

Frequently Asked Questions Concerning Textiles and PFAS

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

PFAS (per- or polyfluoroalkyl substances) is an umbrella term for a large and diverse family of chemical substances that possess a molecular bond that is naturally strong. PFAS provides products with superior resilience, durability, and can greatly extend the life cycle of manufactured goods. There are currently over 9000 unique substances that are part of the PFAS grouping. Products such as textiles, food packaging, military equipment, healthcare personal protective equipment (PPE), automobiles, medical devices, cosmetics, and cellphones all rely on any one of the 9000 different PFAS products to give them the performance characteristics that consumers desire.

2. How does the use of PFAS pertain to textiles?

Among other things, PFAS technology provides everyday textile products with critical performance qualities, such as enhanced cleanability, moisture and contaminant barrier protection, as well as oil, water, and other stain resistance that are not achievable through other technologies. These important performance enhancing qualities that are derived from PFAS, are critical aspects of fabrics used in numerous textile applications. For example, PFAS are essential in providing chem-bio barriers to military apparel and medical PPE, as well as superior cleanability and stain resistance to carpeting and upholstered furniture. PFAS also reduces the number of times a textile product needs to be washed or laundered with harmful cleaning products such as solvents and bleach. Moreover, they greatly extend the life cycle of textile and apparel products, which reduces the rapidity and amount of product disposed of in landfills.

3. What are the facts about PFAS linkages to environmental hazards?

A small subset of PFAS have been linked to serious environmental ramifications. For example, some PFAS have been tied to certain types of cancer and immune system deficiencies. These linkages are cause for concern when traces of certain PFAS are found in water tables or soil samples. At the same time, it is important to note that the vast majority of PFAS have not been tied to any environmental or human hazard. Further, the types of PFAS used in textile applications are not ones that have been linked to any environmental or human health hazards. The main areas of concern associated with harmful PFAS are generally connected to – chemical facilities that manufacture PFAS; Teflon coatings; and fire suppression foams.

4. What are PFOS & PFOA and why do they keep getting mentioned in the news?

PFOA (Perfluorooctanoic Acid) and PFOS (Perfluorooctane Sulfonate) are two types of substances that fall under the PFAS umbrella. These two specific PFAS have been most widely linked to the environmental and health hazards mentioned above. PFOA/PFOS are chemicals produced for other industries to serve purposes unrelated to those used in textile applications. Neither of these chemicals have ever been intentionally added as a treatment in the U.S. textile finishing process. PFOS/PFOA are both associated with long-chain PFAS also known as C8. Not only are PFOA/PFOS not used by domestic textile producers, C8 as a whole is considered old technology and is no longer a factor in the application of PFAS to textile products by responsible manufacturers in the United States.

5. Why have concerns been raised about PFAS technology in the textile sector?

The current PFAS chemistry that is employed by U.S. textile 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

Unfortunately, many environmental groups and policymakers have failed to distinguish between the small subset of harmful PFAS and the larger family of these chemicals where there are no environmental linkages. As such, there have been calls for the banning of all PFAS treatments in the U.S., including elimination of all PFAS within the textile sector, despite the fact that existing science shows no harmful ramifications for the types of PFAS utilized by domestic textile producers.

6. What will the impact be on U.S. textile manufacturers if all PFAS are banned?

If a broad-brush approach is adopted by either the federal government or individual states that bans all PFAS treatments, there will be a number of adverse impacts to the domestic textile industry and consumers. These include the fact that fabric performance capabilities will be undercut leading to reduced strength, durability, cleanability and shorter lifecycles for everyday products that consumers

depend upon. There will also be a degradation of critical performance properties in textiles used by military personnel, healthcare workers and first responders. (Note that the U.S. Department of Defense has to date acknowledged this point by expressing opposition to a broad-based ban on PFAS usage in relation to military purchases of textiles and other equipment.) Finally, there are currently no regulations that protect against the importing of fabrics or other products treated with C8 technology which includes PFOA/PFOS. This will give offshore manufacturers a huge advantage in the U.S. marketplace.

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

In some cases, there is no true alternative technology that can replicate the existing performance characteristics that are derived from PFAS. In products where high-end performance specifications are not essential, the U.S. textile industry has substantially reduced its PFAS footprint by adopting alternative treatments, where available. In addition, the domestic textile sector is aggressively researching alternatives to close the performance gap between PFAS treatments and other chemistries.

8. Where does the U.S. textile industry stand on PFAS regulation?

The domestic textile industry supports a science-based approach to PFAS regulation that segregates harmful PFAS from others within the broad PFAS family where there is no known link to an environmental concern. Consequently, we oppose a blanket prohibition on the entire class of PFAS. At the same time, the U.S. industry is committed to the elimination of any PFAS that has a demonstrated link to environmental and health hazards. As such, U.S. textile manufacturers have supported regulatory bans on those specific PFAS, such as PFOA/PFOS that have been shown to cause harm. We also call for regulations and testing to be applied to imported products in order to place U.S. manufacturers on an equal footing with offshore competitors. Finally, we support research to create and identify alternative treatments that will allow the continuation of the high-quality performance traits for textile and apparel products that consumers, military personnel, first responders and frontline medical workers have come to rely upon.

9. What happens if PFAS on textiles is eliminated?

In October of 2020, the Royal Society of Chemistry produced a report confirming that based on the approx. 5000 tons of PFAS that was reported as used or exported by TSCA, textiles made up .003% of that figure. Regulators could eliminate all textile uses and it will not make any impact on the overall PFAS pollution.

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