



Proposal for a broad PFAS restriction

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Final meeting POPFREE Industry planning project

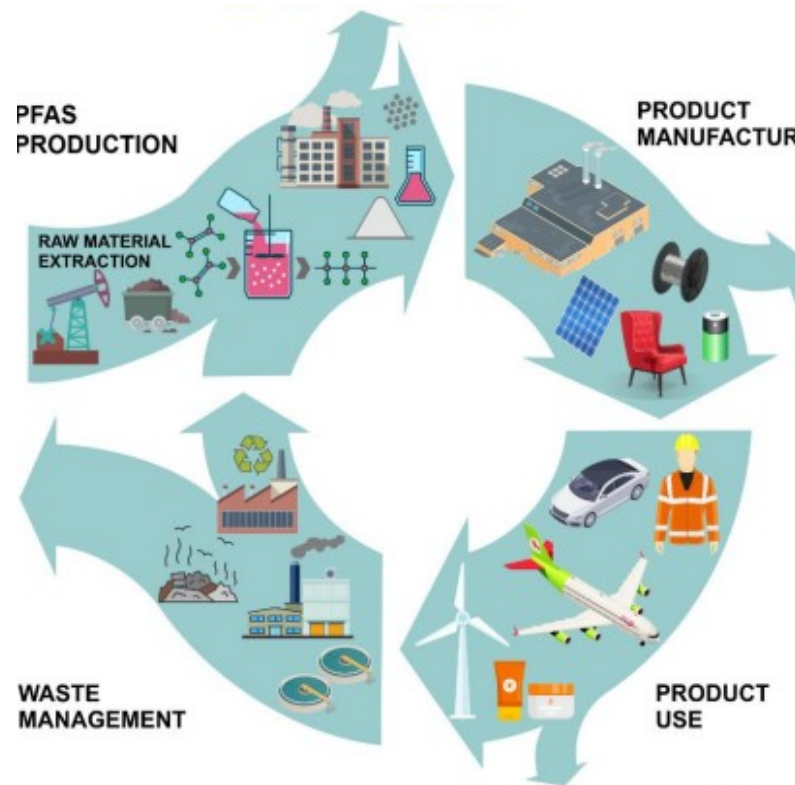
1 March 2023

The broadest restriction proposal in EU history

Roughly 10 000
PFASs



75 000 tonnes of emissions in the EEA 3 000 tonnes in Sweden



Tonnages and emissions

Application	Tonnage range	Emission range % emitted in manufacturing and use phase	Emission contribution Contribution to total emission [%]
Applications of fluorinated gases	> 10 000	5 – 25	> 50
Textiles, upholstery, leather, apparel & carpets	> 10 000	5 – 25	10 – 50
Medical devices	> 10 000	5 – 25	5 – 10
Manufacture	> 10 000	0 – 5	1 – 5
Food contact materials and packaging	> 10 000	0 – 5	0 – 1
Transport	> 10 000	0 – 5	0 – 1
Construction products	1 000 – 10 000	25 – 75	1 – 5
Electronics and semiconductors	1 000 – 10 000	5 – 25	0 – 1
Lubricants	1 000 – 10 000	5 – 25	0 – 1
Petroleum and mining	1 000 – 10 000	0 – 5	0 – 1
Energy sector	1 000 – 10 000	0 – 5	0 – 1
Metal plating and manufacture of metal products	100 – 1 000	0 – 5	0 – 1
Cosmetics	10 – 100	> 95	0 – 1
Consumer mixtures	10 – 100	75 – 95	0 – 1
Ski wax	0 – 10	25 – 75	0 – 1

The proposal - chemical definition

Column 1

Per- and polyfluoroalkyl substances (PFASs) defined as:

Any substance that contains at least one fully fluorinated methyl (CF_3 -) or methylene ($-\text{CF}_2$ -) carbon atom (without any H/Cl/Br/I attached to it).

A substance that only contains the following structural elements is excluded from the scope of the restriction:

CF_3 -X or X- CF_2 -X',

where X = -OR or -NRR' and

X' = methyl ($-\text{CH}_3$), methylene ($-\text{CH}_2$ -), an aromatic group, a carbonyl group ($-\text{C}(\text{O})-$), -OR'', -SR'' or -NR''R''';

and where R/R'/R''/R''' is a hydrogen ($-\text{H}$), methyl ($-\text{CH}_3$), methylene ($-\text{CH}_2$ -), an aromatic group or a carbonyl group ($-\text{C}(\text{O})-$).

= OECD PFAS definition 2021

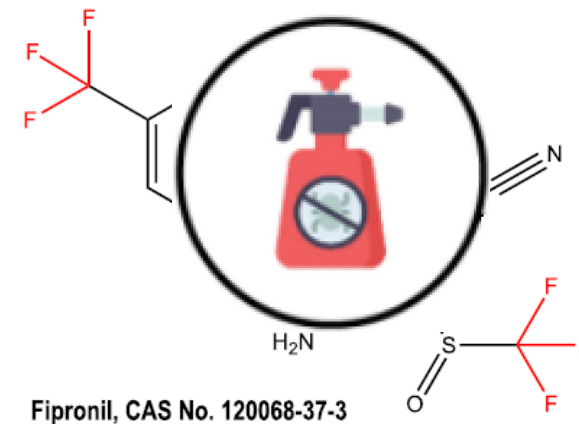
Over 10 000 substances covered! Some examples:



PTFE



HFP, CAS No. 116-15-4



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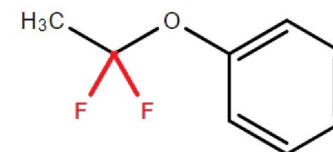
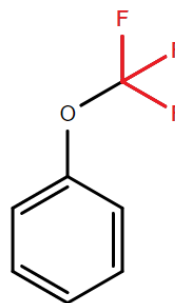
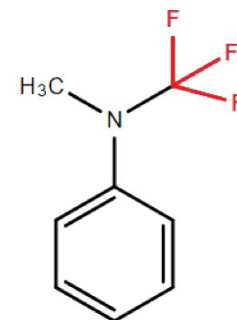
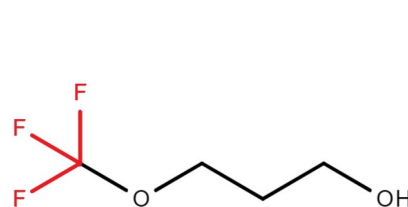
and where R/R'/R''/R''' is a hydrogen (-H), methyl ($-\text{CH}_3$), methylene ($-\text{CH}_2$ -), an aromatic group or a carbonyl group ($-\text{C}(\text{O})$ -).

A few specific types of PFAS can be completely degraded in the environment. These are therefore excluded from the scope:

CF_3 -O- / CF_3 -N<

$-\text{CF}_2$ -O- / $-\text{CF}_2$ -N<

Examples:



The restriction proposal

- Dossier: Risks, Impacts
- Two restriction options considered:
 - Full ban (Option 1)
 - Ban with use-specific derogations (Option 2)
- Proposed Restriction: option 2
 - Based on analyses of alternatives, and
 - Socio-economic considerations



Proposed restriction conditions

- Ban of manufacture, placing on the market and use
- PFASs as such, as constituent in other substances or in mixtures as well as in articles.
- Above a concentration limit of
 - 25 ppb for individual PFAS
 - 250 ppb for the sum of PFASs
 - 50 ppm for PFASs (based on total fluorine)
- Transition period: 18 months after entry into force
- Use-specific (time-limited) derogations
- General derogation for active substances in plant protection products, biocides and pharmaceuticals



Proposed restriction conditions - derogations

Two standard derogation timeframes chosen

Examples:

**Food contact materials
for industrial food and feed
production**

Alternatives under development
but not available at entry into
force

5 years

**Implantable medical
devices**

Identification, development
and certification of
alternatives needed

12 years



Consequences for emissions 2025-2055

If no action is taken:

- Use of PFAS in the sectors investigated: 49 million tonnes
- Release of PFAS during manufacture and use: 4.4 million tonnes
- The difference is the PFAS that goes to the waste stream. These emissions are not quantified.

Ban is decided in 2025 with an 18-month transition period (RO1):

- Emissions (production and use): 0.2 million tonnes (during the transition period)
- **Reduction by 95%**

Ban with time-limited derogations (RO2):

- Emissions will be higher than in RO1
- Calculations are in progress. Will be included in the version published for public consultation in March

Next step, preliminary timeplan



[Submitted restrictions under consideration - ECHA \(europa.eu\)](https://echa.europa.eu)

Kan innehålla spår
av PFAS

