PFAS Regulations: Promoting Sensible Policy for the Environment

Who Is FSA:

The FLUID SEALING ASSOCIATION® (FSA) is an international trade association founded in 1933. Member companies produce and market a wide range of fluid sealing devices targeted to the industrial market. FSA membership includes a number of companies in Europe and Central and South America but is most heavily concentrated in North America. FSA members account for a majority of the manufacturing capacity for fluid sealing and containment devices in the Americas market.

Fluid sealing products serve an essential role in our society. They improve energy savings, reduce emissions, and improve worker safety and equipment reliability. The FSA promotes a targeted approach to regulating hazardous chemicals. We oppose regulatory overreach, and a one size fits all approach to PFAS chemicals, (would include safe PTFE and other fluoropolymers) which may lead to unintended consequences to the climate, economy and safety.

PFAS Chemicals Are Not All the Same:

All PFAS (Per and Polyfluoroalkyl substances) chemicals are not equal and should not be regulated as if they are. Each should be treated differently according to its application and toxicity assessment. Umbrella legislation or regulation against all PFAS could end the use of non-harmful fluoropolymers such as PTFE —a protector of people, the environment, and industrial equipment. These fluoropolymers in their finished form are well studied with no health risks, are resistant to chemical attack, save energy, increase safety and allow easy movement of machine elements. These products are used in infrastructure, aerospace, military, power generation and other energy sources, chemical processing, food, and pharmaceutical industries and virtually every other industry.

According to the Organization of Economic Cooperation and Development (OECD), "PFAS 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". The term "PFAS" is a broad, general, non-specific term, which does not inform whether a compound is harmful or not, but only communicates that the compounds under this term share the same trait for having a fully fluorinated methyl or methylene carbon moiety."

Why Are Fluoropolymers Important?

Fluoropolymer materials are "generally regarded as safe" by the US FDA and are approved for implantation and various medical devices per USP Class VI designation. Studies have shown that they are considered safe, non-harmful materials. In sealing products, fluoropolymers prevent leakage from industrial equipment to the environment. Leaks from these assets contribute to greenhouse gas emissions in some applications and create significant safety hazards in others. Sealing devices that utilize fluoropolymers and fluoroelastomers reduce leakage rates to almost zero, making them a cornerstone in the effort to decrease fugitive emissions, battle climate change, and protect workers. Fluoropolymers are inert to almost all chemicals used in industry, and their wide range of temperature capabilities makes them essential for safe operation of industrial equipment. There are currently no available alternate materials with the same unique properties of fluoropolymers. Including fluoropolymers in any ban of PFAS materials would result in decreased performance across the board for all sealing devices currently in use.

PFAS Chemicals of Concern:

PFAS chemicals are divided into 2 categories – non-polymeric and polymeric. The *non-polymeric* chemicals such as perfluorooctanoic acid (PFOA) and perfluoro octane sulfonic acid (PFOS) are the chemicals of concern as studies have shown they have potentially harmful effects to human health. Some polymeric PFAS such as side-chain fluorinated polymers may also be of concern with respect to end of life decomposition. These materials are the intended targets of most of the legislation and regulations being established to avoid contamination of drinking water and the environment. The major fluoropolymer manufacturers are utilizing new technologies to prevent emissions of non-polymeric PFAS to the environment. The focus of the industry currently is to make essential fluoropolymers using responsible and well controlled manufacturing processes.

FSA Recommendations:

FSA supports:

- A science-based approach to regulating potentially harmful *non-polymeric* PFAS chemicals, such as PFOA and PFOS.
- Regulations based on standardized test methods and acceptance limits of materials deemed harmful by the EPA.
- Continued mitigation efforts, including groundwater clean-up and funding to remove harmful chemicals.
- The EPA and other regulating bodies using the grouping concept to distinguish hazardous chemicals from non-hazardous in making determinations.
    - The scope of any regulation should exclude all chemicals deemed non-harmful.

FSA opposes:

- Classifying and regulating all PFAS as a single group.
- Legislative provisions that would mandate hazardous designations for all PFAS, including PTFE and other safe fluoropolymers and fluoroelastomers.
- Banning or otherwise limiting the development of new non-harmful polymeric PFAS.
- Legislative provisions that would unnecessarily create liabilities, that could disrupt the entire supply chain (distribution, transportation, etc.), including those who acted appropriately (no adverse environmental impact).

FSA's Mission:

The Fluid Sealing Association is dedicated to advancing the fluid sealing industry by fostering innovation, promoting sustainability, and ensuring the highest standards of safety and reliability. The Association strives to be the leading resource for education, advocacy, and collaboration, empowering members and stakeholders to achieve excellence in fluid sealing solutions for a better tomorrow. FSA supports sensible regulation and legislation to protect the health and safety of our communities and environment.

Resources

- Grand View Research sample report, dated JAN2016
  Cotruvo, Joseph. "INSIGHT: We Need Scientifically Credible Health Benchmarks for PFAS," Bloomberg Law. https://news.bloomberglaw.com/environment-and-energy/insight-we-need-scientifically-credible-health-benchmarks-for-pfas
- OECD (2021), Reconciling Terminology of the Universe of Per- and Polyfluoroalkyl Substances: Recommendations and Practical Guidance, OECD Series on Risk Management, No. 61, OECD Publishing, Paris.
- Henry, B. J., Carlin, J. P., Hammerschmidt, J. A., Buck, R. C., Buxton, L. W., Fiedler, H., Seed, J., & Hernandez, O. (2018). A critical review of the application of polymer of low concern and regulatory criteria to fluoropolymers. *Integrated Environmental Assessment and Management*, 14(3), 316-334. doi:10.1002/ieam.4035: Integrated Environmental Assessment and Management, 2018. Retrieved from SETAC.
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- U.S. Department of Defense. (2023). *Report on Critical Per- and Polyfluoroalkyl Substance Uses*. Office of the Assistant Secretary of Defense for Energy, Installations, and Environment. Retrieved from https://www.acq.osd.mil/eie/eer/ecc/pfas/docs/reports/Report-on-Critical-PFAS-Substance-Uses.pdf.