

Five Steps to Follow to Clean & Maintain Turnout Gear



Decades ago, when firefighters entered a structural fire, the primary hazards they encountered were fire and smoke. Today, the smoke emanating from modern materials such as plastics and synthetic materials may contain additional off-gassing hazards that firefighters need to be aware of when entering and leaving the site of a call. The smoke coming from these elements may contain cancer-causing radicals called carcinogens, which can be spread to those who are on-site as well as those coming into contact with turnout gear off-site. One of the best ways to help prevent exposure to these carcinogens is to thoroughly clean turnout gear before leaving the site of a fire.

In addition to helping reduce exposure to potential carcinogens, having clean turnout gear helps protect the firefighter when responding to a call. Contaminants remaining on turnout gear can be abrasive and may damage the thermal protection of the garment. Additionally, substances remaining on turnout gear may be flammable or may reduce the garment's visibility in the dark.

In the past, dirty gear was seen as a badge of honor. Now, studies show that wearing soiled turnout gear may cause cancer and can lower the effectiveness of the very gear designed to protect firefighters on the job. NFPA is working to determine the best methods to clean and maintain gear after responding to a fire. However, there are steps you can take to help maintain the effectiveness of your gear and minimize exposure to carcinogens and other potentially hazardous toxins. We outline five things to keep in mind when cleaning and maintaining your turnout gear.

1. Do an initial cleaning of your turnout gear before leaving the fire scene.

Performing preliminary exposure reduction after responding to a fire is an important safety step because it removes potentially hazardous particles and toxins from the turnout gear. If turnout gear is not cleaned before leaving the scene, everything and everyone it comes in contact with may be exposed to potential carcinogens. This includes the truck, people, other gear, and the firehouse. When performing the preliminary exposure reduction, stay on air supply while a fellow

firefighter first hoses you down and then uses a bristle brush with mild soap and water to further remove debris and potential toxins.

All gear must be washed including your helmet, hood, face mask, SCBA components, turnout gear, gloves, boots, and anything that may have come in contact with potentially hazardous materials on the scene. Once preliminary exposure reduction is complete, carefully remove the PPE, bag it, and bring it back to the station to be laundered before it is worn again.

2. Launder your gear.

Even after performing a preliminary exposure reduction at the fire scene, potentially hazardous materials may still remain on turnout gear. Whether your station has an extractor on-site or sends it to an industrial laundering service, it is important to have every piece of gear cleaned to ensure you are not further exposing yourself or others to potential carcinogens.

3. Use proper cleaning agents.

When performing preliminary exposure reduction at the scene of the fire and laundering gear after responding to a fire, it is important to use cleaning agents that do not damage turnout gear. Using harsh detergents and bleaches can weaken the fabrics; however, most mild detergents are effective at removing debris without breaking down fibers. Generally, if a soap has a PH balance between 7 and 10.5, it is safe to use on turnout gear. If needed, spot treatments can also be performed with gentle stain removers. It is important to reference your user manual for proper care and cleaning instructions for all PPE.

4. Inspect your gear.

After every laundering, inspect your turnout gear for rips, tears, or any other visual imperfections. Your turnout gear is your first line of defense against heat and flames, so confirming your gear is undamaged and in excellent condition will help to ensure protection when responding to a call. If there is any damage to your turnout gear, it is important to have the gear properly repaired by a certified repair service or by the manufacturer.

5. Store gear in a safe area.

It is important to store your turnout gear in a room with no windows, as UV rays may weaken turnout gear fibers over time. Additionally, gear should not be stored where other toxins could come in contact with it. For example, storing gear in the apparatus bay puts them at risk for coming in contact with exhaust from the truck—another dangerous carcinogen. A separate, ventilated room can help keep gear in top shape for the best performance.

Sources

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