

All PFAS Chemicals are not the same

By

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Who Is FSA:

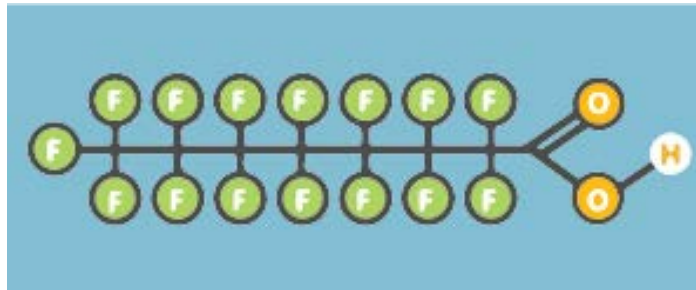
- The FLUID SEALING ASSOCIATION® (FSA) is an international trade association founded in 1933.
- Member companies produce and market a wide range of fluid sealing devices targeted to the industrial market. FSA membership includes a number of companies in Europe and Central and South America but is most 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.





What is a PFAS Chemical and why should you care?

- Per- and polyfluoroalkyl substances (PFAS) are a group of chemicals used to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water.
- Fluoropolymer coatings can be in a variety of products. These include clothing, furniture, adhesives, food packaging, and heat-resistant non-stick cooking surfaces.
- Also many sealing products including Valve Packing, Pump packing, Gasketing, and O-rings in Mechanical Seals.





Some PFAS are a concern

- Some PFAS, including perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), are a concern because they:
 - do not break down in the environment,
 - can move through soils and contaminate drinking water sources,
 - build up (bioaccumulate) in fish and wildlife.

The FSA believes PFAS chemicals of concern include perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) and should be regulated to avoid entering drinking water and the environment



CATS

A Complete Account of Extant or Otherwise Significant Species

CARACAL



AFRICAN GOLDEN CAT
C. aurata



CARACAL
C. caracal

PARDOFELIS



BAY CAT
P. bairdi



ASIAN GOLDEN CAT
P. nimrictus

MARBLED CAT
P. marmorata



FELIS



CHINESE MOUNTAIN CAT
F. bieti



DOMESTIC CAT
F. catus



JUNGLE CAT
F. chaus



BLACK-FOOTED CAT
F. nigripes



SAND CAT
F. margarita



EUROPEAN WILD CAT
F. silvestris silvestris

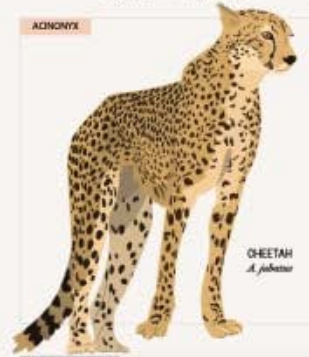


AFRICAN WILD CAT
F. lybica



JAVAN LEOPARD
H. jagularum

ACINONYX



CHEETAH
A. jubatus

HYPERALURICUS

HYPERALURICUS
Hyperalurus utropolaris (extinct)



PROAILLURUS

PROAILLURUS
Proailurus demantoni (extinct)



MACHAIRODONTINAE



DIPOFELIS
Dipofelis barlowi (extinct)



LEOPARDUS



PAMPAS CAT
L. rosalia



GEDDROY'S CAT
L. geddyi



KINKAJOU
L. guajanae



SOUTHERN TIGRINA
L. guttata



ANDEAN MOUNTAIN CAT
L. jacobae



OCELOT
L. pardalis



PALLAS CAT
O. manul

OTOCOLURUS



LEPTALURUS



SERVAL
L. serval

PROAILLURUS



LEOPARD CAT
P. bairdianus



SUNDA LEOPARD CAT
P. parsonsi



RUSTY-SPOTTED CAT
P. rubiginosa

LYNX



CANADA LYNX
L. canadensis



IBERIAN LYNX
L. pardinus



BOBCAT
L. rex

PUMA



OUGAR
P. concolor

FLAT-HEADED CAT
P. planiceps



FISHING CAT
P. viverrina



Comparing Felines to PFAS Chemicals

- Imagine 4,700 felines frolicking in a field. A lion and a tiger tussle at one end. A pair of kittens unravel yarn at the other. And in between, there are 4,696 leopards, pumas, jaguars, lynx, panthers, and house cats.

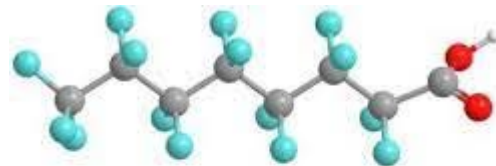




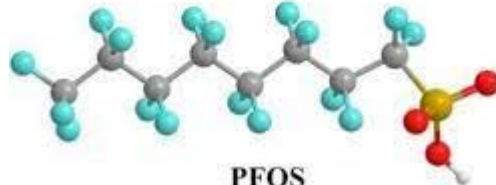
- Now imagine 4,700 PFAS—per- and polyfluoroalkyl substances—polymers and non-polymers spread across that same field. Some are large molecules. Others are small. Some are bioavailable, some are not.
- All are PFAS, but just as the felines come in all shapes, sizes and ferocity, so do PFAS.



PTFE



PFOA



PFOS



- PTFE polymers in their finished form are well studied with no health risks, are corrosion resistant, 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.





PTFE used in Sealing everywhere

- - Valve Packing
- - Gasketing
- - O-rings for Seals
- PTFE is a unique material for which there are no substitutes
 - Unaffected by almost all chemicals- very stable
 - One of the lowest coefficients of friction- excellent lubrication properties
 - One of the best Low Emissions sealing materials in the market
 - Stable to high temps (500°F/ 260°C)
 - Used in food grade applications, medical implants etc.
 - It is used in EVERY industry





FSA believes...

- All PFAS chemicals are not equal and should not be regulated as if they are. Each should be treated differently according to its application and toxicity. Umbrella legislation or regulation against all PFAS could end the use of non-harmful PTFE—a protector of people, the environment, and industrial equipment.





What the FSA Supports

- ❑ A science-based approach to regulating harmful 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.



Options

- Fighting for PTFE to be "carved out" for industry use in National and State regulations
 - Already have language for Medical PTFE usage
 - Will not stop usages to keep industry running with PTFE technology
- Focus on small groups of chemicals like certain states
 - Example: MassDEP published its PFAS public drinking water standard, of six specific PFAS. These PFAS are perfluorooctane sulfonic acid (PFOS); perfluorooctanoic acid (PFOA); perfluorohexane sulfonic acid (PFHxS); perfluorononanoic acid (PFNA); perfluoroheptanoic acid (PFHpA); and perfluorodecanoic acid (PFDA). MassDEP abbreviates this set of six PFAS as "PFAS6."





Fluid Sealing Association's (FSA)- Government Affairs Committee

- Prepared a position statement with input from all our members
- Created Simple 1 page document
- Met with Senators' staff policy experts to communicate our position





What could happen with a full out ban on PTFE?

- LowE emissions packing setback
- Flanges in Chemical Service could be at Risk
- Setbacks in new technology for Safety and effecency
- Bureaucracy
 - paperwork for all PTFE usage





What we need from you

- - Join the FSA in fighting this fight!
- - Enter the Arena with the FSA
- - Make sure Safety and Low Emissions is still met by asking Congress to CARVE OUT PTFE for Industry uses.
- <https://www.fluidsealing.com/pfas-and-fluoropolymers/>



THANKS!

Any questions?

www.fluidsealing.com