



# Do worksite contaminants impact FR apparel?

On utility work sites, there are various contaminants containing flammable components, including insulating oil in transformers, creosote on telephone poles, and hydraulic oils from machinery. The summer presents a whole new set of special chemicals on the jobsite, such as bug spray to fend off mosquitoes while working outdoors.

These chemical components raise questions about whether they have the ability to hinder the protective performance of flame-resistant (FR) apparel - which is nearly always required for tasks in the utility industry.

While these worksite contaminants do not remove the base FR properties of the fabric, the new flammable contaminants can mask the FR causing the fabric to burn until the fuel is consumed.

Interacting with worksite contaminants is often unavoidable or simply imperative to a productive day outside on the job; however, there are simple steps you can take to protect yourself and your FR apparel from additional flammable hazards.

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***Consult your FR garment manufacturer on proper care and maintenance instructions to adequately remove contaminants without compromising the attributes of the fabric.***

### **Use Bug Repellent Alternatives**

Studies show a waterborne, Permethrin-based insect repellent does not have adverse effects on flame resistant fabrics. When applying insect repellents to FR garments, it is recommended you avoid applying DEET or DEET-containing insect repellents. DEET and DEET-containing insect repellents can be flammable, and therefore, have an adverse effect on the flame resistance of FR garments. It is important to note that DEET and DEET-containing insect repellents do not remove or destroy the flame resistance of fabrics, but they do mask it. Once the garment is laundered, the DEET and DEET-containing insect repellents are removed, and the flame resistance remains intact.

### **Observe Care Recommendations to Remove Contaminant Build-Up**

Clear FR apparel is safer FR apparel, although garment soiling with creosote, transformer oil, or other common jobsite chemicals is often unavoidable on a worksite steps should be taken to prevent contaminant buildup on FR clothing.

Industry standards, such as NFPA 2113, state the importance of garment maintenance. NFPA 2113: Standard on Selection, Care, Use, and Maintenance of Flame-Resistant Garments for

Protection of Industrial Personnel Against Short-Duration Thermal Exposures specifically addresses the need for routine care and maintenance of FR apparel to prevent contaminant buildup that could reduce flame resistance.

While you may not be able to prevent contaminants from getting on clothing, you can prevent their buildup on FR apparel through daily care, as noted in NFPA 2113 Chapter 6. Be sure to follow the manufacturer's recommended wash and dry temperatures (either for at-home or industrial laundry cleaning) to maintain the garment's aesthetic quality. While the performance of FR qualities in a garment are not impacted, overall appearance, dye retention, and shrinkage can be adversely impacted in wash and dry temperatures higher than recommended tolerances. Consult your FR garment manufacturer on proper care and maintenance instructions to adequately remove contaminants without compromising the attributes of the fabric.

### **Routinely Check Apparel After Each Workday**

Chapter 7 of NFPA 2113 emphasizes the need for organizations to implement a streamlined process confirming an employee's FR apparel is viable. Workers are also charged with examining their individual FR apparel for any damage, soiling or potential contamination after each wear.

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***Employers and employees alike can work together this summer to review and address contaminants the season brings.***

Safety on a jobsite is imperative, regardless of the time of year. Employers and employees alike can work together this summer to review and address contaminants the season brings. This practice can then be carried forward year round in order to help ensure workers are wearing proper FR protection.

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