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# Fluoropolymer Focus



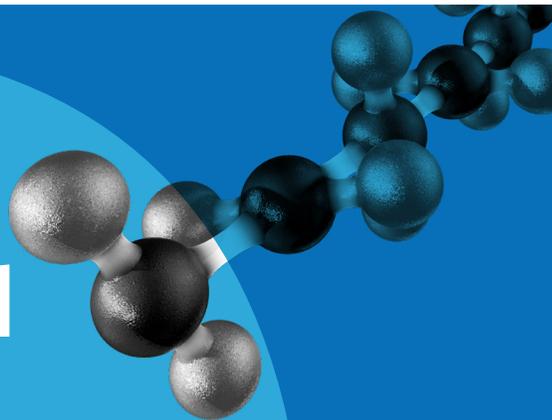
# Introduction

As federal and state governments race to regulate a class of chemicals known as per- and polyfluoroalkyl substances (PFAS), their broad efforts sweep in thousands of individual chemicals—from those for which scientific consensus coalesces on significant health and environmental effects (PFAS of Concern or PFOC) to those which are generally understood by the scientific community to be safe. This quarterly brochure will focus on the regulation of fluoropolymers—a distinct class of PFAS that can vary toxicologically from PFOC and are crucial to, and irreplaceable in, several industrial applications ranging from manufacturing of solar panels and windmill blades for clean energy systems, to optimizing lithium-ion batteries and hydrogen fuel cells in electrical vehicles, to facilitating microchips that support the semiconductor industry and allow the development of modern electronic devices such as mobile phones and laptops. Fluoropolymers also are utilized in medical products like catheters and medical implants and in a variety of pumps, gaskets, industrial equipment and refrigeration systems. In a growing number of applications, they can be made without the use of fluorinated polymerization aids to minimize the risk to water quality, human health and the environment. We hope this brochure can serve as a resource to you, our valuable clients, to ensure you are keeping up to date on this rapidly changing landscape, as well as a forum to foster dialogue specific to this important class of chemicals apart from PFOC and to facilitate smarter regulation.

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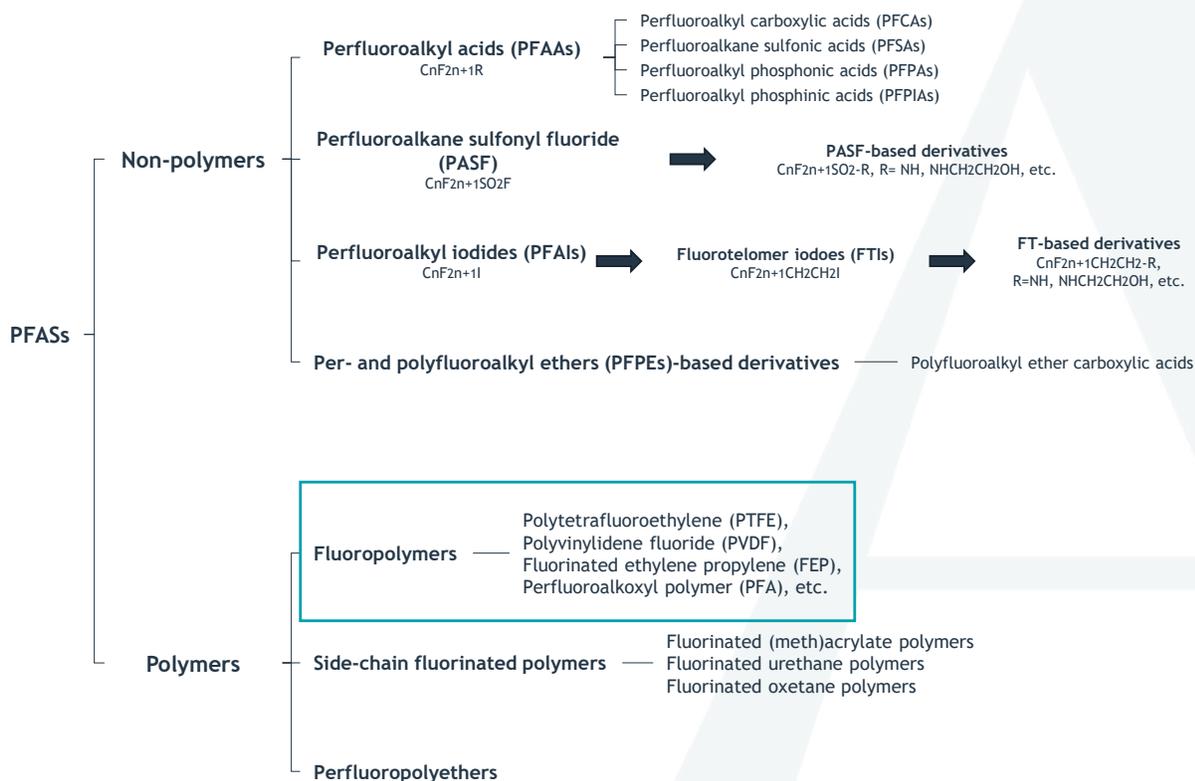
# Fluoropolymers 101



## What Are Fluoropolymers?

To understand fluoropolymers, one must first understand PFAS. PFAS are a broad class of chemicals for which there is no single, globally harmonized definition. Many regulations define PFAS based on their structure and atomic composition and specifically the carbon–fluorine (C–F) bond found in all PFAS. A definition used in several federal and state regulations within the United States, for instance, describes PFAS as a “class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom.” Such broad, chemical structure-based definitions, however, cover a range of about 9,000 substances, which can vary greatly in risk presented and toxicological profiles. Such a structural definition that includes PFAS of Concern or PFOC like the toxic, bio-accumulative, persistent and mobile per- and polyfluoroalkyl carboxylic and sulfonic acids (example: PFOA and PFOS) also brings within its purview of regulation fluoropolymers—a distinct class of 38 PFAS used primarily in industrial applications that can be produced, used and disposed of safely.

## Per- and polyfluoroalkyl substances (PFASs)



## Why Do We Need Fluoropolymers?

Fluoropolymers are essential to several critical industrial sectors including renewable energy, transportation, electric vehicles, semiconductors, food and water treatment technologies, safe chemical processing, and pharmaceutical and medical devices.<sup>1</sup> In October 2023, the Department of Defense (DOD) submitted a “Report on Critical Per- and Polyfluoroalkyl Substance Uses” to Congressional Committees outlining uses of PFAS, and especially fluoropolymers, that are critical to the national security of the United States. The Report warns against chemical-structure-based (rather than hazard- or risk-based) definitions that would unwisely target fluoropolymers without regard to the specific risk (or lack thereof) relative to their use. Similarly, a regulatory management option analysis (RMOA) published by the United Kingdom’s Health and Safety Executive (HSE) in April 2023 suggests that the current regulatory framework for PFAS in the U.K. could be streamlined by providing exemptions for fluoropolymers and fluoroelastomers since comprehensive, reliable evidence of their low hazard or safe use is available, and because they are particularly important to the industrial, automotive, aerospace and defense sectors.

## How Are Fluoropolymers Different from PFAS of Concern?

While fluoropolymers share structural similarities with other PFAS, this structural similarity—namely the existence of a single C–F bond across chemical substances—in itself is not representative of a risk to human health and environment. Whether a PFAS is a cause of concern to human health and environment is determined by other traits such as its potential to bio-accumulate and to be persistent and/or mobile in the environment. Fluoropolymers exhibit different toxicological and environmental profiles from PFOC in these regards. They are high molecular weight substances with negligible solubility in water, solvents and biological liquids that cannot bio-accumulate in the human bloodstream. Further, they do not degrade to PFOC under intended use conditions or under the environmental conditions at the end-of-life phase of their application. Fluoropolymers are non-mobile, non-bio-accumulative, non-toxic chemicals that do not pose any risk to water quality, human health or the environment and fulfill the 13 criteria established by the Organization for Economic Cooperation and Development (OECD) to be regarded as “Polymers of Low Concern.”

To the extent there may be a valid concern related to fluoropolymers, it is the use and potential emission of fluorinated surfactants (also called PFAS polymerization aids) in the polymerization of certain fluoropolymers. However, the four fluoropolymers which form majority of the fluoropolymers in circulation in commerce—polytetrafluoroethylene (PTFE), polyvinylidene fluoride (PVDF), fluoroelastomer (FKM) and perfluoroalkoxy alkanes (PFA)—can be produced without the use of fluorinated surfactants and many companies are already doing so or committed to doing so.



Fluoropolymers are non-mobile, non-bio-accumulative, non-toxic chemicals that do not pose any risk to water quality, human health or the environment...”

<sup>1</sup> Fluoropolymers are crucial to, and irreplaceable in, the manufacturing of solar panels and windmill blades for clean energy systems. In electric vehicles, fluoropolymers are critical for optimal performance of lithium-ion batteries and hydrogen fuel cells. Fluoropolymers are essential for manufacturing semiconductors. Without fluoropolymers, the semiconductor industry will be unable to produce microchips that allow for the development of modern electronic devices such as mobile phones and laptops. Fluoropolymers are utilized in water filtration systems (which avoids the need to use chemicals for water treatment), and in food processing systems to guarantee adequate sanitary conditions and protect consumers from harmful contamination. Catheters and medical implants contain fluoropolymers due to their biological compatibility, inertness and durability. Furthermore, the production of medicines and vaccines requires ultra-pure conditions which can only be achieved with equipment based on fluoropolymer materials. Fluoropolymers are found in all kinds of industrial equipment, as well as joints and gaskets to secure operation and containment of chemicals. Further, fluoropolymers contribute to both fuel efficiency and safety, playing a key role in systems such as brakes in cars or wing flaps in aircraft. They are also the best option available (due to their high resistance and high flexibility) to protect electrical cables in aircraft, where high reliability of such cables, which can be exposed to thermal as well as chemical pressure, is fundamental. Lastly, fluoropolymers are used in highly efficient air conditioning and refrigeration systems, as well as in heat pumps. Fluoropolymers also play a key role in modern construction systems, used in many buildings to boost durability and sustainability.

Sources: [https://www.gfl.co.in/assets/pdf/GFL\\_Announcement\\_30.11.22\\_new.pdf](https://www.gfl.co.in/assets/pdf/GFL_Announcement_30.11.22_new.pdf), <https://www.solvay.com/en/innovation/science-solutions/pfas>, <https://www.arkema.com/global/en/media/newlist/news/global/corporate/2023/20230221-arkema-position-on-european-proposal-to-restrict-pfas/>

# Federal Fluoropolymer Activity

The U.S. Congress is considering legislation in a number of areas that affect fluoropolymers, including those that do so in the greater context of regulating PFAS.

In July 2023, the Senate Environment and Public Works (EPW) Committee released a draft bipartisan PFAS bill aimed at mitigating and remediating PFAS contamination. The draft proposed a deadline for the Environment Protection Agency (EPA) to set a Safe Drinking Water Act (SDWA) standard for PFAS, provided additional funding for research and treatment technology, addressed PFAS in the context of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and, perhaps of greatest importance to fluoropolymers, proposed a definition for PFAS which, although structural, is more narrowly tailored to target toxic PFAS that are mobile in the environment. The definition targets only non-polymeric PFAS and human-made side-chain fluorinated polymers containing at least two fully fluorinated carbon atoms. It exempts fluoropolymers, which are polymeric, and thus have a higher molecular mass, making them less mobile in the environment. Fluoropolymers also differ from side-chain fluorinated polymers; unlike fluoropolymers, side-chain fluorinated polymers can degrade to non-polymeric PFAS during their intended use or at the end-of-life phase and are used for more dispersive consumer facing applications. The draft was the product of science-based stakeholder input and a receptive, bipartisan EPW Committee leadership and staff. At this writing, EPW Committee leaders have yet to indicate when they will officially introduce the PFAS bill, nor are its prospects for eventual consideration and adoption clear at this time.

The fiscal year (FY) 2023 National Defense Authorization Act (NDAA) required the DOD to submit a report to the Senate and House Armed Services Committees on DOD's use of PFAS "critical to the national security of the United States," with a focus on sectors of strategic importance for domestic production and supply chain resilience. In response, DOD recently submitted a report to the House and Senate Armed Services Committees emphasizing, in part, that "a dozen fluoropolymers, including fluoroelastomers, are ingredients in polymer bonded explosives, pyrotechnics, and propellant components used in munitions, decoy flares, and chaff," noting that fluoropolymers "serve as high temperature resistant binders and resins." In addition to these few "purely military PFAS applications," the report also underscored defense applications equally critical for non-defense, civilian needs, such as energy storage and electric vehicle batteries. The report recommends more careful PFAS regulation that contemplates these critical applications, discouraging the use of broad chemical-structure-based definitions and advocating instead for regulations that are hazard- or risk-based.

Additionally, the Department of Energy (DOE) is assembling a report in response to a directive contained in the FY 2023 Energy and Water Development and Related Agencies Appropriations Act to provide a life-cycle assessment of fluoropolymers within a year of its enactment. Among other elements, the law calls for "an analysis of the use of fluoropolymers in the aerospace, automotive, battery, building construction, chemical processing, electronics, infrastructure, semiconductor, solar panel and wind energy sectors." DOE, in collaboration with Savannah River National Laboratory and Vanderbilt University, sought extensive stakeholder input to inform the DOE report due to Congress in April 2024.

Meanwhile, the House Energy & Commerce Committee continues to evaluate ongoing federal and state PFAS legislative and regulatory activity. During the 117th Congress, the Committee considered and the House ultimately adopted the PFAS Action Act (H.R. 2467), which, among other actions, proposed to institute requirements and incentives to limit PFAS use, designate PFAS as a hazardous substance under current federal statute, and establish a competitive SDWA grant program to assist community water systems with installing PFAS treatment technologies. The Committee has yet to consider specific PFAS legislation in the 118th Congress.

## EMPW Committee Bipartisan PFAS Bill

- Proposed a deadline for the Environment Protection Agency (EPA) to set a Safe Drinking Water Act (SDWA) standard for PFAS.
- Provided additional funding for research and treatment technology.
- Addressed PFAS in the context of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).
- Proposed a definition for PFAS more narrowly tailored to target toxic PFAS that are mobile in the environment.

# Department of Defense (DOD) Needs Fluoropolymers

On October 11, 2023, the DOD submitted a report entitled “Report on Critical Per- and Polyfluoroalkyl Substance Uses” to the Committees on Armed Services of the House and the Senate pursuant to the National Defense Authorization Act of 2023 (the Report). The Report outlined the uses of PFAS critical to the national security of the United States.



As an initial matter, the Report notes that there is no universal definition of PFAS and emphasizes the variation in toxicological profiles of chemical substances included within the class of chemicals. The Report describes the “PFAS universe” as “structurally and physiochemically diverse” and highlights that several subgroups of PFAS may be more or less stable, persistent and/or bio-accumulative compared to well-studied PFAS of concern such as perfluorooctanesulfonic acid and perfluorooctanoic acid. However, the Report notes that regulators in both the United States and Europe have proposed chemical-structure-based (rather than hazard- or risk-based) definitions “which [do] not inform whether a compound is harmful or not.” The Report warns that the use of this type of definition would make emerging PFAS environmental regulations broad, unpredictable and uninformed by the specificity of

## EPA’s Recently Finalized TRI Reporting Rule

On October 20, 2023, EPA finalized rules tightening reporting requirements applicable to manufacturers and processors of PFAS listed in the Toxic Release Inventory (TRI). The Rule makes TRI-listed-PFAS ineligible for *de minimis* exemptions to reporting requirements. A complete list of the PFAS added to the TRI list can be found [here](#). Initially, Congress required facilities to report on TRI-listed-PFAS if they manufacture, process or otherwise use more than 100 pounds PFAS but did not address the availability of the *de minimis* exemption or other burden reduction provisions to the reporting requirement.

With the finalization of these Rules, the listed PFAS are added to the compilation of Lower Thresholds for Chemicals of Special Concern. This eliminates the use of the *de minimis* exemption by manufacturers. In addition, the Rules remove the *de minimis* exemption for Supplier Notification Requirements for all chemicals of special concern, requiring suppliers of mixtures and trade name products containing TRI-listed-PFAS to report the presence of such PFAS in their mixtures and products.

Perhaps of equal interest, in promulgating the rules, EPA conceded that the “[d]efinitions of what constitutes ‘PFAS’ differ amongst scientific and regulatory bodies....” This again highlights the need for vigilance to ensure that the federal regulatory programs treat fluoropolymers appropriately and with recognition of their differing chemistries and toxicological profiles.

individual PFAS risk relative to their use. Through the Report, DOD warns of this system having unintended impacts on market dynamics and the supply chain.

The Report concludes that PFAS have both direct and indirect uses critical to the production of key components of the defense industrial base. It identifies four focus areas where the use of PFAS is particularly important: (i) kinetic capabilities; (ii) energy storage and batteries; (iii) castings and forgings; and (iv) strategic and critical minerals. The Report pays particular attention to the role of fluoropolymers, noting that they are essential to maintaining kinetic capabilities since they are used as ingredients in polymer bonded explosives, pyrotechnics and propellant components used in munitions, decoy flares and chaff. The Report also notes the presence of fluoropolymers (like polytetrafluoroethylene (PTFE)) in subcomponents of Li-ion batteries (where they serve as heat transfer materials or insulation and provide weather resistance and ultraviolet light resistant functionalities to final components) and fluoropolymers (like PVDF, FKM and PFAs) in microelectronics and semiconductors due to their “exceptional combination of heat and chemical resistance and chemical inertness.” The Report confirms that DOD would face challenges, long timelines and high costs to find acceptable alternatives to these materials.

The Report predicts that the current regulatory framework will have impacts beyond the defense sector and calls for a “more complete understanding of PFAS essential uses...[through]...an extensive and complex evaluation of the market.” Action items set out by the DOD to this end include engaging with industry to identify PFAS content in other materials commonly used within the DOD to assess potential risks and potential alternatives.



# Where We Are On EPA's PFAS Roadmap (And What It Means For Fluoropolymers)

EPA released its Strategic PFAS Roadmap for the years 2021 to 2024 (Roadmap) in October 2021. [Keep an eye on future brochures for what we presume will be a new roadmap next year!]. The Roadmap sets timelines by which EPA will take specific actions and commit to new policies.

## Key Commitments of the Roadmap



Reviewing previous decisions on PFAS.



Publishing a national PFAS testing strategy to deepen understanding of the impacts of PFAS and categorize them to prioritize regulation.



Designating certain PFAS as hazardous substances under existing laws.



Enhancing reporting of PFAS.

As discussed in greater detail below, EPA is well on its way.

Through the Roadmap, EPA acknowledges the importance of categorizing and regulating PFAS commensurate with their toxicity. One of four guiding principles of the Roadmap is to “ensure science-based decision making.” The Roadmap notes that the current body of science ties only certain PFAS to hazards and that there are significant gaps in the understanding of the impacts of other PFAS. It states, “[r]egulatory development, either at the state or federal level, would greatly benefit from a deeper scientific understanding of the exposure pathways, toxicities, and potential health impacts of less-studied PFAS.” It will be important to evaluate past and future actions by the Agency to ensure this development occurs and results in sound decision making with respect to fluoropolymers, which have lower risk profiles than other PFAS of Concern.

Since 2021, EPA has taken several actions to regulate PFAS in furtherance of the Roadmap. For instance, the agency issued a SDWA health advisory and announced a CERCLA rulemaking to address the investigation and cleanup of PFAS. EPA also issued a final rule adding five PFAS substances to the 170-plus list of PFAS that are subject to reporting requirements under the Toxics Release Inventory (TRI), a centralized database of the chemicals released into the environment, and proposed the designation of PFOA and PFOS as hazardous substances under CERCLA. The Agency finalized a human health toxicity assessment for hexafluoropropylene oxide dimer acid (GenX Chemicals), imposed required sampling for 29 PFAS to understand prevalence in drinking water, and made recommendations to states on setting effluent guidelines and water quality criteria for PFAS. Most recently, EPA proposed a rule preventing the resumption of the use of inactive PFAS without review; proposed National Primary Drinking Water Regulations of 4 ppt for PFOA, PFOS, PFNA, GenX Chemicals, perfluorohexane sulfonic acid (PFHxS) and PFBS; and proposed legal amendments to make PFAS ineligible for low volume exemptions (LVE) and low release and exposure exemptions (LoREX) from reporting requirements. Just last month, EPA finalized rules tightening reporting requirements applicable to manufacturers and processors of PFAS listed in the TRI. Note that EPA lacks a consistent definition of PFAS across its programs, requiring a heightened focus to ensure fluoropolymers do not get caught up inappropriately.

# TSCA Reporting Rule

On October 11, 2023, EPA published its final rule imposing reporting and recordkeeping requirements on manufacturers and importers of PFAS (the Rule) under Section 8(a)(7) of the Toxic Substances Control Act (TSCA). The Rule applies to all entities, including small entities, that imported or manufactured PFAS for a commercial purpose in any year since 2011, and all such entities that do so moving forward. The Rule defines “manufacture for a commercial purpose” to include the coincidental manufacture of PFAS as byproducts or impurities.



Regulated entities now have 18 months to submit information regarding: the manufacturing company; the identity of the PFAS produced; the purpose for which the PFAS was produced; annual production volumes; the form of PFAS produced; and byproducts generated during its manufacturing, disposal, exposures and hazards.<sup>2</sup> The information must be submitted to EPA via Central Data Exchange, the Agency’s electronic reporting portal, for each year in which that substance was manufactured since January 1, 2011, to the extent the information is known or reasonably ascertainable by the entity. The Rule also requires each person subject to the reporting requirements to retain records documenting the information reported to EPA for five years.

**EPA’s rule employs a structural definition of PFAS that includes at least one of these three structures:**

<b>R-(CF<sub>2</sub>)-CF(R’)R’’</b>	<b>R-CF<sub>2</sub>OCF<sub>2</sub>-R’</b>	<b>CF<sub>3</sub>C(CF<sub>3</sub>)R’R’</b>
where both the CF <sub>2</sub> and CF moieties are saturated carbons	where R and R’ can either be F, O or saturated carbon;	where R’ and R’’ can either be F or saturated carbons

While EPA intends to clarify the scope of the Rule by providing a list of covered substances gathered from the TSCA Inventory and LVE claims, the Agency confirmed that fluoropolymers, including higher molecular weight fluoropolymers, meet the definition and are reportable as PFAS. EPA will publish its list on the [CompTox Chemicals Dashboard](#), although it notes it will not be exhaustive. Whether a substance is covered under the Rule is ultimately determined by the above-mentioned structural definition incorporated in the Rule.

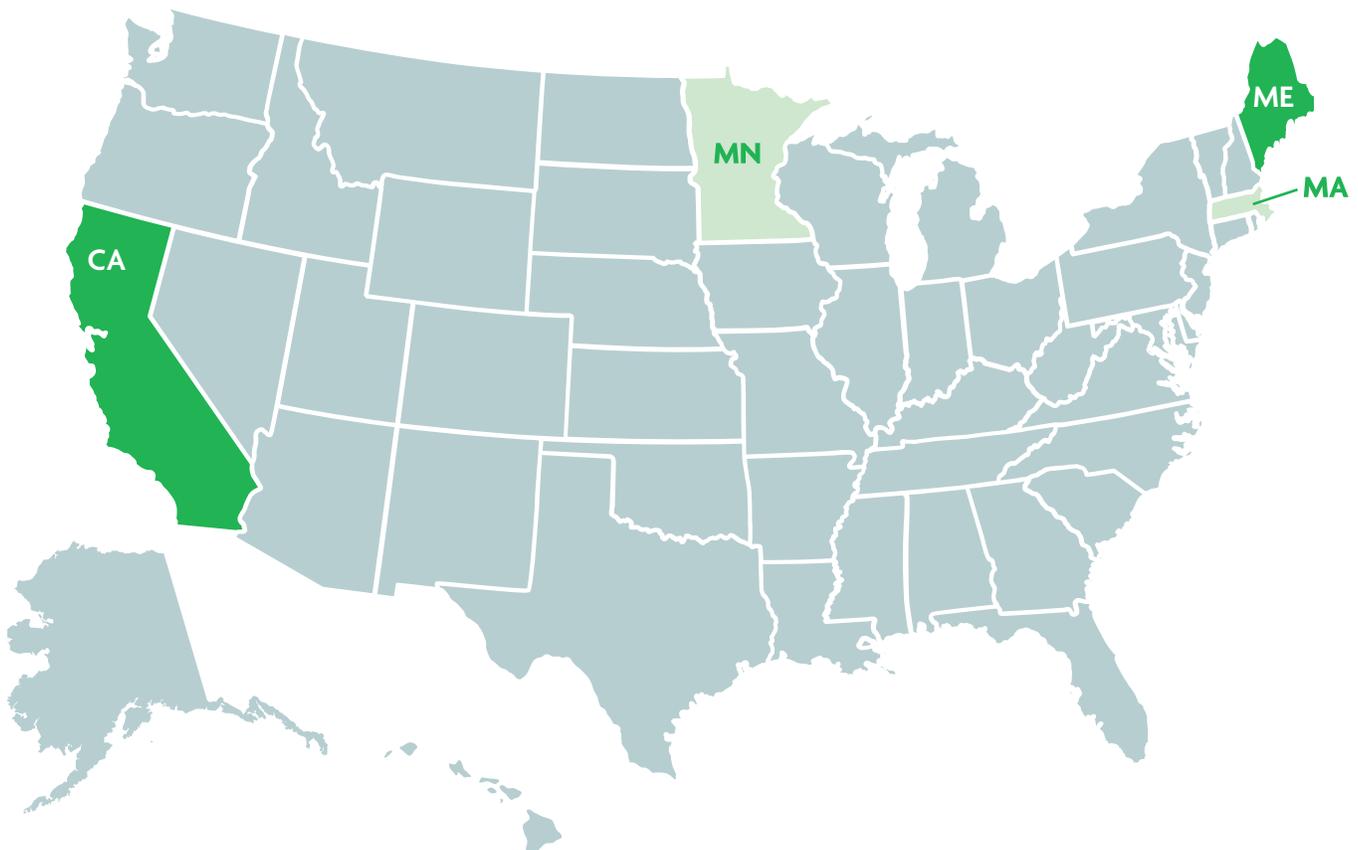
<sup>2</sup> Small manufacturers whose reporting obligations under the Rule derive exclusively from the import of articles containing PFAS have 24 months from the effective date of the rule to complete their reports.

# State Fluoropolymer Activity

## Overview

U.S. states vary in their approach to fluoropolymer legislation and regulation. Some states proposed a prohibition on all PFAS. Most of these prohibitions phase in over time—imposing an initial ban on the manufacture of certain products containing intentionally added PFAS, with a ban on all such products following a few years later. Other states only ban certain listed products and empower state environmental agencies to add products to these set lists, though often excluding those products for which such use is “currently unavoidable.” Many state laws also impose reporting requirements on manufacturers of products containing PFAS, requiring them to describe the product and disclose the purpose of PFAS in the product, including in any components; the amount of each PFAS chemical in the product; and basic information about the manufacturer. While the approaches vary, the definition of PFAS applied at the state level typically is structural, sweeping fluoropolymers into the net. The following is a sampling of the various state frameworks.

## Active State Legislatures on Fluoropolymers



Note that additional states, most prominently Minnesota, have adopted the “Maine Model” and many others, including Massachusetts, have proposed similar legislation.

## Maine

The Maine legislature passed legislation that (1) requires manufacturers of products with “intentionally added PFAS” to report to the Maine Department of Environmental Protection (Maine DEP) by January 1, 2025, and (2) prohibits the sale of new products containing intentionally added PFAS starting January 1, 2030. The Maine Statute defines PFAS as “substances that include any member of the class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom,” which is so broad as to include our fluoropolymers.

As a result, Maine now requires manufacturers of all products (whether for personal, residential, commercial or industrial use) with intentionally added PFAS to report the products to the Maine DEP and to identify any unavoidable uses for which no viable substitutes exist (if the manufacturers seek exemption). The reports must describe the product; the purpose of PFAS in the product, including in any components; the amount of each PFAS chemical in the product; and basic information about the manufacturer. Over 2,500 impacted companies, particularly downstream users, sought and received a temporary waiver of these rules to allow them time to come into compliance with the initial reporting deadline of January 1, 2023 (which was later amended to January 1, 2025 for all entities subject to the legislation). In an effort to clarify reporting requirements and process, Maine DEP is working with the Interstate Chemicals Clearing house to develop an online reporting database (updates on the development process of the database are expected to be made available [here](#)) and is drafting a rule intended to add clarity to the requirements.

Maine’s product-related PFAS law will prohibit the sale of all new products that contain intentionally added PFAS by January 1, 2030, with an initial prohibition on the sale of carpets, rugs and fabric treatments that contain intentionally added PFAS effective from January 1, 2023. Maine DEP may exempt certain uses as currently unavoidable. Note that additional states, like Minnesota, have adopted the “Maine Model,” and imposed similar requirements and timing.

<sup>3</sup> 2022 Cal Stat. Ch. 762.

## California

California has a number of laws that either prohibit, or require disclosure of, PFAS. Several of these laws define PFAS broadly as “a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom,” but narrowly define their targets to only certain products. For instance, California’s Department of Toxic Substances Control (DTSC) maintains a Priority Product List (the List) of the consumer products containing chemicals that have a hazard trait that can harm people or the environment. In the past two years, DTSC has updated the List to include carpets, rugs and treatments (for use on converted textiles or leathers) containing PFAS, requiring manufacturers of these products to submit to DTSC the names of all their products that contain PFAS and are sold in California.

In October 2021, California enacted legislation requiring the disclosure of the presence of PFAS in cookware, including pots, pans, skillets, etc. The law does not differentiate between short-chain PFAS and fluoropolymers.

In September 2022, California enacted legislation that will prohibit the manufacture or sale of new apparel and textile articles containing PFAS after January 1, 2025.<sup>3</sup> The legislation specifically exempts: (1) personal protective equipment, including “equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses that may result from contact with chemical, radiological, physical, biological, electrical, mechanical, or other workplace or professional hazards”; (2) outdoor sports apparel intended to protect from extended exposure to wet conditions (although the law does impose disclosure requirements related to the sale of outdoor apparel intended for use in severe wet conditions); (3) textiles related to vehicles; (4) vessels and related components; (5) filtration media used in chemical or pharmaceutical manufacturing; (6) textiles used for laboratory analysis and testing; (7) aircrafts and their component parts; and (8) architectural fabric structures.



# Across The Pond



Several PFAS are regulated in the European Union (EU) through Regulation 2019/1021 of the European Parliament and of the Council of June 20, 2019 on persistent organic pollutants (POPs Regulation). The POPs Regulation bans or restricts persistent organic pollutants (POPs) from being produced or used within the EU and imposes reporting requirements on manufacturers and distributors that are subject to the Regulation. Europe entered this arena earlier than the U.S., starting to regulate PFAS of Concern, including PFOS, PFOA and PFHxS under the POPs Regulation as early as 2009.

More recently, efforts to restrict PFAS ramped up significantly in the EU. A restriction proposal was submitted by five EU member states for consideration by the European Chemicals Agency (ECHA) in February 2023; the proposal calls for a gradual ban of over 10,000 PFAS compounds in Europe; the proposal calls for a gradual ban of over 10,000 PFAS compounds in Europe. The proposal defines PFAS per structural criteria used in the OECD definition: “any substance that contains at least one fully fluorinated methyl (CF<sub>3</sub>) or methylene (CF<sub>2</sub>) carbon atom (without any H/Cl/Br/I attached to it).” Other structural elements have been added to the definition to provide for exclusions from the scope of the restriction. The proposal restricts the manufacturing, sale and use of PFAS. It would also restrict the sale of PFAS as constituents of other substances if their concentration exceeds certain thresholds set based on the feasibility of targeted PFAS analysis (default concentration of 50 ppm). The proposal includes derogations for PFAS that are used as active substances in plant protection products, biocidal products and human and veterinary medicinal products and so does not apply to many fluoropolymers. Even fluoropolymers made with certain fluorinated polymerization aids receive derogation (but not PTFE, PVDF and FKM). Further, the proposal contains potential derogations, including one for the semiconductor manufacturing process, which will be reconsidered at a later stage. That said, while there are likely to be further exemptions and derogations worked in, the proposal as it stands is the fullest regulation on PFAS in existence. The final restriction is subject to and undergoing review by the Committees for Risk Assessment and Socio-Economic Analysis and is expected to come into force in 2025. The restriction appears likely to impact global PFAS regulation as well, as it will be a model for the Stockholm Convention.

In addition, several groups of PFAS compounds have been added to the EU Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Regulation Candidate List, requiring the producers and importers of these PFAS to register themselves with EU authorities. A number of PFAS are on the REACH Candidate List of substances of very high concern, which are to be progressively replaced by less dangerous substances or technologies where technically and economically feasible alternatives are available. In 2019, ECHA decided to include GenX in a candidate list for its eventual designation as a substance of very high concern. Chemours Netherlands challenged the decision before the EU Court of Justice. In November 2023, the EU Court ruled against Chemours.

If you have any questions regarding this update, please contact:

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