Obsolescence Management Notification

Possible restriction on the use of PFAS

POLYTRON KUNSTSTOFFTECHNIK

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After evaluating more than 5,600 comments and preparing various opinions, ECHA is now about to issue its final opinion to the EU Commission, which must translate the findings into concrete regulation. Experts do not expect the proceedings to be completed before the end of the decade.

In cooperation with its customers, POLYTRON develops and manufactures components and systems made of so-called specialty- and high-performance polymers, some of which can withstand temperatures from -270 to over +300°C, extreme mechanical loads and permanent chemical attack. Among other things, fluoropolymers (PTFE, PVDF, PCTFE...) or polymers modified with fluoroplastics are used for this purpose. These fluoropolymers are classified as per- and polyfluorinated (fully or partially fluorinated) alkyl substances (PFAS).

Following the conclusions of the consultation phase, the European Chemicals Agency (ECHA) submitted an initial proposal to the EU Commission in August 2025, including a revised list of per- and polyfluoroalkyl substances (PFAS) that are potentially hazardous to health. However, a final report by the evaluating committees is still pending. The Commission must then evaluate the results of the reports and transpose them into applicable law. The assessment is difficult because the Commission has to determine if and if so, which PFAS should be exempted from bans or restrictions in critical applications, e.g. because of a lack of alternative substitutes.

Restriction proposal

Many of the substances proposed for a restriction are needed in key technologies. Without PFAS, the technologies needed to transform the economy cannot be produced and thus the energy and mobility transition cannot be implemented in the scheduled way, trade associations warn. Even lithium-ion or hydrogen technologies are dependent on PFAS, especially since these are often used in cross-sectional technology, such as tubing- (sealing) or cable-systems (insulation). The substitution of PFAS is currently unthinkable in many cases due to the property profile. Alternative technical solutions are available or about to be implemented, but in some cases they entail considerable restrictions for the processes concerned. PFAS are so outstanding because they combine insulation-, sliding- and friction-properties as well as media- and temperature-resistance.

For polymers, the proposed restriction is even less understandable, since fluoropolymers (PTFE, PVDF, PCTFE...) meet the current OECD criteria for so called "Products of low Concern" (see below). Due to their insulation-, sliding- and friction-properties as well as their media- and temperature-resistance, many of the polymers concerned are indispensable and of great importance for innovative technologies, especially in the aerospace-, food- and packaging-industries, biotechnology, pharmaceutical and medical technology as well as the semiconductor, solar and electrical industries.

Already in September 2023, the six-month consultation phase on the PFAS restriction proposal in the evaluation process of the European Chemicals Agency (ECHA) expired. Meanwhile, ECHA has received more than 5,600 comments from more than 4,000 organizations, companies and individuals, which must be assessed, taking various factors into account.

Actual Situation

Following the process initiated by the restriction proposal, both ECHA's Scientific Committees for Risk Assessment (RAC) and for Socio-Economic Analysis (SEAC) had dealt with the restriction proposal and the opinions issued on it and issued corresponding opinions or drafts of opinions.

Due to the risks involved in production and use, RAC in its final opinion of 2 March 2026 and SEAC in its draft opinion of 10 March 2026 support an EU-wide restriction of use of PFAS. However, the restrictions provide specific exceptions regarding the production and use of PFAS. The Committees also recommend that any restriction should be supported by effective measures to minimize emissions. The scientific con-

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clusions of the RAC and the draft SEAC opinion represent an important step towards EU-wide regulation of PFAS.

After the end of the 60-day consultation phase on the draft SEAC opinion on 25 May 2026, SEAC is expected to deliver its final opinion by the end of 2026. This will conclude the scientific assessment of the proposed restriction and the opinions will be formally submitted to the European Commission by ECHA.

On basis of the two final opinions, the EU Commission will propose a restriction for final discussion and vote in the REACH Committee. The REACH Committee is composed of representatives of the individual EU Member States. (Further information on this can be found on ECHA's website at www.echa.europa.eu).

It is not yet known when the final assessment will be available. Initial time estimates, which had expected a valuation for the end of 2024, have turned out to be wrong. Experts do not expect the proceedings to be completed before the end of the current decade.

Below we have summarized some information about these substances and our products.

What are PFAS?

PFAS are industrial chemicals that, due to their special technical properties, are used in numerous industrial processes as well as in a wide range of end products. PFAS can be gaseous, liquid or solid and consist essentially of carbon-fluorine bonds (substances with a perfluorinated methyl group (-CF3) or a perfluorinated methylene group (-CF2-)). Carbon-fluorine bonds are among the strongest in organic chemistry and are therefore difficult to degrade, but also extremely durable.

PFAS differ in their structure, differentiated properties and large number of compounds. In total, it is assumed that there are up to 10,000 different substances. PFAS can be broadly divided into two categories: high-molecular (polymers) and low-molecular substances.

Low-molecular-weight PFAS (non-polymers)

Low-molecular-weight PFAS are contained in many additives, extinguishing agents, cleaning agents and coolants and, above all, precursors for other chemical compounds. They are divided into per- and polyfluorinated alkyl compounds. Well-known representatives of non-polymer PFAS are perfluorooctanoic acid (PFOA) and perfluoro octane sulfonic acid (PFOS), which are already banned. Many of these substances are difficult to degrade and have been detected in the environment, in the food chain and in humans, where they have usually been used on a large scale, e.g. as extinguishing agents. The mentioned substances PFOA and PFOS have been proven to be harmful to the environment and have a negative impact on health.

High-molecular-weight PFAS (polymers and elastomers)

High-molecular-weight PFAS are long-chain, polymeric compounds. Part of this group are the fluoropolymers (PTFE, PVDF, PCTFE...), the fluoro-elastomers (FKM, FFKM, FVMQ, etc.), the perfluoropolyether (PFPE), which are often used as lubricants, and so-called side-chain fluorinated polymers (SCFP), which are mostly used for repellent coatings.

Fluoropolymers (PTFE, PVDF, PCTFE...) consist of a carbon chain with directly bonded fluorine atoms. The chemical stability of these compounds prevents them from decomposing into toxic substances. A large proportion of fluoropolymers therefore meet the OECD criteria for "Products of low Concern", which are considered non-toxic, non-bioavailable and non-water-soluble and therefore have no significant impact on the environment or humans. However, low-molecular-weight PFAS may be used as reaction aids or starting agents in the production of fluoropolymers.

Perfluoropolyether (PFPE) are low-viscosity polymers that, like fluoroplymers, have a very stable chemical bond and are therefore very inert. They are widely used as lubricants and are also used for tribological

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modification of other plastics. Here, the smallest amounts (< 1%) are often sufficient to produce corresponding effects.

Polymers with fluorinated side chains, in contrast to PFPE and fluoropolymers, consist of a carbon chain in which the fluorine atoms are not bonded directly, but via a side chain. As a result, these polymers are less stable compared to fluoropolymers. There is a risk of loss of the side chains. Typical applications for these polymeric PFAS are impregnated papers.

Overview of per- and polyfluoroalkyl substances (PFAS)	
Non-polymers (low molecular weight PFAS)	**Polymers** (high-molecular-weight PFAS)
per-fluorinated alkyl substances	**Fluoropolymers** (PTFE, PVDF, PCTFE ...)
Perfluoroalkyl acids (PFAA)	**Fluoro elastomers** (FKM, FFKM, FVMQ ...)
Perfluoroalkyl etheric acids (PFEA)	**Perfluoropolyether** (PFPE)
poly-fluorinated alkyl substances	**Side-chain fluorinated polymers**
Fluorotelomeres	
Perfluoroalkane sulfonamido compounds	

PFAS at POLYTRON

The extent to which low-molecular-weight PFAS are used in the supply chain cannot currently be assessed with sufficient accuracy due to the large number of substances and the complexity of the production processes. Neither at POLYTRON nor at the direct suppliers these substances are intentionally added!

High-molecular-weight PFAS are used as fluoropolymers at POLYTRON to produce engineering systems and components. They are used either as pure polymers (PTFE, PVDF, PCTFE ...) or as tribological additives in other polymers. A list of the fluoropolymers used or polymers with fluoropolymer additives is annexed to this information. Together with the chemical industry, POLYTRON is already looking for PFAS-free alternatives.

Regardless of any PFAS restriction, however, most of the polymers used by POLYTRON do not contain PFAS according to the recipe.

Quick Overview

- According to the current state of knowledge, most of the plastics used by POLYTRON do not contain PFAS.
- Fluoropolymers (PTFE, PVDF, PCTFE ...) belong to the high-molecular PFAS and would be affected by a possible PFAS ban.
- Depending on the filler (e.g. PTFE), tribologically modified (slip-modified) polymers may be affected by a possible PFAS ban.
- POLYTRON already offers PFAS-free alternatives.

Note: The presence of ubiquitous traces of undesirable substances can never be ruled out. Since POLYTRON has no influence on the use of products with the above-mentioned substances, we do not assume any guarantee or liability, either express or implied, in connection with the use of this information.

If you have any questions, please do not hesitate to contact us!

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Attachment:

List of fluoroplastics used or plastics with fluoroplastic additives

Standard Designation	Brand Name	PFAS type
POM C-TF	Acetron® C-TF	POM with high-molecular-weight PFAS additive
POM H-TF15	Acetron® H-AF	POM with high-molecular-weight PFAS additive
PTFE-CM	Fluoroloy® H	Fluoroplastic (PTFE)
PTFE-MI FG	Fluorosint® 207	Fluoroplastic (PTFE)
PTFE-MI	Fluorosint® 500	Fluoroplastic (PTFE)
PTFE-MI mod	Fluorosint® HPV	Fluoroplastic (PTFE)
PTFE-CF	Fluorosint® MT-01	Fluoroplastic (PTFE)
PTFE-C	HS 22232	Fluoroplastic (PTFE)
POM C-AF/TF	iglidur® J	POM with high-molecular-weight PFAS additive
POM C-AF/TF J4	iglidur® J4	POM with high-molecular-weight PFAS additive
PEEK-TF10/CF10/GR10	Ketron® HPV	PAEK with high-molecular-weight PFAS additive
PEEK-TF10 FG	Ketron® TX	PAEK with high-molecular-weight PFAS additive
PEEK-AF/TF	Ketron® TXR	PAEK with high-molecular-weight PFAS additive
PA 6.6-GF/TF/HS	Luvocom® 1-0935-3	PA with high-molecular-weight PFAS additive
PEK-CF/TF	Luvocom® 1114-0717	PAEK with high-molecular-weight PFAS additive
PA 6.6-TF10	Nylatron® NSB	PA with high-molecular-weight PFAS additive
PEKK-TF10/CF10/CS10	OxPEKK® C-BG	PAEK with high-molecular-weight PFAS additive
ECTFE	POLYTRON ECTFE 1000	Fluoroplastic (ECTFE)
ETFE	POLYTRON ETFE 1000	Fluoroplastic (ETFE)
PCTFE	POLYTRON PCTFE 1000	Fluoroplastic (PCTFE)
PEEK-TF10/CF10/CS10	POLYTRON PEEK HPV	PAEK with high-molecular-weight PFAS additive
POM C-PE/TF	POLYTRON POM LXY	POM with high-molecular-weight PFAS additive
PTFE	POLYTRON PTFE 1000	Fluoroplastic (PTFE)
PTFE 59GGM3	POLYTRON PTFE 59GGM3	Fluoroplastic (PTFE)
PTFE-BR15	POLYTRON PTFE B15	Fluoroplastic (PTFE)
PTFE-BR60	POLYTRON PTFE B60	Fluoroplastic (PTFE)
PTFE-BR55/MO5	POLYTRON PTFE BM555	Fluoroplastic (PTFE)
PTFE-BR65/MO5	POLYTRON PTFE BM655	Fluoroplastic (PTFE)
PTFE-C10	POLYTRON PTFE C10	Fluoroplastic (PTFE)
PTFE-C10 (E-Carbon)	POLYTRON PTFE C10 AST	Fluoroplastic (PTFE)
PTFE-C15	POLYTRON PTFE C15	Fluoroplastic (PTFE)
PTFE-C15 (E-carbon)	POLYTRON PTFE C15 AST	Fluoroplastic (PTFE)
PTFE-C25	POLYTRON PTFE C25	Fluoroplastic (PTFE)
PTFE-C25 (E-Carbon)	POLYTRON PTFE C25 AST	Fluoroplastic (PTFE)
PTFE etched on one side	POLYTRON PTFE etched	Fluoroplastic (PTFE)

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Standard Designation	Brand Name	PFAS type
PTFE-CS15	POLYTRON PTFE G15	Fluoroplastic (PTFE)
PTFE-GB30	POLYTRON PTFE GB30	Fluoroplastic (PTFE)
PTFE-GL10	POLYTRON PTFE GL10	Fluoroplastic (PTFE)
PTFE-GL15	POLYTRON PTFE GL15	Fluoroplastic (PTFE)
PTFE-GL20	POLYTRON PTFE GL20	Fluoroplastic (PTFE)
PTFE-GL25	POLYTRON PTFE GL25	Fluoroplastic (PTFE)
PTFE-PI	POLYTRON PTFE P84	Fluoroplastic (PTFE)
PTFE-PES25	POLYTRON PTFE PES25	Fluoroplastic (PTFE)
PTFE-VA50	POLYTRON PTFE VA50	Fluoroplastic (PTFE)
PTFE mod.	POLYTRON TFM 1600	Fluoroplastic (PTFE)
PTFE mod. GL25	POLYTRON TFM 4105	Fluoroplastic (PTFE)
PPS-TF	POLYTRON ZX 530	PPS with high-molecular-weight PFAS additive
PTFE FG	Rulon® 641	Fluoroplastic (PTFE)
PTFE GP	Rulon® LR	Fluoroplastic (PTFE)
PTFE DWGV	Rulon® W2	Fluoroplastic (PTFE)
PTFE-MI ESD	Semitron® ESD 500HR	Fluoroplastic (PTFE)
PPS-TF/CF/CS	Techtron® BG	PPS with high-molecular-weight PFAS additive
PPS-GF10/TF10	Techtron® HPV	PPS with high-molecular-weight PFAS additive
PET-TF	Teratron™ HPV	PET with high-molecular-weight PFAS additive
PAI injection molded	Torlon® 4203	PAI with high-molecular-weight PFAS additive
PAI-CS12	Torlon® 4301	PAI with high-molecular-weight PFAS additive
PA-CS20	Torlon® 4275	PAI with high-molecular-weight PFAS additive
PAI-CF10/CS15/TF5/MI5	Torlon® 4435	PAI with high-molecular-weight PFAS additive
PAI-CS/TF	Torlon® 4630	PAI with high-molecular-weight PFAS additive
PI-CS15/TF10	Vespel® SP-211	PI with high-molecular-weight PFAS additive
PEEK-TF10	Victrex® PEEK TF10	PAEK with high-molecular-weight PFAS additive

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