

Frequently Asked Questions Concerning Stain-Repellent Fabrics and Fluorotechnology (PFAS)

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1. What is the definition of Fluorotechnology treatment and why is it important?

Fluorotechnology, often referred to as fluorinated chemicals and per- or polyfluoroalkyl substances (PFAS), is a diverse group of chemistries characterized by the strong bond between fluorine and carbon. Because of this strong bond, Fluorotechnology provides resilience and durability. Fluorotechnology provides the protection against oils and other stains that other technologies cannot provide. These properties are critical to the performance of many important products that industry and consumers rely on every day. Products such as carpets, food packaging, apparel, automobiles, and cellphones all rely on Fluorotechnology to give them the performance the consumer desires. They help make products last longer.

2. What is PFAS and how does it pertain to textiles?

PFAS (PerFluoroAlkyl Substances) is an umbrella term for a class of organic chemicals that include over 3000 different materials. PFAS are important to textiles because they help the products repel both water AND oil-based stains. They keep the product dry and clean for a longer period of time. They also reduce the number of times a product needs to be washed or cleaned with harmful cleaning products such as solvents and bleach.

The group of PFAS used to make upholstery fabrics stain-resistant is part of a polymer that is not linked to the hazards associated with the PFAS of concern.

For more information about products made with PFAS technology, see this [graphic](#) from the [FluoroCouncil](#).

3. What are PFOS/PFOA and why do they keep getting mentioned?

PFOA (Perfluorooctanoic Acid) and PFOS (Perfluorooctane Sulfonate) are two types of products that fall under the PFAS umbrella. They were products produced for other industries to serve purposes other than stain repellency. Neither of these products have ever been used as the main ingredient for textile finishing. They were present as contaminants. PFOS/PFOA are both associated with long-chain PFAS also known as C8. C8 is old technology and is no longer a factor in the application of PFAS to textile products by responsible producers in the United States.

4. Why have concerns been raised about water/oil repellent technology?

The current PFAS chemistry that is being used by U.S. mills/finishers utilizes short-chain technology, such as C6. Because it is still a PFAS, C6 often gets confused with the discontinued C8 technology (which includes PFOA and PFOS) and other unrelated PFAS products such as Gen-X. “The science supports the conclusion that the newer FluoroTechnology is not expected to present a significant risk to humans and the environment.¹”

There are currently no regulations that protect against the importing of fabrics treated with C8 technology which includes PFOA/PFOS.

5. What is the difference between oil-based repellency and water-based repellency?

All stains are NOT created equal. Materials that cause fabric stains fall largely under two categories, oil-based or water-based. Some common oil-based materials are salad dressings, corn oil, and suntan lotion. Common water-based materials are Kool-Aid[®], coffee, and soy sauce. While most products on the market have the ability to be cleaned after a water-based stain occurs, a far fewer number have the ability to successfully repel oil-based materials. Oil-based materials stain fabrics more easily and are therefore more difficult to repel and remove.

6. Are there alternative technologies that can produce equivalent fabric performance?

There is no alternative technology that can repel oil-based materials to the acceptable industry levels that Fluorotechnology can achieve. It just does not exist. The only technology that is available as an alternative will only repel water-based materials.

Protecting textiles with water only repellents will result in your products being stained at a faster rate which equates to higher customer dissatisfaction, more field complaints, increased costs as well as a greater negative impact to the environment due to cleaning with harmful solvents and having to replace fabrics at a higher rate.

¹ Fluorocouncil - <https://fluorocouncil.com/fluorotechnology/facts/>