

Position Paper

Restriction PFAS

The Federation of Electrical, Electronic, and Communication Industries brings together 27 professional organizations from the electrical, electronic, and communication industries, including 22 members and 5 associate members, supporting a proportionate and differentiated regulation of these substances. FIEEC works towards promoting industries that develop solutions, products, and services that provide relevant responses to future markets related to mobility, construction, an aging population, and the Internet of Things, among others. Both structurally and transformative, these industries drive the French industrial dynamic and constitute one of the drivers of societal and economic progress, serving employment and growth.

The impact of extensive PFAS regulation on the industry and product diversity would be significant. We question the compliance of this project with the REACH regulation, considering the established hazard of PFAS and the sheer volume of prohibited substances in a single text.

A simplistic approach is being adopted, which essentially treats 10,000 substances with diverse toxicological and ecotoxicological properties without differentiation. In fact, two substances with identical chemical formulas can have different properties due to their chemical structure. The proposal only considers the criterion of persistence in the environment. The aim of the restriction should be to prioritize action on the most concerning substances.

Furthermore, there is a shift in the burden of proof in the regulatory process, as it now falls on companies to demonstrate the safe use of tens of thousands of substances.

As a result, a ban on the production and use of a wide range of PFAS, as well as specific PFAS, would have an impact on:

➤ **Innovation**

A prohibition on the use of a broad spectrum of PFAS, including specific PFAS, would constrain the innovation capability of our products over time and also impact the competitiveness of the European electronic components industry and its ability to invest (in R&D and new manufacturing facilities) in an intensified international competitive landscape. Indeed, batteries utilize fluoropolymers, and without alternatives to this substance, the European strategy for promoting electric mobility and relocating production in Europe is called into question. Furthermore, the innovation of many ongoing technologies, such as sustainable transportation and new energy storage models, would be hampered.

➤ **Scope of Restriction :**

○ **Avoiding Duplicate Regulations.**

We notice that the definition encompasses PFAS used in refrigerants. These substances have already been evaluated under REACH, and it has been proven that they can be used in certain technologies. Furthermore, the proposed PFAS restriction project also aims to ban HFOs. HFOs are already considered alternative substances for refrigerants in response to the prohibitions outlined in the F-Gas Regulation and the Montreal Protocol. It is, therefore, essential to avoid double regulation. There would be no alternatives left for refrigerants. (It's worth noting that the POP Regulation, as well as biocides or phytosanitary products, also address substances mentioned in this restriction project.)

○ Excluding Fluoropolymers from the Restriction Project

Some PFAS have been identified as persistent because they do not readily degrade and can transform into long-term persistent compounds. The restriction proposal mentions that the persistence of PFAS has been highlighted by scientists in statements such as the Helsingør Statement on PFAS (Scheringer et al., 2014) and the subsequent Madrid statement (Blum et al., 2015). However, it is important to note that these statements do not refer to fluoropolymers. They specifically pertain to non-polymeric perfluoroalkylic acids (PFAS) such as perfluorocarboxylic acids (PFCAs) and perfluorosulfonic acids (PFSAs).

Fluoropolymers are currently unmatched in terms of suitable alternatives, especially PTFE (polytetrafluoroethylene). These materials offer unique properties, including exceptional chemical resistance, non-bioaccumulation, and they are not considered hazardous to human health according to assessments conducted by the OECD. Furthermore, fluoropolymers are not classified as carcinogenic and do not permeate cell membranes, confirming their safety. Additionally, PTFE is insoluble in water, further reducing concerns about its impact on the environment and human health.

Therefore, it is imperative to conduct a risk assessment for different types of PFAS on a case-by-case basis to establish requirements that consider all phases of the life cycle. Fluoropolymers do not exhibit the same characteristics as non-polymeric PFAS. For example, fluoropolymers that comply with regulations for plastics in contact with food are considered safe for human health and should be granted an exemption. Thus, it is necessary to manage the risks of these substances in a specific manner.

➤ Safety

In response to restrictive regulations, industry players have adapted by incorporating fluoropolymers, which are necessary (in small quantities, around 1%) for consumer and worker safety. Without these additives, the number of plastic materials **passing fire tests** is significantly reduced. With no alternatives to these substances, there is a risk that products may not meet fire safety requirements or may barely meet them, leaving no room for maneuver.

The ROHS Directive banned lead (often used in electronic soldering). This led to regrettable substitutions with dendrite-related issues emerging in use. Therefore, it is crucial to provide sufficient transition periods to observe potential reactions and avoid safety problems.

The restriction proposal should be based on technology rather than the substance itself. PFAS, in fact, also serve **waterproofing purposes**. Waterproofing is often crucial in our applications to maintain a minimum level of safety, and fluorinated elastomers (considered as PFAS) provide thermal resistance that cannot be found elsewhere. (Fluorinated elastomers are often used for critical components, and there are currently no alternatives. This substance is costly and is not used for pleasure but for its technical capabilities).

For instance, products containing materials in contact with food must ensure safety for health.

Finally, while certain uses of PFAS in medical devices have been identified and are subject to temporary exemption proposals, the absence of exemption for certain PFAS like PFOB for medical applications such as liquid ventilation, whether in clinical or preclinical research, would represent a missed opportunity for thousands of patients each year.

Safe and durable products already on the market would no longer be authorized for sale.

The safety of products and their production processes, as well as workplace health and safety and environmental protection, would thus face significant disadvantages in many areas due to a broad ban on PFAS, as mentioned in the UK RMOA report. ¹

These exemptions are crucial for achieving EU objectives aimed at preventing premature obsolescence and complying with laws promoting product longevity. The concepts of "right to repair" and authorization for resale of used products have been widely incorporated into other EU substance restrictions, and it is essential to include them in the EU PFAS restriction to prevent major disruptions in the market.

➤ **The economic impact**

Preparing for the realistic impact of a ban on thousands of substances carries a significant risk of unforeseen disruptions in supply chains, with all the associated economic consequences. Sufficient time is required to analyze the precise impact of the substance-specific ban and the socio-economic implications of this restriction.

Furthermore, passive electronic components do not benefit from postponement. This entire sector of the industry has been massively outsourced from Europe in past decades. Consequently, this ban could deprive Europe of electronic components.

Moreover, this restriction proposal contradicts numerous aspects of the European Green Deal, including the ESPR and Right to Repair, which impose various circular economy challenges such as the use of spare parts and the right to repair. Indeed, PFAS are present in all products currently on the market, making it seemingly impossible to reuse, refurbish, and repair products with PFAS-free components. Compatibility issues between products and spare parts, as well as certain conformity tests, would become inaccurate.

Thus, FIEEC requests the following exemptions to be added to the EU restriction on PFAS:

- Spare parts for the repair of finished consumer electronic equipment already placed on the market.
- Spare parts for the repair of finished professional electronic equipment in business-to-business transactions already placed on the market.
- Replenishment of articles already placed on the market (second-hand products).

It is necessary to rely on the exemption system of the RoHS Directive, using appropriate review clauses, to enable proper implementation and compliance with the product restriction. Transition periods of four to eight years after entry into force should be provided, considering the product's lifespan and development timelines, to facilitate full conversion. An 18-month transition period, as proposed, would be insufficient and could lead to disruptions in supply chains with long-term effects on the EU market. It is crucial to avoid regrettable substitutions and ensure that products placed on the market are durable and compliant with the EU Green Deal objectives and circularity ambitions to reduce waste in the EU.

¹ [Analysis of the most appropriate regulatory management options \(hse.gov.uk\)](https://www.hse.gov.uk/pfas/)

In general, our industry is ready to engage in a constructive approach to explore alternative solutions. However, alternative solutions either do not systematically exist, or when they do, they may not perform as well due to lower resistance, or they have not been comprehensively evaluated and could pose risks to health and the environment.

Regarding PFAS emissions, we support risk management measures for PFAS emissions, especially downstream. Therefore, an abrupt implementation without consultation and without exemptions would result in significant consequences. For example:

- **Impact on essential components for the manufacturing of strategic** equipment in sectors such as medical, aerospace, decarbonization, renewable energy, and lighting. (Impact on the production of electronic components, even leading to the cessation of production for certain components. For semiconductors, there are currently no known alternatives.)
- **Impact on the medical field:** Impact on the filters used (as they require PTFE membranes), for example, in systems for cleanrooms and hospitals (resulting in an impact on indoor air filtration and/or dust removal for indoor air quality).
- **Impact on transportation:** Impact on transportation safety, affecting all cables that supply power (energy, automobile, aeronautics, communication, emergency, detection, etc.).
- **Impact on energy:**
 - **Heat Pumps:** France is the largest heat pump market in Europe, with more than 90% of the heat pump market using HFC and/or HFC/HFO blends. This restriction will, therefore, have a significant impact on the French economy.
 - **Compressors:** 90% of chillers/coolers in the French market that use screw compressors operate with HFOs. The very powerful groups using centrifugal compressors for urban heating operate with HFOs.
 - **Batteries:** Batteries use fluoropolymers.
- **Impact on measurement instruments**, particularly in nuclear power plants: Flow measurement instrument (with ETFE coating) used in nuclear power plants in case of a major accident. The device is used to control the flow that floods the reactor building. Level measurement instrument (containing PEEK parts) to control the level of pools containing used nuclear fuel in nuclear power plants; Flow measurement instrument (with PTFE coating) to control the flow of highly corrosive and toxic products used by the chemical industry.

The FIEEC is mobilizing its members to participate in the consultation process; however, we call for a clarification of the objectives of this restriction. It is not about eliminating PFAS themselves but rather implementing risk management measures for those where a health risk or negative environmental impact will be substantiated following their scientific and socio-economic evaluation.