PFAS 101:
What They Are, Why We Need Them & Chemours' Role

What are PFAS?

PFAS, or poly-fluoroalkyl substances, are a large and diverse family of chemistries that contain carbon-fluorine bonds, the strongest chemical bonds in organic chemistry.

PFAS is a generic phrase for this family of chemistries, but not all PFAS are the same. In fact, the term PFAS encompasses over 4,700 substances that have varying physical and chemical properties, health, and environmental profiles, uses, and benefits.

Just like we use motor oil and olive oil for different purposes – the same is true for PFAS.

Why We Need Certain PFAS

Fluoropolymers, a specific class of PFAS, possess a unique and vital combination of properties that allow them to withstand the most challenging and high-stress conditions, including:

- Fire resistance
- Weather resistance
- Temperature resistance
- Chemical resistance
- Non-wetting properties
- Non-sticking properties
- High-performance dielectric properties

Polymers of Low Concern and High Societal Value

Fluoropolymers meet the OECD's criteria for polymers of low concern – meaning they are stable in the environment and do not degrade.[1] Fluoropolymers do not dissolve in water, cannot enter a person's bloodstream or accumulate in the body, and do not pose a significant risk to human health or the environment.

Criticality to U.S Industries

Fluoropolymers are used in applications that span nearly every major sector of the economy, and the responsible manufacturing of fluoropolymers in the United States is critical to furthering U.S. technology leadership, onshoring key industries, and enabling American supply chain resiliency and security.


Semiconductors, Computers & Software Systems


Aerospace & Defense


Shipping


Consumer Technologies


Automobiles (XEVs, EVs, and FCEVs)


Trucking


5G & IoT Deployment


Lithium-Ion Batteries

Chemours is the only domestic producer of PFA, a fluoropolymer used in the manufacture of semiconductor chips. Without this, a domestic supply chain for semiconductors would not be possible.

Responsible Regulation & PFAS Stewardship:

- Chemours' advanced chemistries, including fluoropolymers, deliver cutting-edge solutions to support industries critical to America's economic prosperity and national security.
- We support science-based approaches to regulate certain PFAS compounds, but overly-broad regulation of PFAS risks devastating effects on the whole technology value chain, including the technologies in the energy and semiconductor sectors, with key U.S. industries bearing most of the burden.
- We take very seriously our obligation to manage the PFAS compounds in our manufacturing processes in a responsible manner and our commitment to eliminate at least 99% of PFAS air and water emissions from our manufacturing processes by 2030. Chemours is already heavily invested in responsible manufacturing and pushing the limits of technology to detect, abate, and remediate emissions.

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1. A critical review of the application of polymer of low concern (2022)