AHFA PRESENTATION

August 17, 2022

Alliance for Telomer Chemistry Stewardship

Outline

- The Organizations We Represent
- PFAS 101
- Uses
- State Landscape
- Summary and Conclusion
- Questions

Alliance for Telomer Chemistry Stewardship

The Organizations We Represent

Performance Fluoropolymer Partnership

The purpose of the Partnership is to advance the interests of member companies that manufacture, formulate, process or use fluoropolymer products.

- The Partnership is a global organization.
- Full members are commercial manufacturers of fluoropolymers.
- Associate membership is available to companies that formulate, process or otherwise use fluoropolymers
- All members must act in accordance with agreed stewardship principles.
- Current members are AGC Chemicals, Chemours, Daikin America, Gujarat Fluorochemicals, ExxonMobil (assoc.), and Shamrock Technologies (assoc.).

Alliance for Telomer Chemistry Stewardship

Global organization representing C6 fluorotelomer-based products

Mission is to promote the responsible production, use, and stewardship of fluorotelomer based products, while also advocating for a sound science- and risk-based approach to regulation

Current member are: AGC Chemicals, Daikin America, Johnson Controls, Inc., and Dynax

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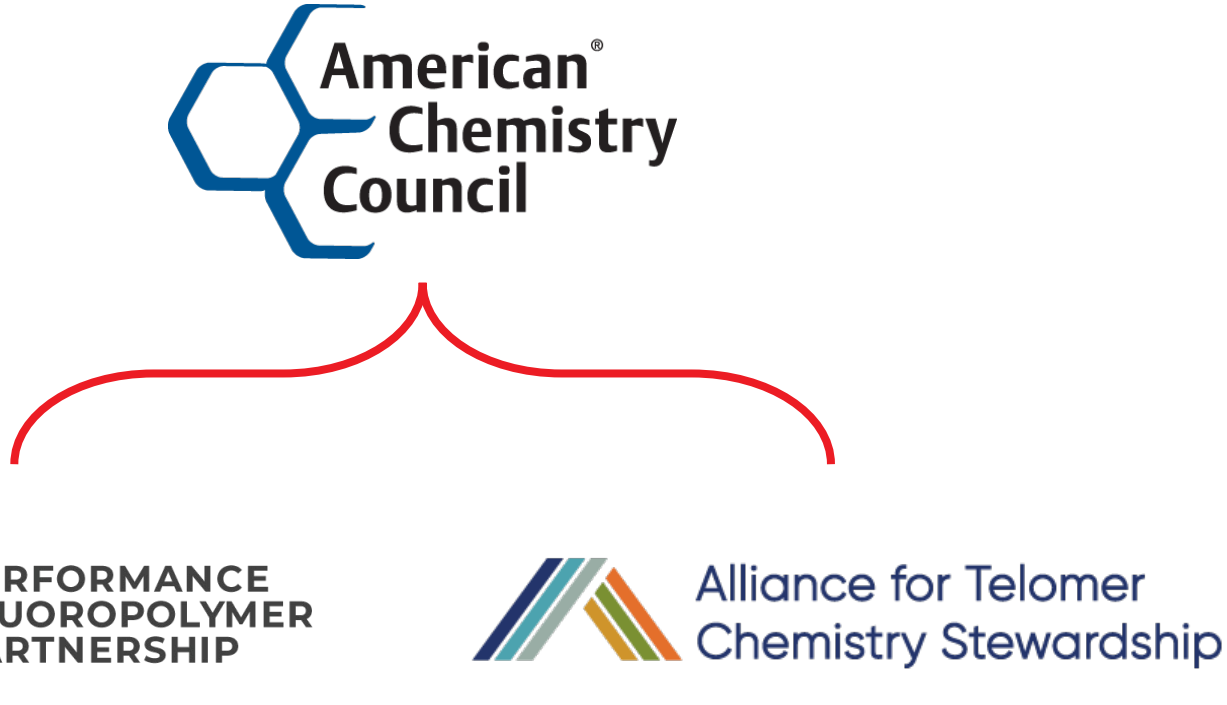
Organization



PFAS 101

PFAS 101

PFAS = Perfluoroalkyl and polyfluoroalkyl substances

Perfluoro = Compounds for which all hydrogens on all carbons have been replaced by flourines (with the exemption of carbons in functional groups).

Polyfluoro = Compounds for which all hydrogens on at least one, but not all, carbons have been replaced by fluorines.

PFAS 101

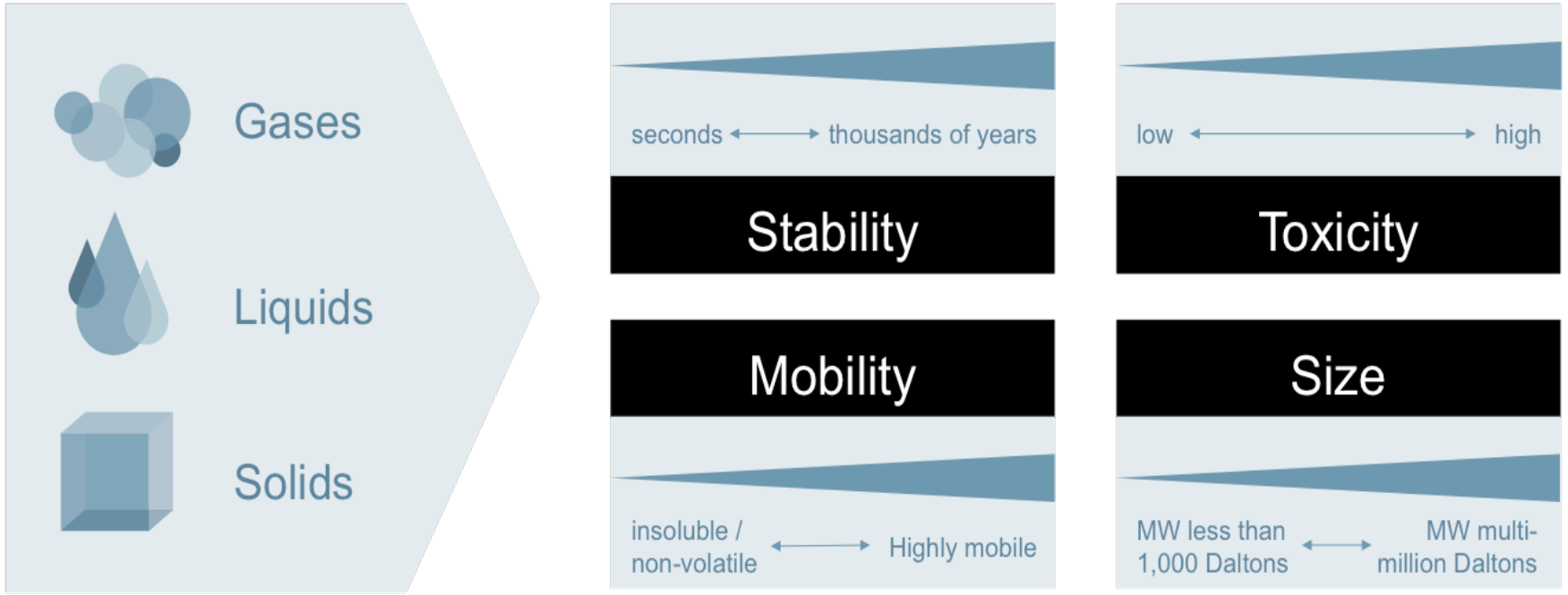
Why are we talking about PFAS?

- PFOS and PFOA are two “long chain PFAS” found globally in the environment.
- A need to identify how they came to be in the environment, including the substances that break down in the environment to form them (the precursors).
- The PFAS terminology was created to help define the group of relevant substances and establish a common lexicon.

Clear, Specific and Descriptive

The term “PFAS” includes many different substances with *very different* properties

Differences



Hydrocarbons: C-H Substances

A Big Universe of Very Different Substances

SOLID

Polyethylene

$H(CH_2CH_2)_xH$

LIQUID

Ethyl Alcohol

CH_3CH_2OH

GAS

Propane

$CH_3CH_2CH_3$

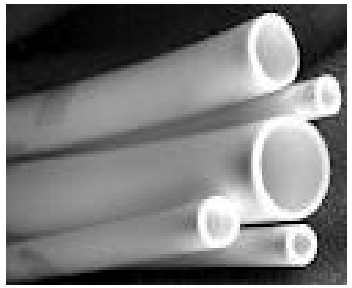
We would never group them together and say, "They are the same," because they are NOT the same.

Fluorocarbons: C-F Substances

Fluorocarbons – Also a Big Universe of Very Different Substances

Fluorocarbons: C-F Substances

SOLID



Polytetrafluoroethylene

PTFE $F(CF_2CF_2)_nF$

LIQUID

6:2 Fluorotelomer Alcohol

$C_6F_{13}CH_2CH_2OH$

GAS

HFC-134a

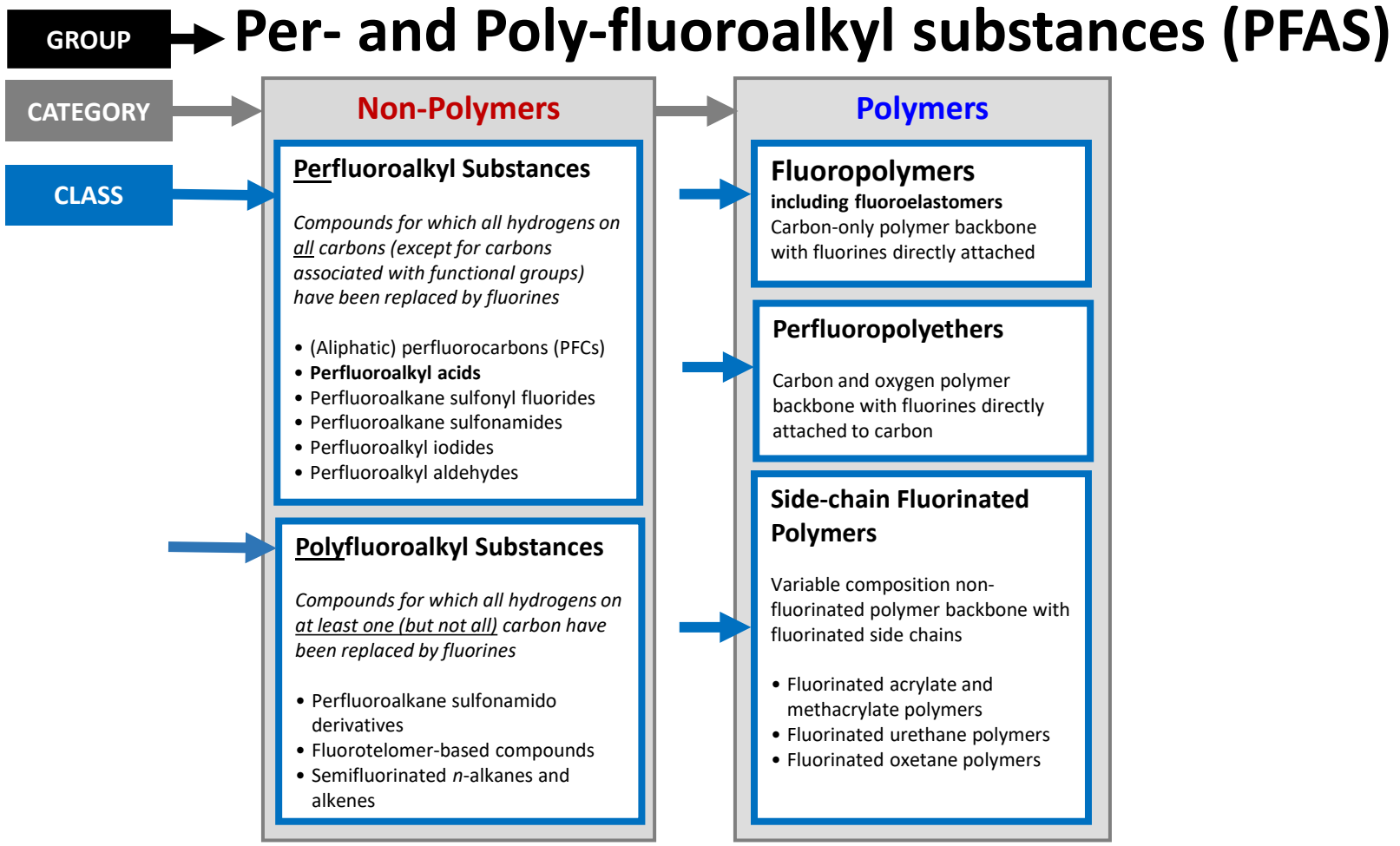
CF_3CH_2F

We should NOT group them together, because they are NOT "the same."

Integrated Environmental Assessment and Management — Volume 7, Number 4—pp. 513–541

Perfluoroalkyl and Polyfluoroalkyl Substances in the Environment: Terminology, Classification, and Origins

Open access:
http://dx.doi.org/10.1002/ieam.258



C6 Safety

- Must meet relevant environmental, health and safety regulatory standards and had to undergo significant regulatory scrutiny and testing before being brought to market
- In the US this included extensive additional testing as part of EPA Stewardship Program
- Reviews included evaluation of primary potential break down product, perfluorohexanoic acid (PFHxA or C6 acid) and overwhelming weight of scientific evidence indicates that
  - does not cause cancer
  - does not disrupt endocrine activity
  - has not been shown to cause reproductive or developmental harm
  - does not build up in the human body
  - does not become concentrated in the bodies of living organisms
- Subject to ongoing review by federal regulatory agencies
  - U.S. EPA: New Chemicals Program, PFOA and Related Chemicals

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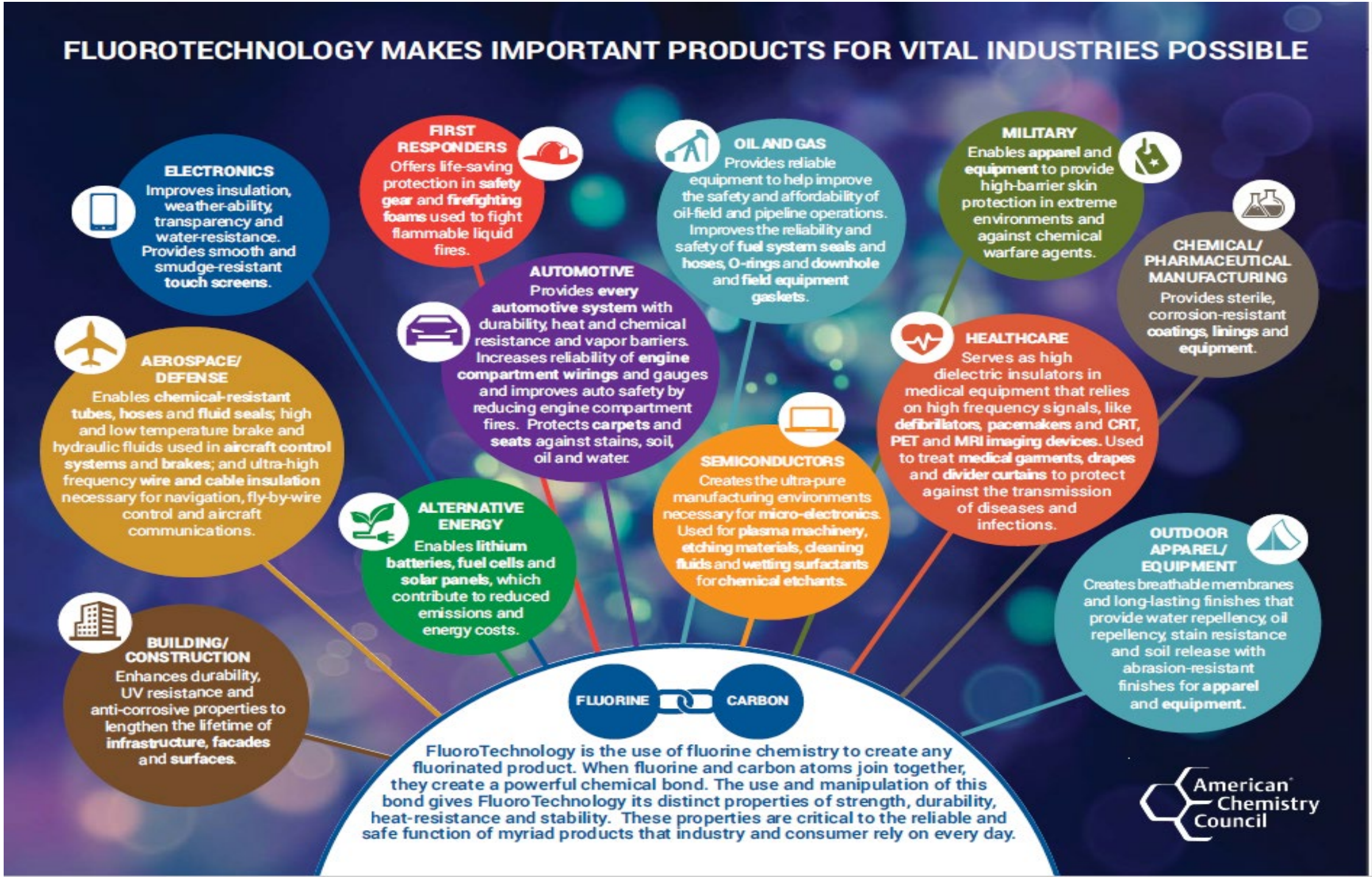
Uses

FLUOROTECHNOLOGY MAKES IMPORTANT PRODUCTS FOR VITAL INDUSTRIES POSSIBLE



C6 Fluorotelomer Products

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Examples of C6 Fluorotelomer Products

- Paints and coatings
- Adhesives, sealants and caulks
- Class B fluorinated firefighting foams
- Woven medical textiles
- Pulp-based repellent medical equipment
- High-performance air and liquid filtration and separation media
- Nonwoven membranes for water filtration
- Paper-based grease repellent food packaging/wrapping
- Outdoor technical textile applications
- Semiconductor production

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State Landscape

State Landscape

Some interests have positioned all per- and polyfluoroalkyl (PFAS) substances as being the same and belonging to one regulatory class.

Not all PFAS are the same.

- "PFAS" is a broad, generic term and should be used only when talking about all substances in the group.
- Different types of PFAS have different physical, chemical, and biological properties, that make them essential in a variety of industries.
- Casual use of "PFAS" creates confusion and may lead to policies with unintended consequences.

Clear, Specific and Descriptive

State Landscape

Different definitions of what is/isn't a PFAS cause confusion among regulated community and stakeholders.

- Buck et al. 2011
- OECD 2013
- Call for Evidence Under Reach 2020
- U.S. EPA 2021
- OECD 2021

Different definitions lead to questions about how many PFAS there are/were in commerce, further complicating the dialogue.

- Identification and classification of commercially relevant per- and poly-fluoroalkyl substances (PFAS)

State Landscape

Maine Essential Uses Regulation sets a reporting on all PFAS in products with restriction for all but “essential uses”

- **Regulatory Push Back** is trying to extend the present January 2023 timeline back by 1 year. Over 50 organizations on coalition letter request.
- **Legislative Fix?** The broad coalition will look to potential fixes in the legislature during the 2023 session.
- **Eyes on November:**
  - The race for Maine Governor is locked closely at the moment

State Landscape

WA Department of Ecology Released the draft preliminary ruling Safer Products last week.

Draft final determination has:

- Carpets and Rugs – restriction
- Leather & Textile furnishing, indoor – restriction
- Leather & Textile furnishing, outdoor – reporting
- Aftermarket stain/water-resistance - restriction

Help educate decision makers on the chemistry with facts and rationale science-based approach during the below timetable:

- Webinars scheduled by Dept. of Ecology August 16 & 18
- Feedback due by August 23 to Dept. of Ecology
- Formal draft rule expected in December of 2022

State Landscape

California Legislation in Play:

AB 1817: PFAS in Textiles looks to remove the chemistry from consumer wears. Legislative text has staggered timetable with exemptions for professional and industrial uses.

AB 2247: PFAS in Products Reporting seeks to have manufactures report products that contain ‘intentionally added’ PFAS to ICC.

State Landscape

Policies that seek to impose overly broad restrictions could have a major impact on the ability to use proven PFAS technologies and reap the benefits of their unique combination of properties.

Regulators and legislators need to hear not only from PFAS manufacturers, but also from industries that rely on PFAS for the manufacture and performance of their products.

Help educate decision makers on the chemistry with facts and rationale science-based approach.

- Coalition sign-on letters
- Provide decision makers with information on impacts of proposed regulations to your business
- Send letters to the editor to help consumers understand impacts on them

Summary and Conclusion

Summary and Conclusion

All PFAS Are Not The Same

- PFAS can be divided into 5 chemically distinct groups and subdivided even further within those groups.
- Different groups have different properties and thus different health and environmental profiles.
- It is neither scientifically accurate nor appropriate to regulate all PFAS as one class.
- It is very important to use common terms that are **clear, specific and descriptive.**

Get Involved!

- Work with suppliers to understand whether PFAS confer benefits to the products you sell.
- Overly broad policies could have a major impact on the ability to use effective PFAS technologies in the future.
- Tell decision makers that PFAS are important for your business, your customers, etc.

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Questions