

A microscopic view of several COVID-19 virus particles. The particles are spherical with a textured surface and numerous spike-like projections extending from them. The background is a warm, orange-red color with a bokeh effect.

**DISINFECTION & SANITIZATION
OF STRUCTURAL FIREFIGHTER
PPE EXPOSED TO COVID-19**

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TotalCare[®]

Today's Presenter



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Contributors:

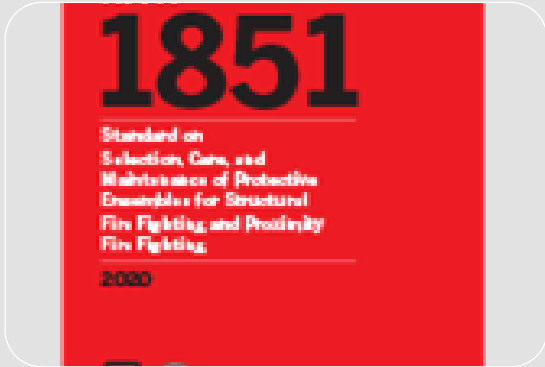
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- ✓ General Guidelines
 - a) NFPA 1851 2020 Ed.
 - b) PPE User Guides
 - c) EPA-Approved Sanitizer List
- ✓ Disinfection & Sanitization
- ✓ User Checklist

General Guidelines



NFPA 1851 Standard – 2020 Edition

- * Basic Definitions of Cleaning, Sanitization & Disinfection
- * Specialized cleaning, sanitization & disinfection
- * Impacts of using high temperature wash and impacts of repeated laundering at high temperature



Manufacturer's User's Guides

- * Seek advice from the manufacturer on appropriate cleaning agents, sanitizers, or disinfectants and processes if not addressed in the instructions

Products with Emerging Viral Pathogens AND Human Coronavirus claims for use against COVID-19
Date Accessed: 03/24/2020

Active Ingredient/s	Product Name	Company	Follow the disinfection directions and preparation for the following virus	Contact Time (in minutes)	Formulation Type	EPA Approved
Sodium Ammonium	512 Sanitizer	Diversey Inc	Human Coronavirus	10	Dilutable	No
Hydrochloric Acid	65 Disinfecting Heavy Duty Acid Bathroom Cleaner	Ecolab Inc	Human Coronavirus	2	Dilutable	No
Hydrogen Peroxide	Accel (Concentrate) Disinfectant Cleaner	Virox Technologies Inc	Poliovirus	5	Dilutable	Yes
Hydrogen Peroxide	Accel 5 RTU	Virox Technologies Inc	Human Coronavirus	5	RTU	No
Hydrogen Peroxide	Accel TB	Virox Technologies Inc	Poliovirus; Feline Calicivirus	1	RTU	Yes
Hydrogen Peroxide	Accel TB Wipes	Virox Technologies Inc	Poliovirus	1	Wipe	Yes
Sodium Ammonium	AF3 Germicidal Disposable Wipe	Professional Disposables International Inc	Rotavirus; Adenovirus	3	Wipe	Yes
Sodium Ammonium; Chlorite; Sodium Dichloroacetate	Asepticare	Airkem professional products	Human Coronavirus	2	RTU	No
Sodium Hypochlorite; Sodium Dichloroacetate	Aseptrol S10-Tab	BASF Corporation	Human Coronavirus	10	Solid	No

EPA-Approved Sanitizer List

- * A laundry sanitizer with EPA registration should be used
- * Any sanitizer chosen should also have its SDS checked against the requirements in NFPA 1851
- * Any product containing chemicals such as Sodium Hypochlorite, Ethanol or Isopropanol should not be used
- * According to their SDS's, the following products meet the guidelines of NFPA 1851 and should not harm turnout gear if used as directed: Maquat 128-MN, Maquat 64-NHQ, SC-NDC-128, Teccare Control & CleanSmart. Again, we cannot make any definitive claims regarding their effectiveness on COVID-19.

Disinfection & Sanitization Procedure



Bag & Seal Gear, Contact Verified ISP

- Bag, seal and isolate exposed gear in bio hazard bag. (One set of gear per bag.) Spray outside of bag with anti-viral/anti-bacterial spray.
- ISP must be notified of any exposed or potentially exposed gear coming into their facility
- Exposed gear cannot be shipped via FedEx, UPS, USPS – must be picked up by ISP or dropped off by dept.
- If ISP is not nearby and disinfection & sanitization will be taking place in-house, proceed to next step.



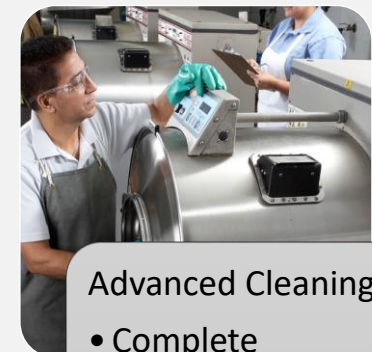
Don Proper PPE

- Proper PPE should be donned by personnel handling the exposed gear
- Spray outside of bag with anti-viral/anti-bacterial spray



Decontamination

- Submerge bag with gear inside in a decontamination barrel containing a solution of EPA-approved sanitizer
- While submerged, open the bag in order for the gear to become completely saturated
- Set timer according to soak time listed on sanitizer instructions
- Remove garments from barrel
- Separate liners from outer shells in order to be laundered separately.



Advanced Cleaning

- Complete Advanced Cleaning per NFPA 1851 2020 Edition requirements

Disinfection & Sanitization Procedure – Hard Goods & Other Soft Goods



Don't Forget
Hard Goods &
Soft Goods
Such as Gloves
& Hoods!



Hard goods such as helmets, boots & goggles should be placed in a separate red bag from turnout coat & pants. Spray bag with same anti-viral/anti-bacterial spray, then follow decontamination barrel instructions.



Gloves, hoods & suspenders can be included in the same bio-bag with the turnout coat and pants.



PPE Exposure Response Check List



Coronavirus (COVID-19) PPE Exposure Response Check List
WHAT TO DO WITH EXPOSED STRUCTURAL TURNOUT GEAR

TotalCare
VERIFIED PPE MAINTENANCE

BEFORE EXPOSURE

- TAKE INVENTORY.**
Take inventory of all gear (make, model, UPC of all issued PPE)
- GET THINGS IN ORDER.**
Establish a sequence for removing contaminated PPE based on the PPE items being worn and practice those doffing procedures to become familiar with correct doffing to minimize potential for cross contamination.

Additional PPE Safety Information Resources:
Centers for Disease Control (CDC), World Health Organization (WHO) or other recognized organizations based on the specific PPE that is available.
www.cdc.gov/hai/pdfs/ppp/ppp-sequence.pdf
www.who.int/csr/resources/publications/putontakeoffPPE/en/

AFTER EXPOSURE

- If PPE is contaminated, thought to be contaminated, compromised or damaged during use, exit the area and appropriately doff contaminated items. Immediately bag contaminated PPE items.
- If PPE is obviously or grossly contaminated, consider Preliminary Exposure Reduction (PER). NOTE: PER does NOT replace PPE sanitation.
- Contain and seal contaminated or potentially contaminated PPE in a biohazard bag. One firefighter's set of PPE per bag (coat, pant, gloves, boots, hood, helmet).
- Spray the bag with a sanitizer.
- Transport gear in the sealed bag.
- STOP! Don't take contaminated gear into the fire station.** Don appropriate PPE and continue to Next Step.

AFTER EXPOSURE

- If sending gear to a verified ISP such as TotalCare, label bag with Department, Name and UPC Code, if possible. Ask ISP representative for instructions on how to transport gear. **CLICK HERE** to see TotalCare facilities in your area. If laundering in house, proceed to Next Step.
- STOP!** Ensure proper PPE is donned before performing this procedure. Outside the fire station, with gear still in the bag, submerge in a barrel containing an EPA-approved sanitizer for use against SARS-CoV-2. Ensure the sanitizer is properly mixed with water, using the directions listed on the sanitizer's instructions.
- Follow sanitizer instructions for specific soak time.
- Remove garments from the decontamination barrel. At this time, liners can be removed from outer shells and laundered.
- Wash in a high-temperature wash, not to exceed 140°.
- Dry gear as normal.

MORE COVID-19 SAFETY TIPS

- STAY ON AIR WHILE OPERATING IN A CONTAMINATED AREA.
- REMOVE RESPIRATOR LAST AS PART OF DOFFING PROCESS.
- THOROUGHLY WASH HANDS OR USE HAND SANITIZER FOLLOWING THE USE OF ANY PPE IN A CONTAMINATED AREA.
- CLICK HERE** FOR A LIST OF EPA APPROVED SANITIZERS THAT MEET THE CLEANING, SANITIZATION AND DISINFECTION REQUIREMENTS SET FORTH BY NIFPA 1851 2020 FOR USE ON STRUCTURAL FIREFIGHTING ENSEMBLES.

www.lionprotects.com/totalcare

- Use as a tool to ensure correct steps are being taken to sanitize and disinfect exposed or potentially exposed gear.

- Additional resources, as well as a copy of this presentation can be found on our LION COVID-19 Resources Page - <https://www.lionprotects.com/covid19>
- If you have additional questions, please complete the form on the webpage and someone will promptly get back to you.
- If you need to contact a LION TotalCare facility, please refer to the TotalCare Service Map, which you can also find on the COVID-19 Resources Page.