September 2023, Request for a time unlimited derogation or maximum exemption time of the PFAS Restriction

Executive summary:

- Afecor fully support the restriction of substances that have shown to pose a risk, in accordance with the legal framework
- Not all PFAS classes are associated with the same use case hazard profile and, therefore, a segmentation according to risk must be made in the restriction proposal instead of grouping together all PFASs
- Derogations are needed if:
    - No suitable alternatives exist
    - There is no risk to the environment and health expected due to the product/ application
- For our products:
    - The final appliance using afecor controls are employed in very controlled applications and are mounted and dismounted by professionals
    - Releases to the environment are not expected as production processes of fluoropolymers are technically designed to ensure prevention of dispersion of PFASs into the environment
    - Our members do not manufacture fluoropolymers-based components themselves
    - Fluoropolymers-based components are important for the key functions of our members' controls due to their unique properties
- Afecor requests:
    - Time unlimited derogation of gas- and liquid fuel controls or a
    - 13,5-year derogation for fluoropolymers

Introduction and aims

This comment is submitted in the name of **afecor, the European control manufacturer association**. Our members are all major companies which provide safety controls for residential and commercial applications and also for industrial processes (melting, burning or drying for metal, ceramics and food industries) using gaseous and liquid fuels and for the distribution of fuels, including renewable and low carbon gases, like Hydrogen, Biomethane, efuels, etc, which are essential for our society and the energy transition and decarbonization of European energy use in accordance with the Green Deal and the following implementation strategy (Fit for 55, REPowerEU, etc.).Further information on our association and the products (controls) we manufacture can be found on our website https://www.afecor.org/

Afecor is composed of 15 members, they cover more than 80% of their EU market.

To fulfil their responsibility of providing millions of private households, municipalities and industries with controls to be used with gaseous and liquid fuels, our members depend on a variety of **fluoropolymers-based technical components**, all of which with high requirements towards their mechanical, chemical and thermal properties. This does not only guarantee a functioning infrastructure with an enormous economic impact on the European society; this also provides the high level of safety for the European population.

Our members do not manufacture fluoropolymers-based components themselves, but use fluoropolymers-based components like O-rings or membranes, which fulfill crucial functionalities for the safety, performance and durability of several controls.

Our members depend on the current materials on the market and they are constantly optimizing their processes and products with the aim of complying with the REACH regulation and substituting proactively substances which may have a potential risk to health and environment.

The replacement of fluoropolymers-based components in controls, which are designed for a service life of decades, is a great challenge. There is a lack of alternative materials and corresponding revised approvals, and extensive safety tests would be necessary.

Special concern is given if the maintenance and servicing of the operating appliances / plants (e.g. industrial furnaces) is not possible due to the lack of spare parts following a potential PFAS restriction. Especially in the commercial building and industry sector the burners and boilers, where safety controls of our members are part of them, are designed for a long lifetime and the use of spare parts is common.

In industry, e.g. glass melting furnaces that are in operation 365 days / year, there are long-term maintenance contracts and these are dependent on a continuous supply of spare parts. Without these spare parts, the supply chain would be interrupted.

So not only households, hospitals and commercial buildings would be affected but also the whole industry which relies on combustion/ thermal processes.

A rapid/short-term substitution would entail enormous risks, not only for the security of energy supply but also for health and safety of the population (e.g. gas leaks, ground pollution from fuels leaks, methane emissions). Numerous approved and certified controls would quickly become unavailable once a material ban comes into force. For all these technologies alternative materials must be developed, tested, and certified. This would result in enormous efforts for industry and customers that would be disproportionate to the benefits.

Afecor Position

Afecor and its members are aware of the concerns related to the use of some PFASs and, as an organization committed to safety controls, afecor explicitly supports the initiative to restrict the use of any hazardous PFAS classes which are scientifically proven to be associated with risks to human health and environment**.**

It must however be noted that not all PFAS classes are associated with the same use case hazard profile and, therefore, a segmentation according to demonstrated risk must be made in the restriction proposal instead of grouping together all PFASs.

Afecor primarily supports an exemption of fluoropolymers by way of a time-unlimited derogation for the applications relevant for its members or at least the longest derogation period to perform the research, necessary to find and implement alternatives and do re-certifications that meet the high level of requirements of the laws, regulations and safety standards applicable to our industries, which would certainly require far more than 13,5 years.

The difficulty in meeting the proposed implementation dates arises from the scarcity of materials capable of meeting the demands of thermal, chemical, and mechanical

resilience in components intended for fuels applications. We have started the process of evaluating the replacement of current components containing fluoropolymers and that process requires re-design, testing, and approvals.

Under the assumption that suitable alternatives are available it will take time to replace fluoropolymer containing components in the controls and processes in a safe and responsible manner.

There are challenges for the replacement / substitution:

- Identifying and developing non-fluoropolymers-based components that can meet the safety and performance requirements
- Time for material qualifications / approvals
- Full product re-design
- Endurance testing
- Certification of the control
- Certification of the final appliance

The following Figure 1 shows a typical timeline that is required to replace current materials with a suitable alternative.

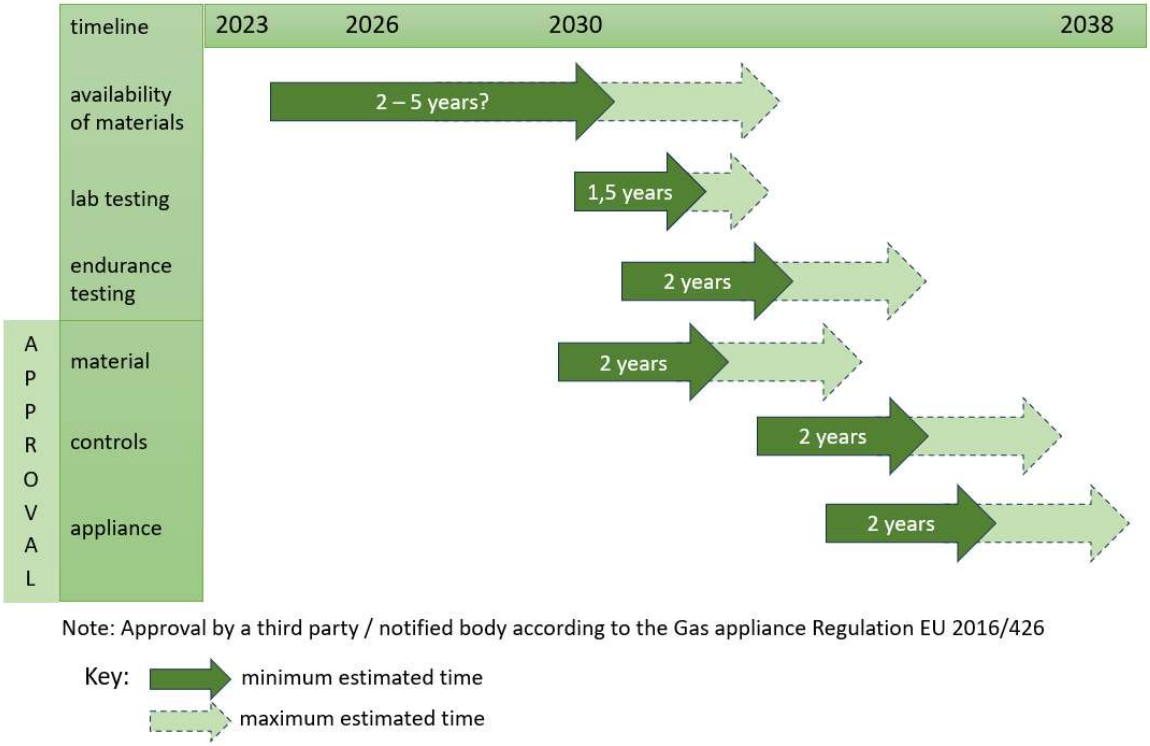

Figure 1: estimated time frame needed for the replacement of fluoropolymer containing components in afecors' controls and the release of certified controls with alternative materials (best case scenario)

Combustion technology is essential to provide heat for homes and energy for industrial processes. To ensure proper functionality of those applications there are several crucial parameters to control and measure.

For example, it is important to control the safe and efficient combustion process, for which e.g., pressure regulators, automatic shut-off valves and sensors are used, which contain fluoropolymers-based components. This equipment safely prevents the build-up of overpressures and fuel leakages which could result in an **ecological and**

economical damage in case there is a release of gas/liquid fuels into the environment.

Why should fluoropolymers be excluded from the restriction?

Fluoropolymers have very high molecular weight (usually > 10,000 Da) and show excellent thermal, chemical, photochemical, oxidative, hydrolytic and biological stability with low flammability, neutral electrical charge and resistance to degradation. No reactive groups are present in the structure of fluoropolymers. They are characterized by a carbon-only polymer backbone with F atoms directly attached to it, a unique feature in the chemical space. Fluoropolymers do not bioaccumulate, are not mobile and fulfil the **Polymer of Low Concern (PLC)** criteria.

Given:

- the known unique characteristics of fluoropolymers (e.g. combination of high thermal and chemical resistance, very low surface tension, wear resistance)
- the importance of fluoropolymer-based components in our controls like gaskets and O-rings, which are crucial elements for the safety, efficiency and durability of several controls
- the fact that there are no suitable alternatives available, members are facing major difficulties for substitution of fluoropolymers in their products

Fluoropolymers-based sealings are currently without alternatives in the above mentioned installations. The most common fluoropolymers are FKM, PTFE and FMVQ because of their highly favorable properties in regards of chemical and temperature resistance and mechanical properties. As of today, there are no alternative materials available that meet the required performance criteria and fulfil the high standards mandatory for these applications.

Fluoropolymers are of significant importance in a wide range of our safety controls where there are no immediately available alternatives, for instance sealings, meticulously designed for operation at elevated temperatures, up to 100°C. Likewise, controls like automatic shut-off valves, integral to safety, are subjected to millions of cycles (see EN 161, EN 298, EN 16898, ISO 23551-1 and –11) and demand a similarly high level of performances which is currently not available from components that are not made by fluoropolymers.

Researches are being conducted by material and component manufacturers for suitable alternatives, but these investigations will require a long time, together with all related European standards revisions (e.g., EN 549, EN 682).

The sealings also play a crucial role in the residential, commercial and industrial sectors in gas and liquid fuel heating to prevent leakages and thus accidents. A ban of fluoropolymers would entail huge efforts for the substitution of all parts containing fluoropolymers.

Considering the high number of use cases depending on fluoropolymers in today's industry, substitution of materials will take much more time than anticipated in the PFAS restriction proposal.

Furthermore, it is very important to highlight that releases to the environment are not expected as production processes of fluoropolymers are technically designed to ensure prevention of dispersion of PFASs into the environment. **The**

final appliance using afecor controls are employed in very controlled applications and are mounted and dismounted by professionals.

Summary and outlook

Applications in gas and liquid fuels sector and distribution rely on fluoropolymer-based components in non-dispersive uses. These applications have been proven to be ecological, energy efficient and operationally safe. To ensure the advantages of the afore mentioned applications without sacrificing environmental protection, energy consumption and operational safety goals, the use of fluoropolymers must remain possible until suitable alternatives are available.

Afecor and its members understand the concerns regarding the use of some classes of PFASs, and we see the general effort to restrict them in a positive light. However, we strongly believe that different judgement should be applied according to the specific hazard profiles of the different classes of PFASs instead of trying to address them as one broad group.

Fluoropolymers for example have high molecular weight and do not bioaccumulate, are not mobile and fulfil the Polymer of Low Concern (PLC) criteria. The non-dispersive use of fluoropolymers as polymers of low concern in the applications described above is associated with major societal benefits while leading to minimal (if any) releases into the environment or exposure to humans. **We request that fluoropolymers as a subgroup of PFAS should be handled differently due to their insignificant contribution to the problem the restriction proposal aims to address.**

Furthermore, the document intends to raise awareness among the ECHA Committees that the use of fluoropolymers by the companies represented by afecor provides a high benefit to society at an absolute minimum risk.

As representatives of professional applications with the highest quality requirements in critical areas of our society, we plead for an appropriate, balanced and risk-based regulatory approach that improves health, safety and environmental protection in the EU.

We therefore call for an **exemption of fluoropolymers for our applications by way of a time-unlimited derogation from the current restriction procedure under REACH or a time-limited derogation with sufficient duration for technological adaptation**, which will certainly exceed 13,5 years.

AFECOR supports the position papers of Orgalim and figawa where similar considerations are given.

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