

COVID-19: Disinfection of Structural Firefighting Personal Protective Equipment



Purpose

As of April 6, 2020, there has been no study specific to the disinfection of structural firefighting personal protective equipment (PPE) and the COVID-19 virus. This document is intended to serve as basic guidance for managing the disinfection of structural firefighting PPE (bunker gear/turnouts) thought to be 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). Routinely confirm the manufacturer's requirements for recommended disinfection as updates to the recommended practices may change as more COVID-19 research is completed.

Material definitions

- ▶ Soft: pants, coats, liners, hoods, gloves, etc.
- ▶ Hard: boots, helmets, face pieces, etc.

Recommendations

- ▶ Soft:
 - ▶ Follow specific guidance from manufacturer and NFPA 1851, *Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*. As of April 6, 2020, there is no alternative or other specific guidance on the decontamination of structural firefighting PPE.
 - ▶ 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:
 - ▶ Presoak with a mild detergent or laundry sanitizer (please refer to manufacturer recommendations and select an EPA-registered product for use).
 - ▶ Extraction rinse (stand-alone rinse cycle).
 - ▶ Wash (140 F **max** per manufacturer, 105 F per NFPA 1851, Chapter 7) with a mild detergent or laundry sanitizer.
 - ▶ 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.



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- Hard:
 - Follow specific guidance from manufacturer and NFPA 1851. As of April 6, 2020, there is no alternative or other specific guidance on the decontamination of structural firefighting PPE.
 - Generally, the cleaning and disinfection process involves the same steps as would be followed for all body fluid contamination:
 - ▶ Disinfecting solution that is compatible with the material (typically fiberglass/composite or leather).
 - ▶ Proper dwell time/agitation (e.g., brush, cloth).

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.
 - ▶ Rinse.
 - ▶ Dry according to manufacturer recommendations.

Note: Refer to specific face piece 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.

- 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> (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, *Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*, 2014: <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1851> (Chapter 7 is Cleaning and Decontamination.)
- NFPA 1581, *Standard on Fire Department Infection Control Program*, 2015: <https://nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1581>
- International Association of Fire Fighters Quick Reaction Guide: <https://www.iaff.org/wp-content/uploads/Quick-Reaction-Guide-FF-Protective-Clothing-Flyer.pdf>

➤ Manufacturer pages (not an exhaustive list):

- 3M/Scott (face pieces 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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