

## WHAT ARE PFAS?

**PFAS (per- and polyfluoroalkyl substances)** are synthetic chemicals characterized by a high level of fluorination. Widely used in plastics, they provide resistance to water, grease, heat, and UV rays. However, PFAS are often called “forever chemicals” due to their persistence in the environment and association with various health risks. Thousands of PFAS compounds have been developed, each with distinct functional properties, establishing PFAS as a versatile and widely used class of chemicals.

## WHY ARE PFAS CONCERNING?

PFAS are chemicals with a unique structure that makes them both water- and fat-repellent. This gives them the potential to bind to proteins instead of dissolving in the body, introducing the possible risk of PFAS entering cells, accumulating, and interacting with biological substances.

### KEY POINTS:

- **Hydrophobic and lipophobic:** PFAS repel water and fats, helping them avoid breakdown and removal by the body.
- **Bind to proteins:** This helps them move through the body and accumulate in tissues.
- **Strong chemical bonds:** Their carbon-fluorine bonds make them extremely durable and resistant to breakdown.
- **Bioaccumulate:** PFAS stay in the body and environment for a long time.
- **Potential health effects:** Their buildup may interfere with biological processes like hormone function or organ health.

## WHY DO YOU NEED PFAS-FREE SOLUTIONS?

PFAS are under intense global scrutiny due to their persistence in the environment, potential links to serious health issues, and increasing regulatory restrictions. Companies are making the switch to PFAS-free materials to:

STAY COMPLIANT  
WITH EVOLVING  
GLOBAL  
REGULATIONS

MEET CONSUMER  
DEMAND FOR  
SAFER, MORE  
SUSTAINABLE  
PRODUCTS

FUTURE-PROOF  
SUPPLY CHAINS  
WITH SAFER,  
SCALABLE  
ALTERNATIVES

## CONVENTUS' PFAS-FREE SOLUTIONS PROCESS

Plastic resin suppliers are taking a few different approaches to helping customers find PFAS-free solutions:

### CERTIFYING MATERIALS AS PFAS-FREE

- Certifications for PFAS-Free materials are still in development, but one plastic-specific PFAS test and certification has started to be used.
- UL 746G for Plastics and Recycled Plastics – 3 different levels of certification:
  - Non-fluorine materials
  - Non-PFAS materials
  - Non-PFAS with total fluorine  $\leq 50$  mg/kg not due to polymeric PFAS

### DESIGNING MATERIALS TO REPLACE PFAS RESINS OR COATINGS

Choosing the best polymer family to meet your design requirements, or using additives to supplement deficient properties, can often meet or exceed the performance of materials that used PFAS for flame retardance, chemical resistance, water resistance, etc.

#### Need a slippery surface?

Use POK which has a low coefficient of friction and good wear resistance or add a silicon additive as a lubricant.

#### Need increased chemical resistance?

Use PEEK or a sulfone to increase your part's chemical stability.

### LABELING NOT INTENTIONALLY ADDED PFAS RESINS

- When a plastic is labeled "PFAS not intentionally added," it means that per- and polyfluoroalkyl substances (PFAS) were not deliberately used during the manufacturing process.
- This label doesn't guarantee the product is entirely PFAS-free, as trace amounts may still be present due to contamination or materials used upstream.

**Conventus wants to partner with you to identify PFAS-free materials that meet performance, compliance, and sustainability goals that are tailored to your unique applications.**

**USA** – 1719 Route 10 | Parsippany, NJ 07054 | Tel: +1-973-343-7669

**Mexico** – Av. 18 de Marzo, #704 | Guadalajara, Jal 44470 Mexico | Tel: +52-33-36789134

**China** – 6F, The 21st Building | No. 210 Century Ave. | Pudong New District | Shanghai 200120 China | Tel: +86-21-31185068

**Email:** [info@conventuspolymers.com](mailto:info@conventuspolymers.com)

**www.conventuspolymers.com**