

Federal Healthcare Resilience Task Force

EMS/Prehospital Team

COVID-19 - Disinfection of Structural Firefighting Personal Protective Equipment

Product Purpose

As of April 20, 2020, there is no scientific study specific to the disinfection of structural firefighting personal protective equipment (PPE) in response to COVID-19 that our team is aware of. This document is intended to serve as basic guidance for managing the disinfection of structural firefighting PPE (bunker gear/turnouts) potentially exposed to COVID-19. This information is intended to supplement the structural firefighting PPE manufacturer's instructions for use and recommendations from the Centers for Disease Control and Prevention (CDC), the Environmental Protection Agency (EPA), and the National Fire Protection Association (NFPA). Manufacturer guidance and recommended practices should be routinely reviewed. Information may change as more research is completed on COVID-19.

Developed by

The Federal Healthcare Resilience Task Force (HRTF) is leading the development of a comprehensive strategy for the U.S. healthcare system to facilitate resiliency and responsiveness to the threats posed by COVID-19. The Task Force's Emergency Medical Service (EMS)/Pre-Hospital Team comprises public and private-sector EMS and 911 experts from a wide variety of agencies, and focuses on responding to the needs of the pre-hospital community. This Team is composed of subject matter experts from NHTSA OEMS, CDC, FEMA, USFA, US Army, USCG, and non-federal partners representing stakeholder groups and areas of expertise. Through collaboration with experts in related fields, the team develops practical resources for field providers, supervisors, administrators, medical directors and associations to better respond to the COVID-19 pandemic.

Intended Audience

Federal, as well as state, local, tribal, and territorial government (SLTT) fire rescue and EMS agencies

Expected Distribution Mechanism

EMS.gov, Noon Stakeholder Calls, EMS stakeholder organization's membership distribution, Email mechanisms, USFA webpage, USFA GovDelivery and USFA social media.

USG Agency/ Program Consulted During Drafting

Members of the team were from USFA and CDC

Primary Point of Contact

NHTSA Office of EMS, nhtsa.ems@dot.gov, 202-366-5440

Date Published

April 25, 2020

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PURPOSE

As of April 20, 2020, there is no scientific study specific to the disinfection of structural firefighting personal protective equipment (PPE) in response to COVID-19 that our team is aware of. This document is intended to serve as basic guidance for managing the disinfection of structural firefighting PPE (bunker gear/turnouts) potentially exposed to COVID-19. This information is intended to supplement the structural firefighting PPE manufacturer's instructions for use and recommendations from the Centers for Disease Control and Prevention (CDC), the Environmental Protection Agency (EPA), and the National Fire Protection Association (NFPA). Manufacturer guidance and recommended practices should be routinely reviewed. Information may change as more research is completed on COVID-19.

MATERIAL DEFINITIONS

Soft: Pant, coat, liners, hood, gloves, etc.

Hard: Boots, helmet, facepiece, etc.

RECOMMENDATIONS

1) SOFT

- a) Follow specific guidance from the manufacturer and NFPA 1851. As of April 6, 2020, there is no alternative or other specific guidance on the decontamination of structural firefighting PPE.
- b) Generally, the cleaning and disinfection process involves the same steps as would be followed for all body-fluid contamination. To minimize contamination of other pieces of PPE, wash the outer layers separately from the liners:
 - i) Pre-soak with a mild detergent or laundry sanitizer (please refer to manufacturer recommendations and select an [EPA registered product](#) for use)
 - ii) Extraction rinse (stand-alone rinse cycle)
 - iii) Wash (140°F MAX per manufacturer, 105°F per NFPA 1851, Chap 7) with a mild detergent or laundry sanitizer
 - iv) Air-dry / no heat hang-dry (e.g., drying cabinet)

NOTE: The care and maintenance material provided with the protective garment/item must be consulted for proper procedures.

2) HARD

- a) Follow specific guidance from the manufacturer and NFPA 1851. As of April 6, 2020, there is no alternative or other specific guidance on the decontamination of structural firefighting PPE.
- b) Generally, the cleaning and disinfection process involves the same steps as would be followed for all body-fluid contamination:

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- i) Disinfecting solution that is compatible with the material (typically fiberglass/composite or leather) and on the [EPA list N](#).
- ii) Proper dwell time / agitation (e.g., brush, cloth)
 - (1) Dwell time (also known as contact or “wet” time) refers to the amount of time the cleaning product remains on the surface to be cleaned prior to rinsing. This varies by product. Refer to the label claim on the disinfection product.
- iii) Rinse
- iv) Dry according to manufacturer recommendations

NOTE: Refer to specific facepiece disinfection procedures from your manufacturer (a link to 3M/Scott procedures is provided in the Resources section as an example)*

RESOURCES

NOTE: The resources listed below are not exhaustive, nor an endorsement of the manufacturer, product, or to the efficacy of any process. This document contains links to non-federal websites. Linking to a non-federal website does not constitute an endorsement by the U.S. government, or any of its employees, of the information and/or products presented on that site.

- EPA List of approved Disinfectants: <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>
- (CDC) Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008 (2019 update): <https://www.cdc.gov/infectioncontrol/pdf/guidelines/disinfection-guidelines-H.pdf>
NOTE: See page 26 for coronavirus.
- (CDC) Interim Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed Coronavirus Disease 2019 (COVID-19) in Healthcare Settings: https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Finfection-control%2Fcontrol-recommendations.html
- NFPA 1851, 2014 (Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting): <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1851> (Chap 7 is Cleaning and Decontamination)*
- NFPA 1581, 2015: (Standard on Fire Department Infection Control Program) <https://nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1581>*
- IAFF QRG: <https://www.iaff.org/wp-content/uploads/Quick-Reaction-Guide-FF-Protective-Clothing-Flyer.pdf> *

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- Manufacturer Pages (not an exhaustive list)
 - 3M/Scott (facepieces and other respiratory devices):
https://www.3m.com/3M/en_US/worker-health-safety-us/covid19/#cleaning-and-disinfecting-respirators*
 - Bullard (helmets): <https://www.bullard.com/fire-helmets/cleaning-your-fire-helmet> *
 - Firedex PPE: <https://www.firedex.com/covid19-responder-resources/#clean>*
 - Lion Products: https://www.lionprotects.com/covid19*
 - MSA/Cairns (helmets):
<https://s7d9.scene7.com/is/content/minesafetyappliances/0600-108-MC%20Head%20Eye%20and%20Face%20Protection%20Cleaning%20Guidance%20Brief> *
 - MSA/Globe PPE Recommendations:
<https://s7d9.scene7.com/is/content/minesafetyappliances/1601-014-MC%20Turnout%20Gear%20Cleaning%20Guidance%20Brief> R3*
 - Phenix (helmets):
https://cdn.shopify.com/s/files/1/0664/9881/files/Phenix_Fire_Helmets_Care_and_Maintenance_Manual_for_Traditional_Leather_and_Modern_Fire_Helmets.pdf?8232604816995883130*

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