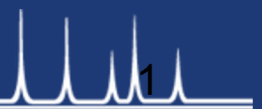




PFAS

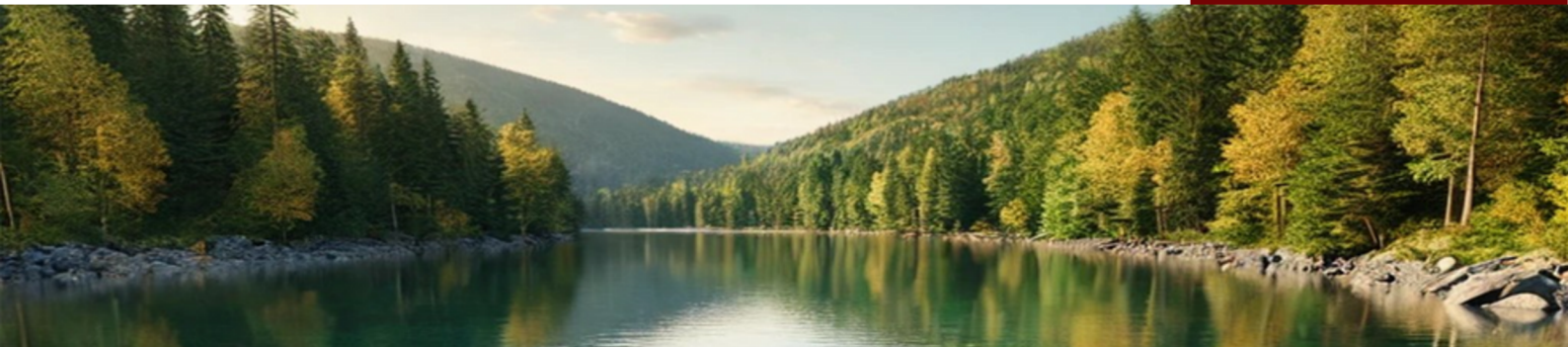
2025

Regulations, Compliance, Testing,
Reporting and Mitigating Risks



PFAS

Regulations, Compliance, Testing, Reporting and Mitigating Risks



INTRODUCTION

PFAS (Perfluoroalkyl and Polyfluoroalkyl Substances) are synthetic chemicals that have become a focal point of environmental, regulatory, and public health concerns due to their persistence in the environment and widespread use across industries.

In the United States and around the world, bans, restrictions, and reporting requirements for PFAS are steadily increasing. The European Union (EU) is evaluating a proposal to limit over 10,000 PFAS chemicals under the REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals) regulation. If adopted, this would be the most extensive regulatory restriction on PFAS to date, in one of the world's largest markets. Similar measures are also being explored by other regions.

This document offers detailed insights into the regulatory landscape, the commercial implications of PFAS, testing, and actionable strategies to address associated risks while seizing emerging opportunities.

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WHAT ARE PFAS?

PFAS are a diverse group of man-made chemicals used extensively for their unique properties, including resistance to heat, water, grease, and stains. Examples of their applications include:

Waterproof coats, swimsuits, non-stick pans and the grease proof paper around takeaways chips; in cosmetic products such as sunscreen, foundation, hair moisturizer, pharmaceuticals, coatings for smartphones or on solar panels; as cleaning agents in floor polish and car care products. In non-consumer products they are used in electronics, aviation, firefighting foams, oil production and mining and even in some pesticides.

WHY ARE PFAS CONCERNING?

PFAS, often referred to as “forever chemicals,” are highly persistent in the environment due to their strong carbon-fluorine bonds, which prevent natural breakdown in soil, water, and sediments. Traditional water treatment methods are largely ineffective at removing PFAS, resulting in widespread contamination that persists for decades. Exposure to PFAS is linked to significant health risks, including immune suppression, reproductive issues, hormonal disruption, elevated cholesterol levels, and an increased risk of cancers such as kidney and liver cancer. These chemicals bioaccumulate in tissues, meaning even low-level exposure can build up over time, amplifying health impacts. PFAS are detected globally in water supplies, agricultural soil, wildlife, and human blood serum, underscoring their extensive reach. Their mobility through air, water, and food chains ensures that contamination spreads even to remote regions, far from manufacturing or

usage sites. Addressing the environmental and health challenges posed by PFAS requires coordinated regulatory actions, technological advancements, and proactive industry measures to limit further contamination and reduce exposure risks.

References:

(C8 Medical Monitoring Program.
<http://www.c-8medicalmonitoringprogram.com>).

(<https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas>)

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)
https://progressreport.cancer.gov/prevention/chemical_exposures/pfas

REGULATORY LANDSCAPE

There is now some new interest in reassessing what might otherwise be considered settled science when it comes to food additives and food packaging materials.



The following highlights key regulatory developments driven by the growing global demand for transparency and information regarding the manufacture, classification, testing, processing, distribution, and use of PFAS, along with the associated legal and commercial impacts.

REGULATORY LANDSCAPE (continued)

UNITED STATES

The regulatory focus in the United States currently centers on addressing PFAS contamination in soil and drinking water due to the significant potential for human exposure. On October 18, 2021, the U.S. Environmental Protection Agency (EPA) introduced its PFAS Strategic Roadmap, outlining a comprehensive, agency-wide strategy to manage PFAS-related issues. On April 10, 2024, the U.S. Environmental Protection Agency (EPA) finalized a new rule to reduce the amount of per- and polyfluoroalkyl substances (PFAS) in drinking water. The rule establishes legally enforceable levels for six PFAS, including PFOA, PFOS, PFNA, PFHxS, and HFPO-DA to 4 ppt. The rule also sets limits for mixtures of any two or more of four PFAS.

• EPA's PFAS STRATEGIC ROADMAP (2024-2025):

Key Strategies: Increase research, impose restrictions on PFAS releases, and accelerate remediation. The EPA has also outlined steps to ensure that industries disclose PFAS use and assess potential impacts on the environment and public health.

- o **TSCA Implementation:** Significant New Use Rules (SNURs) require regulatory approval for new PFAS uses, mandating stricter assessments before market introduction.

- o **Drinking Water Standards:** Maximum Contaminant Levels (MCLs) 4 ppt for PFOA, PFOS, and other PFAS have been introduced to safeguard public health, with a goal to reduce human exposure through municipal water supplies.

- o **CERCLA Designation:** PFOA and PFOS are now classified as hazardous substances, creating strict cleanup and reporting requirements. This classification significantly increases liability for companies linked to PFAS contamination.

- o **California:** Ban on PFAS in food packaging and cosmetics by 2025, with additional restrictions on firefighting foams and textiles.

- o **Maine:** Mandatory reporting and phase-out of intentionally added PFAS in all products by 2030. Companies operating in Maine are required to disclose product content to the Department of Environmental Protection.

- o **Minnesota:** Comprehensive restrictions on PFAS in consumer goods, coupled with incentives for manufacturers adopting PFAS alternatives.

References:

EPA's PFAS Strategic Roadmap: <https://www.epa.gov/pfas/pfas-strategic-roadmap>.

National Conference of State Legislatures (NCSL) PFAS Laws Database: <https://www.ncsl.org>.

REGULATORY LANDSCAPE (continued)

CANADA

- **Draft State of PFAS Report (2024):** Proposes inclusion of PFAS under the Canadian Environmental Protection Act (CEPA) for stricter controls, aligning Canadian regulations with global standards.
- **Mandatory Surveys:** Companies must disclose PFAS production, importation, and usage data annually. This survey process helps authorities develop targeted risk management strategies.
- **Risk Management:** Initial bans on PFAS in firefighting foams, with plans to expand restrictions to other applications, including textiles and industrial equipment. Canada is also investing in research to develop PFAS-free alternatives.

References:

Canada Gazette, Proposed PFAS Regulations: <https://www.gazette.gc.ca>.

EUROPEAN UNION

- **REACH Restriction Proposal (2023):**
 - o Covers over 10,000 PFAS compounds, aiming to eliminate all non-essential uses within a specified timeline.
 - o Introduces phased bans with specific derogations for critical uses (e.g., medical devices and semiconductor manufacturing).
- **Food Safety Measures:** Restrictions on PFAS in food contact materials have been expanded to include bans on grease-resistant coatings used in fast-food packaging.

Reporting Requirements: Mandatory declarations of PFAS content under the Waste Framework Directive, enabling better tracking of hazardous waste streams.

References:

European Chemicals Agency (ECHA): <https://echa.europa.eu>.

REGULATORY LANDSCAPE (continued)

UNITED KINGDOM

- **Regulatory Management Options Analysis (RMOA):** Focused on high-risk applications such as firefighting foams and consumer products. The UK has committed to creating tailored regulations for sectors where PFAS use is unavoidable.
- **Exclusions:** Exempts specific PFAS with isolated methylene groups, unlike the EU's broader approach. This exclusion has sparked debates on balancing industrial needs with environmental protection.
- **Stakeholder Engagement:** UK authorities are actively consulting industry leaders to identify feasible PFAS substitutes and set achievable compliance timelines.

References:

UK Health and Safety Executive (HSE): <https://www.hse.gov.uk>.



GLOBAL TRENDS

- **OECD Coordination:** Promotes harmonized definitions and regulatory frameworks for PFAS globally. OECD's guidelines are becoming the baseline for international trade agreements and regulatory compliance.
- **Trade Impacts:** The EU's restrictions are expected to reshape international supply chains, compelling exporters to adhere to stricter PFAS standards.
- **Consumer Awareness:** Rising public demand for PFAS-free products is influencing market trends, with more companies marketing their products as "PFAS-free" to attract environmentally conscious consumers.
- **Innovation Incentives:** Governments globally are offering grants and tax incentives to industries investing in the development of PFAS-free technologies and products.

References:

OECD Publications on PFAS: <https://www.oecd.org>.

EPA MANDATES

On October 9, 2024, the U.S. Environmental Protection Agency (EPA) announced its fifth Toxic Substances Control Act (TSCA) test order under the National PFAS Testing Strategy. This order mandates Innovative Chemical Technologies, The Chemours Company, Daikin America, Inc., Sumitomo Corporation of Americas, and E.I. Du Pont de Nemours and Company to conduct and submit comprehensive testing on 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl prop-2-enoate, commonly referred to as 6:2 fluorotelomer acrylate (6:2 FTAc).

The EPA identifies 6:2 FTAc as a chemical widely used in the production of plastics, resins, textiles, apparel, leather, and other chemical products. It estimates that annual production ranges between one million and 20 million pounds. This testing requirement aims to gather critical data on the chemical's environmental and health impacts to inform future regulatory actions and safety measures.

WHAT TO DO NEXT?

1. Supply Chain Analysis

- Identify all points in your supply chain where PFAS may be present, including raw materials, manufacturing processes, and end products.
- Evaluate options to eliminate or minimize PFAS use.
- Develop a testing plan.

2. Regulatory Compliance

- Develop processes to stay ahead of global regulatory changes.
- Prepare detailed justifications for PFAS uses that are essential and seek exemptions where applicable.

3. Long-Term Planning

- Establish PFAS-specific policies and management frameworks within your organization.
- Collaborate with industry groups and regulators to influence future policy directions.

4. Market Opportunities

- Position your company as a leader in sustainability by transitioning away from PFAS where possible and/or reduce presence of PFAS.
- Highlight environmentally responsible practices in marketing and communication efforts.

PFAS TESTING LAB

ADPEN Laboratories is the standard for quality and excellence and our knowledge and experience enable us to provide assistance to the ongoing operations of public water systems and water treatment facilities (municipal and industrial water treatment plants), pharmaceutical manufacturing companies, manufacturing industries, environmental agencies, government bodies, public health departments, defense and aerospace, DOE/DOD, agriculture, food production, food packaging, real estate and construction firms.

ADPEN performs chemical tests in our ISO/IEC 17025:2017 PJLA-accredited lab in Florida. Our experts can test for PFAS compounds using EPA methods 537.1 and 1633 in drinking water, drinks, ground and surface water, sediment, soil, tissue, foods and other matrices. These advanced procedures can detect trace residues down to 4 parts per trillion (ppt) using LC-MS/MS.



**LET ADPEN TAKE CARE OF YOUR TESTING NEEDS
CONTACT US**

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