ZVEI on the restriction of PFAS under REACH

For a targeted and differentiated regulatory approach

At the beginning of 2023, the competent authorities of five European countries submitted a restriction dossier[i] for per- and polyfluoroalkyl substances (PFAS) under the European chemicals regulation REACH. The proposal would be the most far-reaching restriction on chemicals in the EU to date and forms a key part of the Chemicals Strategy for Sustainability (CSS).

The proposed restriction on the manufacture, use and placing on the market of PFAS (in substances, mixtures and articles) would have a massive impact on the producibility and competitiveness of our member companies, whose technologies are crucial for the energy transition, digitalisation, European infrastructure, transport and logistics chains, healthcare and process automation/measurement technology.[ii]

While we recognise the environmental and health problems caused by the improper use of PFAS, we believe that an indiscriminate ban would seriously jeopardise the production, research and development sites of the German and European electro and digital industries, as well as their global competitiveness. We therefore advocate a fundamentally different approach to PFAS regulation. The aim should be to enable the continued safe use of PFAS, while avoiding emissions into the environment wherever possible, and maintaining the industry's competitiveness through targeted, rather than indiscriminate, regulation.

1 ZVEI´s ten proposals for improvement

In recent years, ZVEI has actively contributed to the discussion on the PFAS restriction procedure[iii,iv,v] and, informed by this, to the forthcoming revision of the REACH Regulation[vi] as well as to the development of a harmonised concept for information requirements on substances requiring regulation[vii]. While these statements are relevant in the context of the PFAS restriction, they will not be repeated in full here.

In order to make the PFAS restriction feasible and maintain Germany and Europe as competitive production locations for high-tech products in the electrical and digital industry, the ZVEI proposes the following:

Risk-based and targeted restriction approach

1. The current **restriction approach** should be **reversed.** Rather than implementing a broad ban with countless exemptions, only PFAS applications that have undergone a thorough, evidence-based assessment by the ECHA committees and for which an unacceptable risk has been identified should be restricted. Applications for which there is no technically suitable, economically viable and less harmful alternative for the environment and health should not be restricted.

2. PFAS products and applications must be regulated according to their **actual exposure risk or emission risk**. Recent statements by the European Commission on PFAS suggest that **consumer products** should be regulated differently from **industrial applications**.[viii] However, the term "consumer products" covers a very wide range of applications, from cosmetics and chemical mixtures (e.g. paints, adhesives) to products that come into direct contact with the skin (e.g. textiles) and consumer goods such as electronic devices (e.g. laptops, washing machines), which pose very different exposure risks to consumers.

3. Instead of a general ban, risks in the manufacturing and waste phases of certain substances should be better addressed in the relevant legislation (emissions, occupational safety, waste law). Care must be taken to avoid double regulation, e.g., with regard to the new 'Restriction Option 3' introduced in November 2024[ix] and the proposed inclusion of semiconductors in the IED-STM-BREF in accordance with the Industrial Emissions Directive[x]. The scope of the restriction and its demarcation from existing regulations (e.g., F-Gas Regulation, PFHxA restriction) must be clarified urgently. Inconsistent overlaps must be avoided.

Exemptions/derogations

4. A **general derogation for fluoropolymers** would significantly reduce complexity and adequately limit the negative economic consequences.
   The **voluntary commitment by fluoropolymer manufacturers**[xi] should be recognised as a sufficient risk management measure (with regular reviews of its effectiveness)**.**

5. In principle, a clearly defined **procedure for reapplying for, reviewing and extending exemptions** is necessary, particularly in the case of far-reaching restrictions on substances that were not previously subject to information requirements along the supply chain.

6. In complex products, it must be possible to use PFAS-containing components that were delivered before the restriction came into effect. The placing-on-the-market ban must therefore not apply to articles that were first placed on the market before the ban came effective. However, the exemption for "articles already in end-use" added to the background document does not solve this problem in the case of complex supply chains and products and must therefore be reworded.

Transitional periods

7. Even for applications with identified substitutes, transition periods of four to eight years are necessary once the delegated regulation comes into force. The exact time required depends on the sector, product lifecycle, and development times. The 18 months provided for are insufficient for converting products and processes, or for adjusting the supply chain. When setting transition periods, laboratory capacity; the availability and applicability of analytical methods; and the impact on companies (personnel/costs) must be taken into account.

Clarity, feasibility and enforceability

8. Practicable and validated, standardised **analysis and extraction methods** must be available for all restricted substances and applications before a legal restriction is enacted. Compliance with the proposed restriction cannot be adequately verified for all applications using the methods currently available, partly because there is no complete list of substances.

9. For articles, a **limit value of 1000 ppm** should be considered **as a proportionate and practical approach** to enable realistic implementation without compromising the regulatory objectives.

10. To avoid uncertainty and differing interpretations, terms such as 'complex objects', 'articles already in end use' and 'consumer uses' should be clearly defined in legal terms.

2 Current status of the procedure and our assessment

A **public consultation** on the restriction proposal was held by the European Chemicals Agency (ECHA) from March to September 2023. By the end of the consultation, ECHA had received more than 5,600 comments.[xii]
ECHA has announced a further 60-day consultation on the 'Draft SEAC Opinion' for next spring, following the adoption of the RAC and draft SEAC opinions in March.[xiii]
ZVEI contributed to the consultation on the dossier by making several application-specific submissions[xiv], and regularly participates in political discussions in Germany and Europe. We emphasised that the size and complexity of the restriction dossier place an excessive burden on the procedure itself, the authorities involved and industry. Attempting to adequately assess the multitude of applications and substances in a single procedure creates uncertainty regarding planning and investment for affected companies. This also paradoxically delays the restriction of applications with high PFAS emissions, for which substitutes are already available.
Meanwhile, more and more EEA Member States are introducing national bans on PFAS in certain applications. This is leading to fragmentation of legislation in the EU internal market, which undermines legal certainty and jeopardises the internal market.

The revised restriction dossier ('Draft Background Document')

The “Draft Background Document” published on 20 August 2025[xv] contains **numerous improvements** compared to the original dossier **but remains insufficient from ZVEI´s perspective**. Although eight additional sectors have been identified and additional general and application-specific exemptions have been added, fundamental concerns remain regarding feasibility and planning security. According to feedback from our members, the proposed exemptions do not fully cover the input provided in the consultation. It can be assumed that the number of application-specific exemptions will have to increase further, especially since the identification of PFAS applications is by no means complete.
The background document **still lacks adequate differentiation** between the various PFAS categories, their physicochemical and toxicological properties, and their different application profiles. Substance groups that do not pose an "unacceptable risk" during use or whose use is safe are still subject to the restriction.

For example, there is still no **general exemption for fluoropolymers across the supply chain**, even though they pose no risks during use and contribute significantly to **the safety and durability of products and processes**. Adequate solutions and promising research projects already exist for risk management in the manufacturing and waste phases. It should be emphasised that any new restriction increases the economic risks in the supply chain. The market for fluoropolymers, for example, is relatively small and the possibility of suppliers leaving the industry poses a real threat to critical applications and the future availability of fluoropolymers in the EU.

Furthermore, in our view, the restriction will be particularly extensive and complicated due to the inclusion of fluoropolymers in its scope. A **general exemption for fluoropolymers** would significantly reduce the number of application-specific exemptions required and the complexity of the dossier, as well as making the restriction much easier to enforce.

The background document makes it clear that a **broad restriction with numerous application-specific exemptions (currently 74) cannot be effective**. The associated monitoring and tracking efforts are considerable and lead to legal uncertainty. Applications that are not mentioned or have not yet been identified would be automatically prohibited. Only by **reversing the current regulatory approach,** i.e., by formulating a targeted restriction exclusively on those applications whose risks cannot be adequately controlled, instead of a broad ban with an increasing and confusing number of application-specific exemptions, can unwanted supply chain disruptions be prevented.

Many of the proposed exemptions in the dossier are linked to additional obligations, the implementation of which remains unclear in detail, and which will entail **considerable additional bureaucratic effort**, such as the creation of a 'site-specific management plan' or annual reporting obligations. Against the backdrop of the European Commission's efforts to **reduce bureaucracy** and the current economic situation, such reporting obligations should be designed with a sense of proportion and demonstrate a clear benefit for the environment.

We welcome the fact that our call for **fundamental exemptions for spare parts and recycled materials**, as well as for raw materials and intermediate products, has been incorporated into the dossier. However, limiting this exemption to a period of 20 years after the product was first placed on the market does not cover the guaranteed service life of many products in our member companies' portfolios. The service life of products in the electrical and digital industry varies greatly and can in some cases exceed **40 to 50 years** (e.g., infrastructure for the transmission and distribution of electricity).

The background document proposes that, among other things, products falling within the scope of **the WEEE Directive** (Waste Electrical and Electronic Equipment Directive) must in future be labelled with the statement "Contains intentionally added PFAS". This statement would involve a remarkably high level of effort, although from the ZVEI's point of view there is no discernible benefit for the circular economy or consumers.

Furthermore, the use of unclear terms that are not defined in REACH, such as 'articles already in end-use', 'plastic articles containing recovered material' or the distinction between 'industrial', 'professional' and 'consumer use', creates further uncertainty. Care should be taken to use clear, legally unambiguous terms and wording.

If the comprehensive restriction approach with sector-specific assessment is pursued despite our considerable concerns, a detailed description and scientific assessment in the dossier and in the ECHA committees is a mandatory prerequisite for subsequent restriction. For example, many products and industrial sectors are not or insufficiently represented in the current sectors or can be assigned to several sectors. The choice of sectors (e.g., ski wax versus electronics/semiconductors) and their discussion in the ECHA committees appear unbalanced to us and lead to great uncertainty in the industry. The ZVEI stands ready to propose solutions.

The announced timeline

ECHA has announced[xvi] that the eight newly identified sectors will no longer be specifically processed by the Committees for Socio-Economic Analysis and Risk Assessment, as this would delay the timetable by at least another year. It remains unclear what consequences this will have for the affected areas, which include many fundamental uses across numerous industrial branches - for example sealing, printing and machinery applications. This announcement confirms our assessment that the chosen approach to PFAS restriction is too complex and cannot be implemented.

A swift conclusion to the process is important in the interests of planning and investment security for industry but must not come at the expense of a detailed scientific assessment of all the facts presented in the consultation. Otherwise, there is a risk that important and currently non-substitutable uses of PFAS will be overlooked.

The announced consultation on the draft SEAC opinion

We also take a critical view of the announcement[xvii] that submissions to the consultation on the 'SEAC Draft Opinion' will be limited in terms of character count and that no attachments can be uploaded. We do not consider this approach to be appropriate given the complexity of the dossier. It must be ensured that relevant information can still be included in the consultation on the draft SEAC opinion, regardless of its length.

Analysis of PFAS in the electro and digital industry

The analysis of PFAS in electrical products is technically extremely demanding and resource-intensive. PFAS can occur in different chemical forms, concentrations, and material matrices (e.g., plastics, coatings, cable insulation, lubricants), which requires targeted sampling and complex sample preparation. Various methods are usually combined for the determination, which in turn only detect individual PFAS or PFAS groups. Sum parameter methods do not provide information about PFAS, but only about chemical elements or isolated molecular chains. To date, we are not aware of any nationally or internationally standardised method that adequately detects all PFAS contained in a product. The choice of analytical method depends heavily on the issue at hand and the type of product, and the results of different methods are only comparable to a limited extent. In the UK, very few specialised laboratories have the necessary equipment and expertise to test for PFAS in products. The cost of a comprehensive PFAS analysis of an electrical appliance (including sum parameters and individual substance determination) can quickly run into several thousand pounds.

Enforceability of the proposal

The ECHA Enforcement Forum considers the original PFAS restriction dossier to be difficult to enforce.[xviii] Among other things, it criticises unclear definitions, missing substance lists, insufficient analysis, particularly for polymeric PFAS, non-standardised methods and legal loopholes, e.g., in the use of mixtures and articles. The considerable number of unclearly formulated exemptions and the enormous testing effort involved lead to considerable enforcement and resource problems. The authorities lack suitable analytical methods, structural aids (e.g., positive lists), and legally clear terminology.

From ZVEI's perspective, the currently proposed **limit values of 25 ppb, 250 ppb and 50 ppm are disproportionate**, particularly with regard to articles. Comparably low limit values in the ppb range only apply to products in the POP Regulation. A blanket application of such environmental limit values to the more than 10,000 PFAS would not be appropriate. Therefore, a limit value of 1000 ppm for articles should be considered as a proportionate and practical approach that would enable realistic implementation without endangering the regulatory objectives.

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[i] https://echa.europa.eu/registry-of-restriction-intentions/-/dislist/details/0b0236e18663449b
[ii] BDI position on restricting PFAS, 2021, publication (bdi.eu)
[iii] ZVEI page: For a risk-based approach to PFAS – no blanket ban
[iv] Statement on the hearing on per- and polyfluoroalkyl substances (PFAS)
[v] The general restriction of PFAS jeopardises the semiconductor industry in Europe and the objectives of the European Chips Act, as well as the ecological and digital transformation in Germany and Europe!
[vi] ZVEI statement on the REACH revision: Chemicals legislation needs a sense of proportion
[vii] Substances of concern: Associations call for a uniform approach
[viii] European Chemicals Industry Action Plan – European Commission, 'Providing Clarity on PFAS', Chapter 5.4, p. 15 ff.
[ix] ECHA and five European countries issue progress update on PFAS restriction, 20 November 2024
[x] https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/surface-treatment-metals-and-plastics
[xi] FPG Manufacturing Programme for European Manufacturing sites (link), FPG Manufacturing Factsheet (link) and[xi] FPG Manufacturing Programme Update 2025 (link)
[xii] ECHA presentation to CARACAL, November 2023, AP8.1_CA_43_2023_U-PFAS restriction-Public_consultation_ECHA.pptx
[xiii] 15 September 2025 - ECHA to consult on PFAS draft opinion in spring 2026
[xiv] PFAS Factsheets (ZVEI-PFAS-Website)
[xv] 20 August 2025 - ECHA publishes updated PFAS restriction proposal
[xvi] 27 August 2025 – ECHA announces timeline for PFAS restriction evaluation
[xvii] 15 September 2025 – ECHA to consult on PFAS draft opinion in spring 2026
[xviii] Forum Enforceability Advice