

PFAS PUBLIC CONSULTATION: BRIEF FOR FLUOROPOLYMERS USED IN VARIOUS SECTORS

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EuPC is the leading EU-level Trade Association, based in Brussels, representing European Plastics Converters. EuPC now totals about 51 European Plastics Converting national and European industry associations, it represents close to 50,000 companies, producing over 50 million tonnes of plastic products every year. The European plastics industry makes a significant contribution to the welfare in Europe by enabling innovation, creating quality of life to citizens and facilitating resource efficiency and climate protection. More than 1.6 million people are working in about 50,000 companies (mainly small and medium-sized companies in the converting sector) to create a turnover in excess of 280 billion € per year

Introduction

Following our initial submission, EuPC intends to comment on specific applications. Since those are very diverse, each application will be covered in a separate submission. This brief addresses all sectors, that have not been covered by other briefs yet. For detailed information, please refer to the individual submissions published by sector associations.

Use of fluoropolymers in different applications

Due to their unique chemical and physical properties, per- and polyfluoroalkyl substances (PFAS) have been widely used in various industrial and commercial applications.

Within the European plastic pipes and fittings sector, PFAS (fluoropolymers & fluoroelastomers) are used in sanitary piping systems, such as drinking water supply systems and heating systems, piping systems used for the conveyance of critical media in high-tech and chemical industries, for the conveyance of hydrocarbons, pipes for wastewater treatment and in swimming pool installations. This includes the following components, without limitations:

- Manufacturing equipment
- Gaskets, diaphragms, membranes, O-rings
- Measurement & control instruments
- Pipes, fittings & valves
- Compression sleeves

Furthermore, for the following applications the use of PVDF has been reported:

- Lamination foils used in the building industry, mainly window profiles and façades
- Artificial leather upholstery for automotive and non-automotive applications
- Industrial applications in the chemical industry
- Electronics and semiconductors manufacture

Toxicity

Fluoropolymers are very stable because of their intrinsic physicochemical properties. If lost in the environment, they are therefore currently considered as persistent. However, they do not display any hazardous property/property of concern referred to by the dossier submitter; i.e., bioaccumulation, mobility, long-range transport potential (LRTP), accumulation in plants, ecotoxicity, endocrine activity/endocrine disruption, effects on human health and concerns triggered by a combination of these properties.

Moreover, the fluoropolymers and fluoroelastomers **PTFE, FKM, FFKM, PVDF and ECTFE**, meet the OECD criteria for polymers of low concern [Henry, B.J., Carlin, J.P., Hammerschmidt, J.A., Buck, R.C., Buxton, L.W., Fiedler, H., Seed, J. and Hernandez, O. (2018), A critical review of the application of polymer of low concern and regulatory criteria to fluoropolymers. Integr Environ Assess Manag, 14: 316-334. <https://doi.org/10.1002/ieam.4035>; Korzeniowski, S. H. et al. A critical review of the application of polymer of low concern regulatory criteria to fluoropolymers II: Fluoroplastics and fluoroelastomers. 2022. <https://setac.onlinelibrary.wiley.com/doi/full/10.1002/ieam.4646>].

Regarding residual monomers in articles made from fluoropolymers, it is theoretically possible that small quantities of residual monomers can migrate from finished products. Although as regards PTFE, it has been demonstrated that TFE is not detectable in finished articles, manufactured using standard recommended processing conditions, at detection limits down to about 0.01 ppm wt/wt [Society of the Plastics Industry. 2005. SPIs guide to safe handling of fluoropolymers. Washington (DC)].

Fluoropolymers should be excluded from the scope of the restriction

Based on the non-toxic properties described above, fluoropolymers (including fluoroelastomers) should in our view be excluded from the scope of this restriction. We however provide additional information showing both its negligible emission and the disproportionate socio-economic impact that would be linked to its substitution.

Needed for an unlimited derogation of fluoropolymers

If fluoropolymers would remain under the scope of the current PFAS restriction, an unlimited derogation for fluoropolymers for complete piping systems (including components, control & measurement instruments, tools, welding machines) as well as for fluoropolymers used in industrial settings (manufacturing equipment in industrial plants) should be granted.

Note: the following sections numbers correspond to the sections numbers from ECHA's Comments for Annex XV restriction report for Per- and polyfluoroalkyl substances (PFAS).

1. Sector and sub-use

This comment is related to the following use: Plastic components containing fluoropolymers used in piping systems as well as other applications.

The following fluoropolymers and fluoroelastomers have been reported as used:

- PTFE
- FKM
- FFKM
- PVDF
- ECTFE

2. Emissions during the end-of-life phase

For information on the emissions during the end-of-life phase of fluoropolymers in piping systems, please see TEPPFA (The European Plastic Pipes & Fittings Association) 2nd submission.

3. Emissions from incineration

For information on the emissions during the end-of-life phase of fluoropolymers in piping systems, please see TEPPFA 2nd submission.

7. Derogation for reconsideration: Information on socio-economic impact and analysis of alternatives¹

7.1. Analysis of Alternatives

For information on the analysis of alternatives, please see TEPPFA 2nd submission, IVK Europe submission to the public consultation related to window profiles, lamination foil and artificial leather and EPPA Feedback Consultation on Restriction Annex XV Report for Per- and polyfluoroalkyl substances (PFAS).

7.2. Socio-economic impact

For information on the analysis of alternatives, please see TEPPFA 2nd submission, IVK Europe submission to the public consultation related to window profiles, lamination foil and artificial leather and EPPA Feedback Consultation on Restriction Annex XV Report for Per- and polyfluoroalkyl substances (PFAS).

Contact: [REDACTED]@eupc.org, [REDACTED]@eupc.org

¹ Due to EU competition compliance rules, detailed Analysis of Alternatives and other socio-economic considerations related to the uses or sub-uses mapped in the first TEPPFA submission have been separately submitted by TEPPFA members. References to those submissions can be found in the 2nd TEPPFA submission.