TECHNICOAT
Functional Coatings

14. 05. 2025

Dear business partners,

As your partner for high-quality coating solutions, we would like to inform you about current developments in the field of fluoropolymers and explain our position in this regard[1]

CURRENT STATUS OF THE PLANNED BAN BY THE ECHA

The European Chemicals Agency (ECHA) is currently working on a restriction procedure for perfluorinated and polyfluorinated alkyl substances (PFAS), which also includes fluoropolymers. The current proposal stipulates that PFAS may only be used in areas where there is no foreseeable danger of their use. Suitable alternatives exist, or where the socio-economic advantages outweigh the disadvantages for people and the environment.

DIFFERENTIATION BETWEEN POLYMERS AND NON-POLYMERS

The entire group of chemicals comprises more than 14,000 substances, of which only 38 are fluoropolymers.

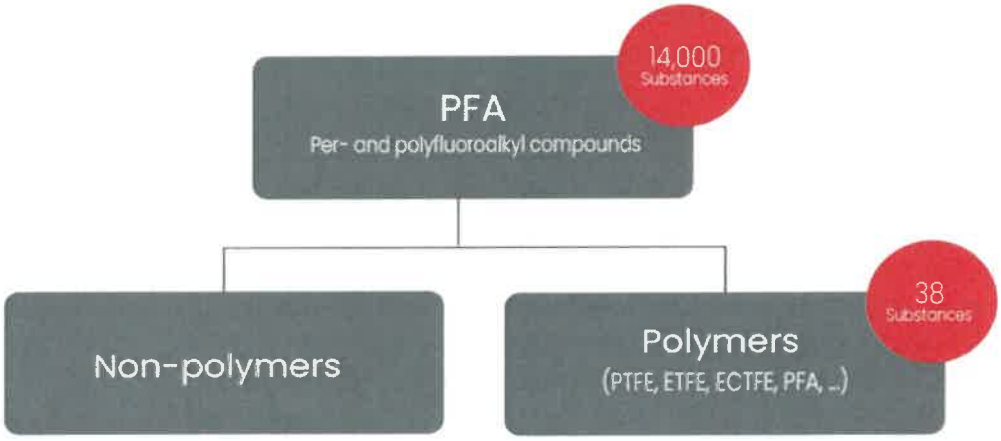

Figure 1: Differentiation of PFAS into polymers and non-polymers (own illustration)

UNIQUE PROPERTIES OF FLUOROPOLYMERS

Fluoropolymers differ from other PFASs because they undergo a different toxicological assessment due to their high molar mass, chemical stability, and low bioavailability. Although they belong to the broad family of PFAS (perand perfluorinated alkyl compounds) in the chosen definition, they have clearly different properties based on the strong carbon-fluorine bond. This bond gives the materials outstanding thermal, chemical, and electrical resistance.

Fluoropolymers are also biocompatible, which makes them indispensable, especially in highly technical applications. In contrast to low-molecular PFAS such as PFOA or PFOS, fluoropolymers are high-molecular compounds that are not bioaccumulative and not easily released into the environment. While short-chain PFAS are often considered problematic because they are persistent and mobile, and fluoropolymers show no proven toxicity or bioaccumulation.

OUR POSITION ON THE PLANNED BAN

1. DIFFERENTIATED AND RISK-BASED ASSESSMENT INSTEAD OF A BLANKET BAN

The PFAS family of substances comprises a large number of different substances. A blanket ban does not do justice to the specific properties and role of individual subgroups.

2. FLUOROPOLYMERS AS "POLYMERS OF LOW CONCERN"

Fluoropolymers such as polytetrafluoroethylene (PTFE) meet the criteria for "polymers of low concern" (PLC). This classification is based on internationally recognized criteria that take into account physical and chemical properties that indicate a low risk to human health and the environment[2].

(1) We are guided by and cite publications from associations such as https://plasticseurope.org/, https://www.pro-kunststoff.de/, https://www.specteris.de/

(2) https://setac.onlinelibrary.wiley.com/doi/epdf/10.1002/ieam.4035

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3. INDISPENSABLE ROLE OF FLUOROPOLYMERS

Thanks to their unique combination of thermal, chemical, and electrical properties, fluoropolymers are indispensable in numerous industries. They enable essential applications in medicine, electronics, and highly specific applications for the chemical and pharmaceutical industries. Their biocompatibility makes them particularly valuable for medical technology applications.

4. RELEVANCE FOR CLIMATE TARGETS AND FUTURE TECHNOLOGIES

Fluoropolymers make a decisive contribution to the development of innovative technologies such as electromobility, battery, wind energy, and hydrogen technology. Without these substances, the achievement of EU climate and sustainability goals is at risk.

5. LACK OF ALTERNATIVES

There are currently no equivalent alternatives for many applications. A ban would hinder the development of innovative technologies and considerably weaken Europe as an industrial location. Due to the uniqueness of the carbon-fluorine bond (the strongest bond in the periodic table), the likelihood of alternatives being developed is unlikely. If a substance were to be found with properties comparable to PFAS, it would be equally stable and pose similar risks.

BEVEL-FREE COATING SYSTEMS

Unfortunately, interested parties are currently flooded with a range of PFAS-free coatings on the market, some of which are supposed to be even better than the existing fluoropolymer coatings.

We regularly and intensively test different PFAS-free coatings from our existing and new suppliers for our customers' areas of application and have so far only been able to identify very few genuine alternatives. We can make the following non-binding recommendation:

1. CUSTOMIZATION OF THE REQUIREMENTS PROFILE FROM OUR PORTFOLIO

In some cases, it is possible to switch to fluoropolymer-free coating systems if the requirement profile is adapted or reduced accordingly.

2. REDUCED FLUOROPOLYMER CONTENT

Coating systems with a low proportion of fluoropolymers (e.g. <5%) can be converted to fluoropolymer-free variants depending on the intended use. The changeover requires development effort as well as precise clarification and, if necessary, adaptation of the requirement profile. Coatings are therefore a good way to reduce the use of fluoropolymers compared to solid material or lining solutions.

3. NO ALTERNATIVES FOR HIGHLY SPECIALIZED APPLICATIONS

We currently see no alternatives for coating systems, which today consist largely of fluoropolymers and have correspondingly high requirements in terms of thermal, chemical, electrical, and mechanical properties.

OUR COMMITMENT

We actively follow regulatory developments and progress in material development and participate in the relevant working groups and committees. As soon as suitable alternatives are actually available, we will inform you and initiate sampling of your components together with you.

For further information, please do not hesitate to contact us or send us information on our PFAS-free coatings.

Yours sincerely

Martin Kortus
CEO