



Breaking Down NFPA 1851 Cleaning Protective Gear — Part 1

In 2001, the NFPA developed a set of guidelines for cleaning protective gear in order to remove harmful biohazards, chemicals and other contaminants. Those inspection and cleaning guidelines are revised periodically, most recently in 2020. Read on for a simplified interpretation of these guidelines and how best to go about cleaning and sanitizing/disinfecting bunker gear and related accessories ...

The development of the “NFPA 1851 Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Firefighting” was established as a protective measure against firefighter exposure to the harmful contaminants on and in dirty firefighting and rescue gear. It’s also in place to protect others from incidental contact with these harmful contaminants.

The NO List!

Let’s start with the “No” list. Don’t ever do the following:

- 1. Don’t take protective gear home to wash.** It could expose family members to contaminants.
- 2. Don’t clean protective gear at a public laundry.** It could expose the public to contaminants.
- 3. Don’t wash protective gear in a top-load washer.** This could damage protective fabrics.
- 4. Don’t wear protective ensembles that are not completely dry.** This could result in steam burns.
- 5. Don’t wear dirty gear.** It is a health hazard and the soil and contaminants in dirty gear can hinder the gear’s protective ability.

Advanced Cleaning

There are procedural steps to follow in 1851 that begin with inspecting protective ensembles, applying preliminary exposure reduction through dry brushing and using water to gently spray off contaminants, and finally, advanced cleaning. Anytime protective gear is exposed to body fluids, it’s critical that disinfection/sanitization is part of that advanced cleaning.

- 1. Use a highly programmable washer-extractor.** Investing in a highly programmable washer-extractor is crucial to properly processing gear and ensures your fire department remains compliant with NFPA guidelines, even if they change in the future. Highly programmable washers offer complete control over every variable of the wash cycle, including extract speed, rotation action, water temperatures and levels, number of baths and rinses, and cycle time. The Continental Girbau ExpressWash and Genius Gear Washers do all this, plus they automatically inject the correct cleaning chemicals at the perfect moment in the wash process to ensure both sanitization and contaminant removal. Moreover, they are compatible with ozone – an ecofriendly and natural way to sanitize gear using cold water. The washer should be programmed by item type (bunker gear shells, liners, gloves, jumpsuits, etc.) This is done by a chemical provider who understands NFPA 1851.

- 2. G-force should not exceed 100; water should not exceed 105° F.**
- 3. Don’t use chlorine bleach or chlorinated solvents.** Use mild detergents with a pH range between 6 and 10.
- 4. Verify the washer is programmed according to protective ensemble manufacturer’s guidelines.**
- 5. Separate gear liners and shells.**
- 6. Fasten all closures, snaps and zippers.**
- 7. Load the washer with like items.**
- 8. Enter the program number that aligns with the items being cleaned, close the washer door and press start.** The washer automatically carries out the appropriate functions to perfectly clean the items.

It all sounds complicated, but it’s really simple once you select the right washer-extractor. Contact your local laundry solutions distributor for guidance. Your distributor will help you select the right washer, ensure it is programmed correctly, and teach your firefighters how to use it properly. [Find your distributor here.](#)



At Girbau North America, Wes Kraemer manages territory sales for the Central and Western U.S. as well as national account sales. He holds over 14 years of experience in providing gear laundering solutions to the fire industry. Contact him at wkraemer@gnalaundry.com.