

"For a risk-based approach to PFAS"

"About GIMELEC :

GIMELEC brings together companies in the French electronic and digital sector. Our members design, manufacture, and deploy electrification, automation, and digitalization solutions for industry, buildings, mobility, and energy and digital infrastructure."

"At the beginning of the year, competent authorities from five European countries proposed an extensive restriction on per- and polyfluorinated substances, commonly known as PFAS, under the European chemical regulation REACH. This constitutes the largest chemical restriction project in the EU to date and is an integral part of the chemical aspect of the European Green Deal. The proposed ban on the manufacture, use, and placing on the market of PFAS (as substances, incorporated into mixtures, or products) would have a massive impact on the member companies of GIMELEC, whose technologies are essential for the energy transition, digitalization, and various industries.

We believe that the production, research, and development centers of the French and European electrical and digital industries, as well as their global competitiveness, will be seriously threatened by a blanket ban. Therefore, we request a fundamental revision of the restriction proposal in several key areas.

This note is inspired by the ZVEI document 'For a risk-based approach to PFAS - no blanket ban.'¹

¹<https://www.zvei.org/en/press-media/publications/for-a-risk-based-approach-to-pfas-no-blanket-ban>

- ****GIMELEC's Position****

Our members are committed to continuously improving the environmental impact and safety of the products they bring to the market. Therefore, we naturally support the overall goal of avoiding the emission of hazardous substances into the environment and the implementation of regulations targeting these substances.

This commitment aligns with the European energy transition, which presents significant challenges to our society, particularly with its rapid electrification over the past few decades. The electrical and digital industry, represented by GIMELEC and its technologies, is at the heart of this movement. These technologies, many of which rely on PFAS, would either not exist or function poorly, if at all, without them. Any restrictions related to PFAS should be implemented through a differentiated approach based on their use and the consequences of potential bans.

GIMELEC strongly advocates for the adoption of a risk-based regulatory approach as outlined in Article 68(1) of REACH and substance-based regulation as specified in Article 69 of the same regulation. A blanket ban on all PFAS, regardless of their toxicity and risk profile, does not meet these requirements. Given their critical importance in the electrical and digital industry, the safe use of PFAS should remain possible as long as their risks can be effectively "managed" through appropriate measures or until suitable alternatives become available.

- It is important to differentiate between various PFAS (groups) and the associated risks for each use.
 - It is also essential to consider whether identified risks can be reduced through targeted measures, such as occupational health and safety, emission control, or waste legislation, rather than a blanket ban under REACH.
 - Only high-risk applications and those for which a technically suitable, economically justifiable, and less harmful alternative for the environment and health exist should be restricted. Otherwise, there is a risk of creating an endless list of very specific exemptions or excluding certain products and processes from the European market, which would negatively impact the export activities of companies based in France and Europe.
 - When substitution is possible, appropriate transition periods of four to eight years after the effective date (depending on the sector, product lifespan, and development timelines) are necessary, as provided in other legislations, such as the RoHS directive. Even in the case of known substitutes, the 18-month period proposed in the current proposal is insufficient for the conversion of complex products and processes.
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- Only the introduction of an obligation to provide information for "intentionally added" PFAS (e.g., by their inclusion in the REACH candidate list) before the introduction of targeted

restrictions will enable the inclusion of all relevant uses in a timely assessment and the request for necessary exemptions. Currently, there is no legal basis for the dissemination and communication of information about PFAS in products along complex supply chains. Most PFAS are neither harmonized under CLP nor included in the REACH candidate list. Therefore, information about PFAS in products is only available in a fragmented manner within international supply chains. It will take years to fill these gaps.

Exemptions

A clearly defined process is needed to request new exemptions and renew and review those already granted, especially in the case of a broad restriction of previously non-declarable substances. The exemptions currently proposed are insufficient and do not consider the relevance of PFAS for a wide range of uses and potential innovations in the electrical and digital industries.

- Moreover, many PFAS are used in existing equipment already installed and with a long lifespan (sometimes exceeding 40 years), which means that the operation, maintenance, and repair of existing equipment containing PFAS must be allowed until the end of their lifespan. Therefore, the ban on PFAS should not apply to spare parts for existing installations. For example, an early decommissioning of existing equipment in the electrical network sector would jeopardize the security of electricity supply. An unrestricted ban on PFAS would mean that the energy transition in Europe would be stalled for several years at a time when acceleration is needed.
- A general exemption is also required for products that have already been placed on the market for the first time. Otherwise, they cannot be resold or further processed and placed back on the market as components of more complex products/articles. The only option would be disposal.
- Fluoropolymers meeting the criteria for "polymers of low concern" and industrial applications in closed systems and equipment components generally result in little or no emissions into the environment when used as intended. Due to their significant industrial importance, general and long-term exemptions are necessary, especially in the absence of technically suitable and more environmentally friendly alternatives. Risks related to manufacturing and waste management are better addressed in relevant legislation (emissions/occupational health and safety, waste legislation).

The Example of Hydrofluoroolefins (HFOs)

HFOs are fourth-generation refrigerant fluids with low global warming potentials that are likely to meet the upcoming requirements of the F-Gas directive. These fluids are currently being deployed in many markets, especially in the data center industry for use in chiller units. While they are currently included in the global ban proposal, a differentiated scientific approach based on risk would exempt them from any prohibition, among other reasons, because they do not bioaccumulate.

The current ban proposal, coupled with the F-Gas revision project, poses significant risks to the availability of refrigerant fluids and, consequently, to the availability of chiller units (and more broadly, the heat pump industry). Faced with a lack of available technological solutions, data centers would have no choice but to resort to water cooling, which poses environmental challenges. Additionally, they may be incentivized to establish operations on the outskirts of the European Union.

****Surveillance/Compliance****

- When establishing transition periods, consideration should be given to the capacity of existing laboratories, the availability/operability of analytical methods, and the associated costs for companies (personnel, time, equipment).
- Compliance with the proposed restriction cannot be verified for all uses with currently available methods and in the absence of a comprehensive list of substances. Practical and standardized analytical and extraction methods must be available for all restricted substances and applications before a legal restriction is imposed.
- In order to create a level playing field for all market participants and to reliably identify potential violations, market surveillance needs to be strengthened, including at external borders, but also within the EU. Situation actuelle

A public consultation on the proposal for restriction with the European Chemicals Agency (ECHA) is currently open until September 25, 2023. The legislative proposal is expected to be published in 2025, and the bans on the manufacture, use, and placing on the market of substances, mixtures, and articles containing PFAS are expected to come into effect in 2026-2027, following the REACH restriction process.

At this stage, the consultation dossier includes only a small number of primarily temporary exemptions, which GIMELEC considers insufficient. The proposal notably lacks expanded exemptions for fluoropolymers and the significant uses of PFAS in the electrical and digital industries. The subgroup of fluoropolymers, in particular, is used in numerous products, production processes, and equipment in our industry due to their exceptional properties (such as resistance to extreme conditions: temperature, pressure, or chemically aggressive agents, low dielectric constant, and low friction coefficient). After decades of development towards smaller, more efficient, and safer products, it is generally the unique combination of several of these properties that necessitates the use of PFAS.

For many applications, no suitable alternatives are known at this stage. Therefore, no timeline can be given for the availability of substitutes. A temporary exemption would send the wrong investment signal for key technologies whose production should be strengthened in Europe (semiconductors, lithium-ion batteries, carbon-neutral energy production and distribution, etc.).

When PFAS-free alternatives are known, they are often not direct replacements: the specific combination of properties of PFAS-based materials can often only be replaced by a combination of materials or components, which requires more development effort and time than a 1:1 replacement. Changes in product dimensions, design, and possibly the entire manufacturing process may be necessary.

Electronic devices often consist of thousands of individual components from complex international supply chains. Modifications to key components or product design require intensive testing, requalification, and, where necessary, product recertification through sometimes complex testing procedures, such as in the field of electrical networks where these technical qualification procedures typically take between 2 and 4 years. Time-consuming product redesign and subsequent testing must be carried out at each stage of the value chain. If tests are not successful, the entire process starts over. Such iterations take years without a guarantee of meeting a deadline. For products requiring certification or mandatory compliance assessment, limited testing capacity (in terms of personnel and laboratory equipment) is often the bottleneck in terms of speed.

Context: Figures, data, facts

- The current proposal for restriction concerns more than 10,000 individual substances, all of which have a fully fluorinated carbon atom according to the definition of PFAS, and some of them vary considerably in their chemical, physical (solid, liquid, gaseous), toxicological properties, as well as their risk profile.
- According to a survey by our counterparts at ZVEI in 2021, fluoropolymers account for more than 75% of known uses of PFAS by ZVEI members. Taking into account the production facilities of companies, we estimate that nearly 100% of GIMELEC member companies will be affected by the planned restriction of PFAS, although the overall impact may vary from one company to another.
- The lifespan of products in the electronic industry varies considerably and can reach 40 years or more (e.g., electricity transport and distribution infrastructure).

(Note: Some sections in the original text appear to be cut off or incomplete. If you have specific questions or need further assistance with parts of the text, please let me know.)