sq. ft. Cordless convenience allows for effortless movement room to room 3-in-1 nozzle allows you to set particle size to match your application 4ft hose with quick release valve allows for comfortable reach and maximum maneuverability 	https://pittsburghsprayequip.com/products/victory-professional-cordless-electrostatic-backpack-sprayer?keyword=&gclid=EA1aIQobChMI_4vphPfk6gIVDorICh3DBQnUEAYYByABEgJI_D_BwE	
EPIX360™ Electrostatic Disinfectant Sprayer	<ul style="list-style-type: none"> Bipolar positive (+) and negative (-) Compatible with any water-soluble solution Droplet size: 75 microns Battery life: 20 tanks on a single charge Droplet size category (ASABE S-572.1) very fine (VF): 60-145 microns Coverage: 4,000 ft² 	emist https://store.emist.com/product/epix360-handheld/	\$1,495.00

The table below lists four chemicals from EPA's list N.

Product Name	Company Name	Active Ingredient	Price	Can it be sprayed?	Safety Data Sheet
Halomist	Halosil International Inc.	Hydrogen peroxide; Silver	\$80/gallon	Yes	http://www.medefect360.com/wp-content/uploads/2012/01/SDSHaloMist10192015.pdf
CloroxPro™ Clorox Total 360® Disinfecting Cleaner1	Clorox Professional Products Company	Quaternary ammonium	\$40/gallon	Yes	https://www.thecloroxcompany.com/wp-content/uploads/2019/09/Clorox-Commercial-Solutions%C2%AE-Clorox%C2%AE-Total-360%C2%AE-Disinfectant-Cleaner1.pdf

VitalOxide	Vital Solutions LLC	Chlorine dioxide; Quaternary ammonium	\$44/gallon	Yes	https://cdn.shopify.com/s/files/1/0079/0085/6375/files/vitaloxide_rtu_sds.pdf?1544
Thymox Disinfectant Spray (Bioesque Botanical Disinfectant Solution)	Laboratorie M2	Thymol	\$45/gallon	Yes	https://bioesquesolutions.com/sds/Bioesque_Botanical_Disinfectant_Solution_SDS_18.pdf

DFAM Recommendation:

Provide the above lists to center operators and authorize purchase of appropriate sprayer and chemicals. Safety team personnel are available to consult on selection.