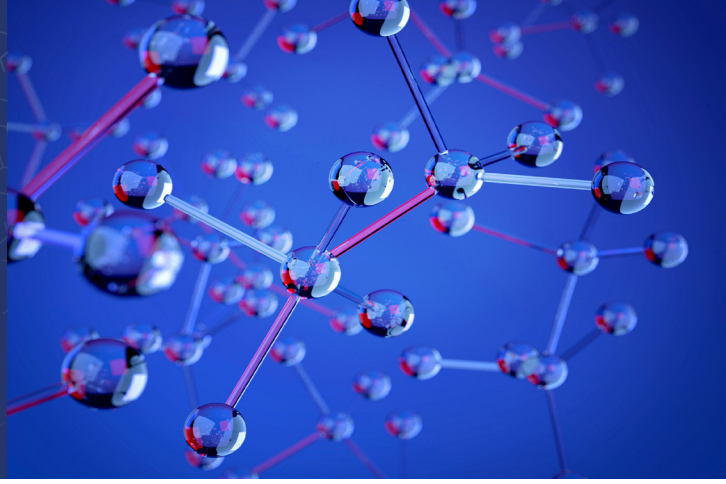
American Chemistry Council

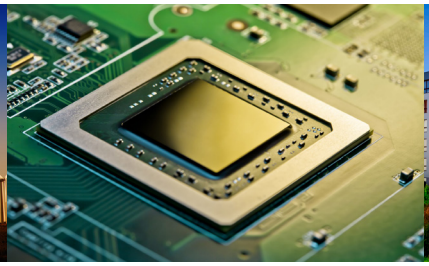
An Emerging Scientific Consensus on Fluorotechnology & PFAS



Fluorotechnology Enables Life in the 21st Century

According to the U.S. Environmental Protection Agency, "approximately 600 PFAS are manufactured (including imported) and/or used in the United States." Among these 600 are substances in the solid (e.g., fluoropolymers), liquid (e.g., fluorotelomer alcohols) and gaseous (e.g., hydrofluorocarbon refrigerants) forms. The fundamental physical, chemical, and biological properties of solids, liquids and gases are clearly different from one another. The very distinct physical and chemical properties of the three types of commercial PFAS described demonstrate how varied they are and how a simple grouping approach to risk would be inadequate.

However, some have proposed grouping all PFAS chemistries together for the purposes of regulation. Although the grouping of some substances within the class based on similar physical, chemical, and biological properties may be possible – a proposal to regulate all PFAS as a single class is neither scientifically accurate nor appropriate.

Latest Research Reveals Flaws in Grouping

But don't take our word for it.

In a published peer review conducted by a panel of experts, most agreed that all PFAS should not be grouped together for risk assessment purposes. Most experts also agreed that it is inappropriate to assume equal toxicity/potency across the diverse class of PFAS.

The US EPA's PFAS Strategic Roadmap and National PFAS Testing Strategy also recognize distinctions within the broad class of PFAS and describe actions the agency will take to gather information on sub-categories within the broader class.

Furthermore, a scientific consensus is emerging that it is not accurate or even possible to group all PFAS chemistries together for the purpose of regulation. Indeed, state, federal and international entities that have explored the possibilities of a class-based approach have recognized significant challenges.

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For instance:

- The Organisation for Economic Co-operation and Development (OECD) issued a report[1] saying, "As PFASs are a chemical class with diverse molecular structures and physical, chemical and biological properties, it is highly recommended that such diversity be properly recognized and communicated in a clear, specific and descriptive manner."

- ECOS[2] – the Environmental Council of the States – which represents state and territorial environmental agency leaders, several of whom have implemented regulatory programs in their home states, has said: "Many regulators and subject-matter experts advise against grouping PFAS as an entire class."

- The Vermont Department of Environmental Conservation[3], which was specifically charged by the legislature to develop a class regulation or to explain why such a regulation wasn't possible said, "The Review Team spent over a year deliberating, researching, and discussing the potential to regulate PFAS as a Class. After reviewing the current peer-reviewed literature, as well as the available toxicology data for PFAS, the Review Team determined that at the current time it is not feasible to regulate PFAS as a Class."

- Federal scientists participating in a workshop convened last fall by the National Academies of Science, Engineering, and Medicine (NASEM) to review the federal PFAS research program acknowledged the broad diversity of properties with this group of substances, concluding that[4] "PFAS substances thus present unique challenges for grouping into classes for risk assessment."

- These state and federal entities findings are also echoed in a recent scientific, peer-reviewed publication[5] evaluating possible grouping frameworks to assess PFAS.

- And in 2023, the U.S. Department of Defense released a report detailing how losing access to PFAS "would greatly impact national security. They warned that policymakers "should avoid taking a broad, purely 'structural' approach to restricting or banning PFAS. It is critical that future laws and regulations consider and balance the range of environmental and health risks associated with different individual PFAS, their essentiality to the U.S. economy and society, and the availability of viable alternatives."

Industry Supports Science-Based Solutions

ACC and its members understand the potential issues with PFAS chemistries and are working with policymakers at the federal and state levels to support strong, science-based chemical regulations that are protective of human health and the environment.

1. https://www.oecd.org/chemicalsafety/portal-perfluorinated-chemicals/terminology-per-and-polyfluoroalkyl-substances.pdf
2. ECOS. Processes & Considerations for Setting State PFAS Standards (February 2020).
3. https://dec.vermont.gov/sites/dec/files/PFAS/20180814-PFAS-as-a-Class.pdf.
4. NASEM. Workshop on Federal Government Human Health PFAS Research, October 26-27. Board on Environmental Studies and Toxicology (2020). https://www.nap.edu/read/26054/chapter/1.
5. Goodrum PE et al. Application of a framework for grouping and mixtures toxicity assessment of PFAS: a closer examination of dose additivity approaches. Toxicol Sci: 1-19 (2020). https://doi.org/10.1093/toxsci/kfaa123.

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