

REACH Universal PFAS Restriction –
Closing Submission
-PUBLIC VERSION-

Chemours | Advance Performance Materials (APM)
September 21, 2023

Please note this is a closing general contribution that summarizes our approach to the public consultation and key arguments made in detailed submissions that Chemours submitted separately during the consultation period.

Introduction

As indicated in our initial comment, Chemours, as one of the largest producers of fluorinated chemistry globally, utilized the consultation period to provide substantial information on the manufacture (#RCOM 37 #6337), Use and end-of-life management of fluorinated chemistry¹, as well as on the role of fluorinated chemistry within and across industries², to effectively and constructively inform the development of a regulatory framework for per- and polyfluorinated substances (PFAS). In this context, Chemours also highlighted the risk of double regulation (#RCOM18 #4435), responded to certain claims regarding the toxicological and ecotoxicological profile of PFAS made in the PFAS Restriction Dossier (#RCOM 37 #6335), and presented a number of legal considerations regarding the Dossier's methodology, legal principles, scientific rigor, and its – from our perspective – breach with the principle of 'Better Regulation' (#RCOM 11 #4248).

Overall, we argue that the Annex XV report does not objectively identify and assess the complete range of potential restriction or regulatory management options, as it only assesses the appropriateness of a ban. From our point of view, it has not been clearly demonstrated that the proposed restriction is the most appropriate means to regulate the potential risks of PFAS. Here, we believe that it is particularly important to assess comparative restriction and regulatory management options based on the criteria given in Annex XV of REACH of effectiveness, practicality and monitorability.

Against this backdrop, our submissions intend to demonstrate that the proposed blanket ban on PFAS under REACH is not an appropriate, proportionate regulatory measure, and it would have significant negative impacts on the EU achieving its policy objectives and EU strategic autonomy. Throughout our submissions, we argue that a more tailored (differentiated) approach to the scope and conditions of a restriction, recognizing the different properties and conditions of use of individual PFAS, would ensure the safe use of PFAS without compromising the EU's policy and strategic objectives. Given the distinct physicochemical and toxicological profiles of fluoropolymers compared to other PFAS, we argue that fluoropolymers shall not be grouped together with other PFAS regulated under the PFAS REACH restriction.

Risk-based approach to regulate PFAS

To clearly elaborate and substantiate our position, Chemours' submissions are structured along Type I, Type II, and Type III comments, which are complementary and in combination address the concerns with the current PFAS restriction proposal.

Type I comments focus on the Dossier submitters' risk-based justification for a restriction (case-by-case risk assessment) that concluded that the whole PFAS class poses a risk that is not adequately controlled on an EU-wide basis.

In our submission "Fluoropolymers and Fluoropolyethers: Their Uses, End of Life Management, and Criticality for Industry"³, we point to various studies that have shown that the fluoropolymers most commonly used in various applications, namely PTFE, ETFE, FEP, PFA, IXM, PVDF and FKM, meet the OECD criteria of 'polymers of low concern'. They are chemically stable, non-toxic, non-bioavailable, non-water soluble and non-mobile materials. Moreover, fluorinated emissions generated throughout the processing of fluoropolymers can be controlled and minimized using standard abatement technologies, and given the stability of fluoropolymers, emissions throughout the use phase are minimal and of no concern for human health or the environment. This particularly holds true for industrial (applications that

¹ Chemours Public consultation Receipt reference: 4e266294-5779-4bd1-bd6c-9465a3079202

² Chemours Public consultation Receipt reference: fe66ebe9-80b8-49e1-9bab-2724b323f4f7

³ Chemours Public consultation Receipt reference: 4e266294-5779-4bd1-bd6c-9465a3079202

are not in direct contact with the consumer) and professional uses of fluoropolymers, since these are not dispersive applications. **Therefore, we argue that the industrial and professional use of fluoropolymers does not pose a risk to human health or the environment that justifies a restriction.**

In addition, in our submission “Toxicological and Ecotoxicological Information of PFAS and Fluoropolymers – Response to Dossier Claims by Chemours APM” (#RCOM 37 #6335), we correct certain claims and assumptions made in the Dossier concerning the justification for grouping and certain classifications, epidemiological and toxicological information, and its uncertainty assessment. The Dossier uses the technical OECD definition of PFAS to describe the substance class and repeatedly points to the diversity within the class throughout the Annex B. Chemours therefore argues that, in accordance with the 2021 OECD guidance, such diversity must be properly recognized and communicated in a clear, specific and descriptive manner when addressing a specific (group of) PFAS to allow stakeholders to correctly and precisely respond to all aspects of the Dossier. We argue that the hazards and risks of PFAS 'sub-groups' are demonstrably different from one another and that the Dossier Submitters do not account for differences in their respective toxicological properties. Furthermore, the Dossier's focus on a subset of certain PFAS neglects that 'safe use' can be demonstrated for certain other sub-groups of PFAS. **We thus argue that grouping the entire class of substances meeting the 2021 OECD PFAS definition is not justified based on the assessment of associated risks.**

Type II comments assess whether restriction options other than a ban demonstrate a more appropriate approach to regulation to control or minimize risks associated with the manufacture, use, or end of life management of fluorinated chemistry; allowing critical uses to continue.

In our submission “Fluoropolymers and Fluoropolyethers: Their Uses, End of Life Management, and Criticality for Industry”⁴, we show that there are already numerous recycling, incineration, and landfill processes and methods, well suited to address end-of-life concerns associated with fluoropolymers. The several incineration studies conducted demonstrate that under the right conditions, fluoropolymers don't break down to new PFAS molecules⁵.

Moreover, existing waste directives as well as recycling, incineration, and landfill standards and practices demonstrate that effective mitigation measures are already in place or can be amended to address risks associated with the end of life of applications containing fluoropolymers. **We, thus, conclude that a combination of existing EU legal acts such as Regulations and Directives (with minor amendments) together with strict technical guidelines and standards can ensure safe end-of-life management of fluoropolymers in industrial and professional uses.**

In a similar vein, in our submission “Manufacturing of Fluoropolymers – An Alternative Proposal for Managing The Risk” (#RCOM 37 #6337), we argue that the **framework of strictly controlled conditions**, as defined in REACH Art 18(4) (a) – (f), is an already existing regulatory framework that can be expanded to **regulate the use of fluorinated transported isolated intermediates [CONFIDENTIAL - REDACTED] in the manufacturing of fluoropolymers to sufficiently stringently control and effectively minimize potential risks** associated with the use of these substances in the manufacture of fluoropolymers. The framework of strictly controlled conditions would further ensure that the critical functions and benefits of fluorinated transported isolated intermediates [CONFIDENTIAL - REDACTED] in the manufacture of fluoropolymers are not lost.

⁴ Chemours Public consultation Receipt reference: 4e266294-5779-4bd1-bd6c-9465a3079202

⁵ Submission by WL Gore to REACH PFAS Restriction consultation part 31 reference 6167 page 18-27 & Submission by GFL to REACH PFAS Restriction consultation part 22 Reference 4587

In the scope of the same submission (#RCOM 37 #6337) [CONFIDENTIAL - REDACTED] we further demonstrate that a substitution of fluorinated polymerization aids with non-fluorinated polymerization aids in the manufacture of fluoropolymers is not a holistic solution to mitigate potential risks. This is especially the case since no matter what type of polymerization aids are being used, fluorinated emissions can occur, which must be controlled and minimized. In addition, using a non-fluorinated polymerization aid can generate a wide variety of unknown fluorinated residues, while the use of fluorinated polymerization aid generates fewer residues whose properties are well understood and can be captured effectively. Only with a full understanding of the impurity profiles from the manufacturing process of fluoropolymers is it possible to design effective emission controls and effectively minimize associated risks. **Therefore, instead of a mere ban of fluorinated polymerization aids, we propose that strict manufacturing standards and state-of-the-art emission abatement and control technology should be considered as an alternative solution to effectively control and minimize potential risks associated with the use of both fluorinated as well as non-fluorinated polymerization aids in the manufacture of fluoropolymers.**

Type III comments focus on the question if, and under what circumstances, a ban on the use of fluoropolymers could be managed to ensure that critical functions (and benefits) are not lost to society.

In our submission “Fluoropolymers and Fluoropolyethers: Their Uses, End of Life Management, and Criticality for Industry”⁶, we underline that fluoropolymers are critical for a number of industries that are vital for the transformation of the European economy and the realization for crucial EU policy programs, such as the EU Green Deal, REPowerEU, and the EU Chips Act, to name just a few. Industries that rely on fluoropolymer-based applications include, but are not limited to, clean energy (including the production of hydrogen), electronics (including high-end battery and semiconductor manufacturing), transport and automotive, as well as the healthcare sector. **It is important to note that these sectors do not operate independently of each other, as they rely on and are supported by key technologies and product applications across a range of industries; countless of which rely on fluoropolymers. In this context, we argue that the approach of use-specific derogations falls short,** as it would be misleading to assess the functions and benefits of fluoropolymers only in the scope of individual applications. **Instead, it is crucial to assess the use of specific fluoropolymer-containing applications within and across industries and value chains.**

The proposed restriction would be impossible to be managed and enforced, given the wide variety of important uses of fluoropolymers and the required many use-specific derogations to regulate all these critical and interconnected uses.

Chemours argues that the currently proposed restriction option, namely a phase-out, is disproportionate and would significantly impact key European industries, resulting in very high socio-economic costs.

In our submission “Fluoropolymers in Chemical and Industrial Processes”⁷, we specifically emphasize the critical role of fluoropolymers in chemical and industrial manufacturing, an industry that is the starting point in the value chains of many sectors. We demonstrate that uses of fluoropolymers in chemical and industrial processes significantly enhance performance, safety, efficiency, and longevity of process and manufacturing equipment, technologies, and applications. This, in turn, leads to significant reductions of operating costs, enhances safety of chemical and industrial processes, and thereby promotes the competitiveness of the European chemicals and industrial sectors. Moreover, we show that there are no viable alternatives that could replace fluoropolymers in chemical and industrial processes without significantly affecting safety, performance or efficiency standards, or even product quality. **We therefore conclude that the proposed risk management objective, i.e., a phase-out of fluoropolymers for uses in the chemical and industrial processing industries 18 months after the restriction’s entry**

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into force, would result in disproportionate impacts on society unless the proposed restriction is modified.

In the scope of our submission “Manufacturing of Fluoropolymers – An Alternative Proposal for Managing The Risk”⁸ we explain the crucial role of **fluorinated transported isolated intermediates [CONFIDENTIAL - REDACTED]** in the manufacturing of fluoropolymers, which we argue **are necessary to maintain the ability to competitively manufacture fluoropolymers and perfluoropolyethers in the European Economic Area (EEA).**

[CONFIDENTIAL – REDACTED]

Conclusion

Overall, we have demonstrated that the manufacture, use, and end-of-life management of fluoropolymers can be carried out in a safe manner. The use of fluoropolymers does not pose a risk to human health or the environment. Potential concerns associated with the manufacture and end-of-life management of fluoropolymers can be effectively controlled and minimized by applying already existing regulatory frameworks or by slightly amending these frameworks. At the same time, the use of fluoropolymers is critical for thousands of applications in numerous different industries that are relevant for European innovation and the EU’s ambitious policy programs such as the EU Green Deal, REPowerEU, the EU Chips Act, and others. Use-specific derogations are not an applicable way to such a high number of different uses. **Therefore, considering that risks throughout the lifecycle can be controlled and that a ban of fluoropolymers would be disproportionate, Chemours urges ECHA and the Dossier Submitters to exempt fluoropolymers, for industrial and professional use, from a potential universal PFAS restriction.**

For this, we have shown that risks associated with the use of fluorinated substances in the manufacture of fluoropolymers can be controlled and minimized applying the framework of strictly controlled conditions, including standard emission abatement technologies and very strict manufacturing standards. We have further outlined that the use of fluorinated polymerization aids in the manufacture of fluoropolymers cannot be entirely substituted with non-fluorinated polymerization aids, and that the use of non-fluorinated polymerization aids generates comparatively higher amounts of unknown residues, which themselves bear a risk to human health and the environment and limit performance. Hence, Chemours urges ECHA to consider:

- **an exemption for the use of transported isolated intermediates in the manufacture of fluoropolymers and fluoropolyethers under strictly controlled conditions.**
- **[CONFIDENTIAL - REDACTED]**
- **an exemption for the use of fluorinated processing aids in the manufacture of fluoropolymers. If a phase-out is eventually considered by the Scientific opinions to be a more appropriate measure, then Chemours urges ECHA to consider a derogation of at least 12 years with a review period, which will be necessary to ensure that disproportionate socio-economic impacts can be avoided.**

⁸ Chemours Public consultation, document 37, reference 6337

Fluoropolymers Glossary:

- **PTFE: PolyTetraFluoroEthylene**
- **PFA: PerFluoroAlkoxy**
- **FEP: FluorinatedEthylenePropylene**
- **FKM: FluoroElastomer**
- **ETFE: EthyleneTetraFluoroEthylene**
- **PFPE: PerfluoroPolyether**
- **PVDF: PolyVinyliDeneFluoride**
- **IXM PFSA Ionomer: Ion Exchange Membrane Perfluorosulfonic acid ionomer**