



## AHRI Policy Position PFAS Legislation and Regulations

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The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) is the trade association representing manufacturers of heating, ventilation, air-conditioning, refrigeration (HVACR) and water heating equipment within the global industry. AHRI's more than 330 member companies account for over 90 percent of HVACR and water heating residential and commercial equipment manufactured and sold in North America.

AHRI member companies are dedicated to manufacturing safe, sustainable, effective, and efficient heating, cooling, and refrigeration systems, as well as refrigerants, that meet critical societal needs such as ensuring availability of life-saving climate control and cold chain technologies that are necessary for the preservation of food and vaccines.

### How are PFAS Different?

While there are thousands of per- and polyfluoroalkyl substances (PFAS), a smaller subset is actually commercially relevant and an even smaller subset of those commercially relevant are identified as persistent, bioaccumulative, and toxic (PBTs)<sup>1</sup> meaning they are:

- **Persistent** in the environment,
- **Bioaccumulative** in organisms, and
- **Toxic** at relatively low (ppt) levels

It is important to stress that the term PFAS does not identify whether a substance is harmful. There are many fluorinated substances, including **hydrofluorocarbons (HFCs)**, **fluoropolymers**, and **hydrofluoroolefins (HFOs)** that **are not PBTs**, that could be unintentionally included in a broad definition, that provide essential services. HFCs and HFOs are used in vital products because they have low toxicity. For example, some HFCs are used in medical inhalers for adults and children with asthma or allergies. Some fluoropolymers are also used in medical applications due to their stability and chemical inertness.

Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS)<sup>3</sup> are two of the PBTs of concern. One of the key concerns regarding PFOS and PFOA is that they have been found in water, including drinking water. EPA is currently working to regulate these substances because they are known to be PBTs.

Unlike PFOA and PFOS, HFCs and HFOs are gases or volatile liquids, and when released, they ultimately are found in the atmosphere before breaking down, largely into naturally occurring substances like water, carbon dioxide and salts. Fluoropolymers also differ from PFOA and PFOS in that they are high molecular weight materials that are not bioavailable<sup>1</sup> or water soluble. The differences in the toxicity and "environmental fate" (water vs. atmosphere; persistent vs. quickly degrading; migrating vs. stationary) creates important distinctions between these chemicals and their potential public health impact.

Any assessment of PFAS should be based on the toxicity and "environmental fate"<sup>4</sup> of each substance (or a group of substances with similar properties) to ensure that low toxicity, essential products, are available for use. The state of Delaware differentiated between PBTs and other substances by using the definition in

[Delaware HB 8](#) from the 2021 state legislative session. The definition specifically includes PFOA and PFOS. Other definitions would group essential non-PBT products with PFOA and PFOS subjecting them to additional regulation unnecessarily.

## The Impact of a Broad PFAS Definition on the HVACR Industry

The continued use of low global warming potential (GWP) HFCs and HFOs is critical to the HVACR industry. Both Congress and many states across the country have passed legislation and/or regulations that will require the phase down of high GWP HFCs. Widely used refrigerants, as well as their low GWP substitute refrigerants, are at risk of being prohibited by legislation or regulations that utilize an overly broad definition of PFAS. Similarly, various fluoropolymer components used in HVACR systems are also at risk, in some cases in sealing applications that prevent the release of refrigerant into the atmosphere.

## Industry Position and Policy Considerations

AHRI members are supportive of efforts to transition away from PBTs across the country and to protect public health by ensuring they are no longer used in products. However, given the critical societal needs for the continued use of low-GWP HFCs and HFOs in HVACR equipment, as well as the substantial chemical and public health differences between various PFAS, AHRI supports a definition that explicitly targets PBTs such as PFOA and PFOS and does not inadvertently include critical chemicals that do not pose a risk to public health.

For legislation and regulations already in place, AHRI supports amending the overly broad PFAS definitions that include all chemicals with a single fully fluorinated carbon atom, with the below definition used by the State of Delaware to target PBTs:

*“PFAS” means non-polymeric perfluoroalkyl and polyfluoroalkyl substances that are a group of man-made chemicals that contain at least 2 fully fluorinated carbon atoms, excluding gases and volatile liquids. “PFAS” includes PFOA and PFOS.*

By using this targeted definition policymakers will ensure that sustainable solutions can be used for critical needs including inhalers, cold chains for food and vaccines, climate control in schools, homes, hospitals, and workplaces, and will avoid creating a regulatory conflict with any legislation or regulations phasing down the use of high GWP refrigerants.

### Contact Information

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<sup>1</sup>On November 4, 1999, EPA issued its final policy statement (64 FR 60194) on a category for Persistent Bioaccumulative and Toxic (PBT) new chemicals. There is no “bright line” that determines a chemical to be a PBT. Chemicals are categorized as PBTs based on a number of criteria which generally trigger additional testing requirements. Details of the determination process can be [found here](#).

<sup>2</sup>According to [Science Direct](#), Bioavailability (F) is defined as the rate and extent to which the active constituent or active moiety of a drug is absorbed from a drug product and reaches the circulation.

<sup>3</sup>PBTs such as Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) are sometimes referred to as “forever chemicals”.

<sup>4</sup>Environmental Fate and Transport are described by the Pacific Northwest National Laboratory as the study of how chemicals degrade and where chemicals travel in the environment when they are released intentionally or unintentionally.