



CARE AND MAINTENANCE

THE CARE AND MAINTENANCE OF FR/AR PPE

When creating a flame-resistant and arc-rated (FR/AR) personal protective equipment (PPE) program, safety engineers dedicate a fair amount of time researching, selecting and sourcing quality garments to protect their employees. Time is spent on the front end to make sure that the proper garment is designed in compliance with industry standards and provide acceptable wearer comfort.

What is the best way to clean FR/AR garments?

As a rule, most FR/AR garments can be washed in both a home laundry or industrial laundry. Each fabric or garment manufacturer will provide recommended laundering instructions, which usually include a restriction on using bleach, fabric softeners and starch. Chlorine bleach can compromise the flame resistance of many cotton-rich FR/AR fabrics over time, and chlorine bleach-exposed garments should be removed from service. Fabric softeners and starch often contain flammable components that can build up on the FR fabric surface, which can compromise its flame resistance. If fabric softener or starch is accidentally used, re-launder the garment without these products and they will wash out.

Deciding which laundering route to take is often dictated by the environment in which the garment is worn. Different processes, such as the industrial laundering (IL) process, may be better suited to removing tough grime or build-up versus general dust and dirt. It is important to understand your work environment and select the care program that best suits your company.

Will FR properties wear out over the course of garment use?

As with any garment, it is important to follow the care instructions, as protective performance can be impacted otherwise. Typically though, and especially when sourcing trusted, branded FR/AR fabric, the flame-resistant properties remain for the life of the garment.

Most market-proven FR fabrics in the U.S. are engineered fabrics where FR properties are incorporated within the fabric structure instead of applied as a coating that could wear off. There is no 'washing' or 'wearing' out a garment's FR/AR properties in most instances, so if the garment is cared for properly, serviceable and intact, the performance will remain through the life of the garment.



- BLEACH
- DRYER SHEETS
- DEET INSECT REPELLENT
- REPLACING TORN GARMENTS

If FR properties will not wear out over time, when does a garment need to be replaced?

Judgment is an important part of making this decision. While the FR/AR properties do remain intact for the life of a properly cared-for garment when using a reputable fabric brand, if the garment has shrunk or shows signs of physical wear and tear, its protective attributes have likely been compromised. It is considered best practice to retire a garment when there are wearing spots, holes or tears, unless the garment can be properly repaired with like FR/AR fabric and FR thread to comply with the relevant ASTM care and maintenance standards.

Can you wash FR/AR garments with other garments?

It is recommended as a best practice that you wash FR/AR garments with other FR/AR garments according to manufacturer care procedures.

If my FR/AR garment has a stain or odor, is it still safe to wear?

Garments can be stained without impacting their FR/AR properties. Simply wash the garment according to manufacturer guidelines to remove the stain. If the stain cannot be removed, depending on size and composition of the stain, judgment must be used on determining the garment's wearability.

If you notice that a garment is retaining an odor even after being washed, it is recommended that you review the care process against what the manufacturer recommended. Any garment still carrying a lingering odor may need to be replaced.

My garment was involved in a short-duration thermal exposure. Can I continue using the garment?

Once a garment is involved in a short-duration thermal exposure like an arc flash or flash fire, it should be replaced with a new garment. The incident does alter the FR/AR protection, as the garment may have been compromised in the exposure.

**NEED HELP COMPARING
THE BENEFITS OF
EMPLOYEES WASHING
AT HOME OR USING AN
INDUSTRIAL LAUNDRY?**

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Are there special considerations for repairing or patching FR/AR garments?

When patching an FR/AR garment, it is important to use the same FR/AR fabric. If you need to replace a button or sew a button back on, be sure to use only FR thread and high-temperature melamine buttons.

As a rule, you should not use bleach, starch or fabric softener. Are there any other solutions you should stay away from when caring for FR/AR garments?

Insect repellent, especially those using DEET, are highly flammable and can compromise the FR/AR protection of a garment. Special care should be taken to spray insect repellent directly on the skin and not onto the garment.

In addition, special laundry additives should be avoided, such as the popular anti-static, wrinkle-free dryer sheets. Other potential additives should be avoided unless specific testing has been done to show the flame resistance of the FR/AR fabric will not be compromised by the additive.



DON'T MISS OUR

EASY GUIDES

TO LAUNDERING YOUR PPE

Load size?
Type of detergent?
How about ironing?

You have questions about how to clean your PPE while maximizing garment wear life—and we have expert answers.

FIND THESE GUIDES, AND MORE, IN OUR ONLINE RESOURCE HUB. ▶