

# Science-Based Accounting of PFAS



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In 2018, the Organization for Economic Co-operation and Development (OECD) created and published a global database of 4,730 per- and polyfluorinated substances (PFAS) that may have been in global commerce. Since then, there have been multiple claims by government authorities and other stakeholders that there are in fact close to five thousand PFAS substances in global commerce. These overstated claims have been used to support a one-size-fits-all approach to regulating the chemically diverse universe of PFAS chemistries.

The reality is that only a small percentage of the PFAS listed in the OECD report are commercially relevant today. Entities claiming that the OECD report is a snapshot of the market today do not acknowledge that the OECD database includes:

- Substances that were never commercialized,
- Substances that have been phased out of production,
- Substances that were made in miniscule research quantities, and
- Substances that are already regulated by authorities and/or multi-stakeholder agreements.

As a result, utilizing the OECD database as a reflection of PFAS in commerce is inaccurate, and it should not form the basis for regulation or legislation. Already, there is evidence that regulatory bodies around the world are drawing erroneous conclusions by the notion that there are thousands of relevant PFAS in commerce. The following represent some of the false claims that may be made using the OECD database.

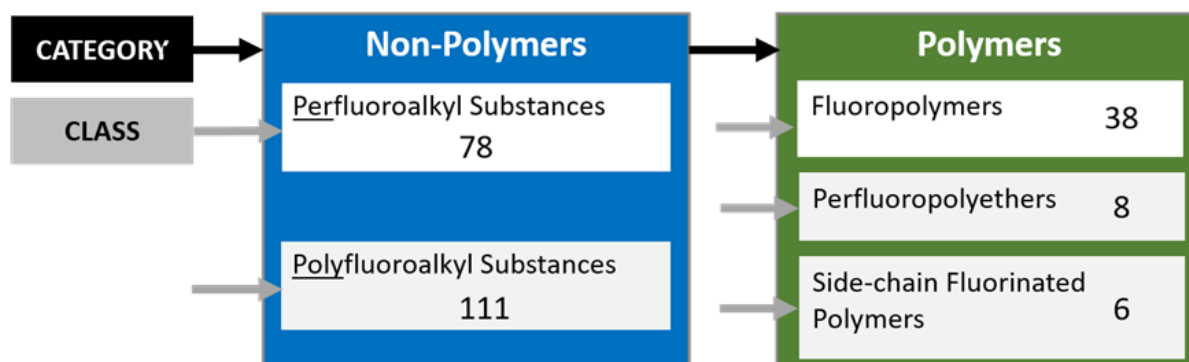
## Claim:

There are thousands of different kinds of PFAS in the market.

## Science:

We have strong reason to believe that the true number of commercially relevant PFAS is much, much smaller. Work recently published by three major global PFAS manufacturers identified less than 6% of the number reported in the OECD/UNEP Report. The list of substances identified through this exercise is not meant to be a definitive list of all PFAS in commerce, although it, along with the PFAS list generated by U.S. EPA after the TSCA inventory reset, demonstrate clearly that the number of commercially relevant PFAS is significantly smaller than the number of substances in the OECD/UNEP report.

The results of this study contain information from three major global producers. To obtain a more complete global picture of commercially relevant substances, we invite other PFAS producers to replicate our method and add their results to ours.



**Number of Commercially Relevant Substances Identified in the OECD PFAS List Classified According to the System in Buck et al. 2011**

### Claim:

All PFAS are sufficiently similar to justify regulation as a single class.

### Science:

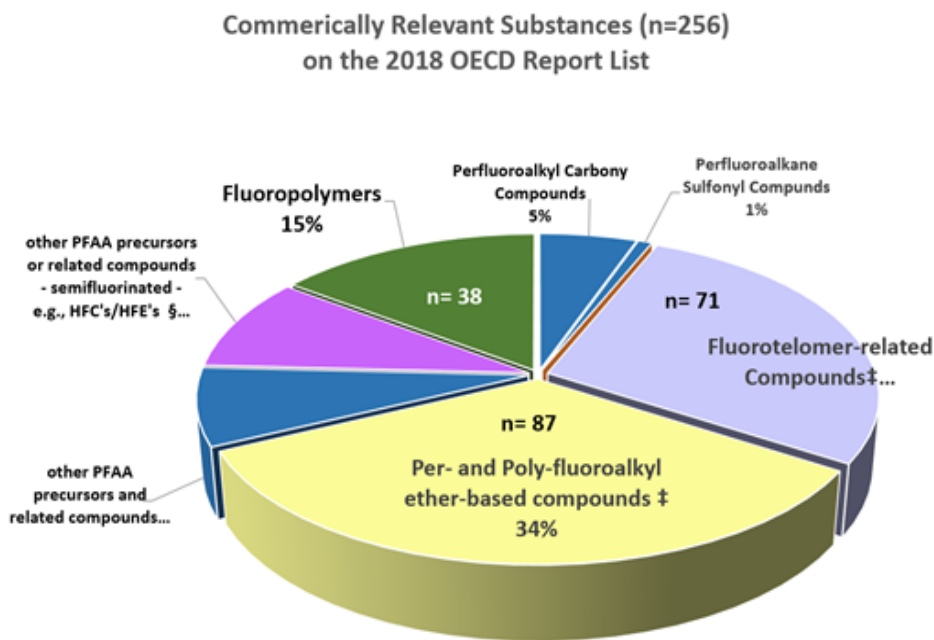
PFAS are a diverse universe of chemistries. Different types of PFAS have different structures, environmental and health profiles, and uses. Different types of PFAS have entirely different physical, chemical, and biological properties, as quickly becomes apparent when comparing, for example, polymers and non-polymers of different PFAS that may exist as solids, liquids, or gases.

### Claim:

It is too difficult to apply a risk-based approach in PFAS regulation because there are so many of them; therefore a "one size fits all" regulatory approach is all that is possible.

### Science:

This position is based on a false premise about the number of PFAS actually in commerce. The amount of commercially relevant PFAS today numbers in the hundreds, not the thousands. A risk-based approach that utilizes predictive groups based on chemical, physical, and biological properties, along with sophisticated predictive hazard and exposure models, is possible.



### Claim:

There is no way to categorize or distinguish between various classes of PFAS, so a uniform policy is required.

### Science:

Commercially relevant PFAS chemistries can be classified into five sub-classes:

- Non-Polymer Perfluoroalkyl,
- Non-Polymer Polyfluoroalkyl,
- Fluoropolymers,
- Perfluoropolyether Polymers, and
- Side-chain Fluorinated Polymers.

These five classes of substances possess very different physical-chemical properties and toxicological profiles, and thus they should not be grouped together when evaluating risk to humans and the environment.

To view a summary of the Performance Fluoropolymer Partnership report, Identification and Classification of Commercially Relevant Per- and Poly-fluoroalkyl Substances (PFAS), please click [here](#).

For more information about the Performance Fluoropolymer Partnership, please visit <https://fluoropolymerpartnership.com/>.