

5 January, 2023

Dear Competent Authorities of Denmark, Germany, Netherlands, Norway, Sweden,

Cc: Commissioner Breton, Commissioner Sinkevičius

We, the undersigned manufacturers and users of fluoropolymers encourage you to put forward a proposal for a per- and polyfluorinated alkyl substances REACH restriction in a way that differentiates between fluoropolymers and other PFAS groups, taking into account the different risk profiles and uses of each group separately. Recognition of the safe uses of fluoropolymers, as determined by prior rigorous evaluation and of their importance for many applications, should result in an exemption for fluoropolymers from any regulatory action under the REACH restriction.

Fluoropolymers have been categorized as PFAS¹ when based solely on their molecular structure. However, their environmental and toxicological profiles are distinctly different to the majority of other lower molecular weight PFAS:

- In general, the properties of many fluoropolymers (fluoroplastics and fluoroelastomers) are such that they do not display the environmental and toxicological profiles associated with some PFAS that could be considered of concern;
- Specifically, recent [studies](#)^{2&3} have shown that 16 unique families of commercially popular fluoropolymers meet the OECD Polymer of Low Concern criteria.⁴ They are chemically stable, non-toxic, non-bioavailable, non-water soluble and non-mobile materials and they are deemed to have no significant environmental and human health impacts.

Significant benefits are generated along the value chain via the use of fluoropolymers. They have unmatched chemical and temperature resistance and unique electrical performance. Their stability in combination with these properties, translates to unique, durable, lasting performance in applications and contributes to extension of product life. Additionally, the durability of fluoropolymers makes them ideal materials that enable the development of innovative technologies.

Assessments of alternative materials have shown that, when available, they frequently cannot meet the critical performance characteristics of fluoropolymer-based materials and lack the combinations and ranges of properties required for applications that sets the fluoropolymer-based materials apart.

A broad PFAS restriction which includes fluoropolymers could result in:

- Environmental, health and safety implications such as higher safety risks to employees, medical patients and consumers; and increased emissions from modes of transport due to technical regression;

¹ Reconciling Terminology of the Universe of Per- and Polyfluoroalkyl Substances: Recommendations and Practical Guidance Series on Risk Management No.61, 9 July 2021.

[https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/CBC/MONO\(2021\)25&docLanguage=En](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/CBC/MONO(2021)25&docLanguage=En)

² A critical review of the application of polymer of low concern regulatory criteria to fluoropolymers II: Fluoroplastics and Fluoroelastomers, Stephen H. Korzeniowski et al, 2022.

<https://setac.onlinelibrary.wiley.com/doi/full/10.1002/ieam.4646?af=R>

³ A critical review of the application of polymer of low concern and regulatory criteria to fluoropolymers, Barbara Henry et al, 2018. <https://setac.onlinelibrary.wiley.com/doi/full/10.1002/ieam.4035>

⁴ Data Analysis of the identification of correlations between polymer characteristics and potential for health or ecotoxicological concern, OECD 2009. <https://www.oecd.org/env/ehs/risk-assessment/42081261.pdf>

- Applications having lower durability and reliability resulting in higher maintenance and replacement frequency and increased waste;
- Negative impacts for emerging and growing technology markets such as energy storage, electrification, renewable energies and hydrogen;
- Constraints for products needing to meet stringent standards requirements (e.g. safety standards), in addition to the need to re-design products.

A PFAS REACH restriction proposal that differentiates between the diverse PFAS groups according to their respective risk profiles and properties and that acknowledges the safe use of fluoropolymers and their importance for applications should result in an exemption from any regulatory action under the REACH restriction.

