

Ad-Hoc open BCR Meeting – PFAS Restriction - 28/02/2023 in FPS premises

1. Please fill in this questionnaire if you want to present a topic during the Ad-Hoc PFAS meeting :

The document should be send back before 13th March 2023 to:

██████████@health.fgov.be and Cc: ██████████@health.fgov.be

It will help us to frame the agenda and organize the discussion on this large restriction.

2. Your presentation should be shared with the Authorities (██████████@health.fgov.be and Cc: ██████████@health.fgov.be) no later than the 20th March 2023 . The presentation should be maximum 5 slides (the time allowed to each stakeholders will be 10 min max).

3. The final agenda will follow before the meeting including a Teams link to follow the discussion remotely. Registration is mandatory, not registered stakeholders will not be admitted in the room or online.

Questionnaire to send back to the BCR secretariat before the 13 March 2023
--

- Do you have remarks on the scope (definition of the PFAS ?)

The restriction proposed at this stage by the five Member States' regulators is overly broad and does not adopt a scientific approach based on risks to human health but rather uses persistence as the sole criterion.

Solvay views safety as an absolute priority and supports clear, science-based regulatory measures on PFAS. That is why our Group is implementing measures ahead of schedule: thanks to our investments in R&I we have already phased out fluorosurfactants from a significant part of our manufacturing processes and are working to complete this by 2026 at the latest. We also continuously invest in enhancing our containment technologies that enabled us to drastically reduce our emissions in air and water to a level that is known as "technical zero".

¹ OECD (2021), Reconciling Terminology of the Universe of Per- and Polyfluoroalkyl Substances: Recommendations and Practical Guidance, OECD Series on Risk Management, No. 61, OECD Publishing, Paris

PFAS are very different materials and they should therefore not be considered as one group. In this respect fluoropolymers produced without fluorosurfactants and perfluoropolyethers should be exempted from the proposed restriction.

Fluoropolymers and perfluoropolyethers do not pose risks to human health, and have a favorable (eco)toxicological profile. These are high-performance materials, unique in terms of properties and durability, and they contribute to a more sustainable society, as they are critical components in electric vehicle batteries, hybrid engines, hydrogen applications, renewable energy installations, semiconductor manufacturing, medical devices, and more.

A restriction of fluoropolymers and perfluoropolyethers would also open the door for regrettable substitution to alternatives that do not perform at the same specification, may be potentially hazardous and as such would mean applications are unable to meet stringent safety standards. During the REACH restrictions process, alternatives must be assessed for their risks to human health and the environment, their availability, but also their technical and economic feasibility.

In the OECD report¹ it is clearly stated that: *"As PFASs are a chemical class with diverse molecular structures and physical, chemical and biological properties, it is highly recommended that such diversity be properly recognized and communicated in a clear, specific and descriptive manner. The term "PFASs" is a broad, general, non-specific term, which does not inform whether a compound is harmful or not, but only communicates that the compounds under this term share the same trait for having a fully fluorinated methyl or methylene carbon moiety. In particular, Chapter 3 provides practical guidance to governments and other stakeholders on how to use the PFAS terminology, starting from the distinction between the general definition and user-specific working scopes of PFASs."*

The PFASs of main concerns found as pollutants in the environment are non-polymeric PFASs that can be described from the subclass defined in the OECD report as "PFAAs", generally used as fluorinated surfactants, additives in the aqueous formulations for the surface treatments and fire extinguishing foams.

The extrapolation of their specific risk to human health to fluorinated polymers is not appropriate, neither from technical nor a risk assessment stand point.

- Please indicate your sector and describe briefly the Restriction impact/influence on your sector .

Solvay is a global leader in the manufacture of Materials, Chemicals and Solutions, bringing advancements in planes, cars, batteries, smart and medical devices, water and

¹ OECD (2021), Reconciling Terminology of the Universe of Per- and Polyfluoroalkyl Substances: Recommendations and Practical Guidance, OECD Series on Risk Management, No. 61, OECD Publishing, Paris

air treatment, to help product manufacturers in these fields to solve critical industrial, social and environmental challenges in their respective sectors.
Solvay's products supply many value chains that would be severely impacted by a large ban on fluorinated materials.

- Do you have specific remarks on the restriction text and its exemptions.
 - ☐ Are you concerned by an exemption?

It is the "catch all" approach taken by the competent authorities of the 5 Member States, as the restriction proposal tries to regulate all 9,000 plus PFAS as one, without respect to REACH art 68.

Such a restriction would jeopardize key value chains and applications critical for a sustainable society such as batteries for EV, green hydrogen membranes, energy transition and semiconductors. It would also severely undermine EU competitiveness. The time foreseen for transitioning is definitely not enough as alternatives are not existing at the moment, and it would take time - if ever found - to scale and industrialize. Moreover some derogations for key applications such as batteries for EV are completely absent from the text.

- ☐ If yes, is the timing foreseen reasonable for your sector?

No. The current restriction is too broad in scope and de facto bans all substances such as Fluoropolymers, Perfluoropolyethers (PFPE) that have unique properties and for which viable alternatives with the same safety performances do not exist. Technological developments would require time more than the time frame indicated in the restriction proposal. Below a more detailed assessment of why we see this challenging given our long standing R&D experience in the field.

- ☐ Have you conducted an alternative assessment that indicates that the proposed timing is reasonable or not?

As a manufacturer of these key materials, we have a long term and strong expertise in alternative assessment both in R&D and in production. Based on this, we can assert that the current timing will open the door for regrettable substitution to alternatives that do not perform at the same specification, and that may be potentially hazardous and as such would mean applications would be potentially unable to meet stringent safety standards.

¹ OECD (2021), Reconciling Terminology of the Universe of Per- and Polyfluoroalkyl Substances: Recommendations and Practical Guidance, OECD Series on Risk Management, No. 61, OECD Publishing, Paris

Guided by our sustainability roadmap Solvay One Planet, we have quadrupled our investment in R&I since 2019 to invent a next generation, more sustainable range of very specialized fluoropolymers through a new technology that is being rolled out across these product lines. This technology enabled us to phase out the use of fluorosurfactants - the PFAS substances under the most intense spotlight - in Europe (Italy) by 2026.

For market segments such as: Electronics and Semicon, Communication, Medical Devices, Transportation, Military, Energy production and storage and CPI, the proposed timing is more than challenging.

In some market segments, such as the semicon industry for example, there is currently no valuable alternative solution to guarantee business continuity of the technology developed in the last 25 years thanks to the specific properties of fluorinated materials. No other materials have been identified to be able to ensure the requirements needed in the semiconductor manufacturing processes such as inertness, purity, wide range of temperature stability, non-flammability, and long service life (> 25 years). This means that the semicon sector would need a huge technological leap in order not to go back to the days of transistors.

Usually these changes take time and it is not certain that a solution will be found within the allotted time. Moreover, the proposed timing for semicon industry would result in a loss of competitiveness of the European semicon industry compared to the rest of the world.

The same applies to all the other industrial segments listed above.

Fluorinated materials guarantee a combination of unique performances such as: thermal resistance both for high and very low temperatures, chemical inertness, dielectricity and electro-stability, or a very good conductivity, good processability, plasma and radioactive resistance, bio-compatible, non toxicity and non flammability. They are used in applications where all these properties are needed and essential, considering also their high cost. Currently there are not drop-in solution to replace them, so two scenarios for alternative solutions can be envisaged:

1. some alternative material can be found sacrificing some performances that can lead to frequent maintenances, cost increase, impact on safety and possible exposure to hazardness of the alternative substance
2. no possible alternatives are suitable, so a technological leap is required with a strong impact on the value chain, exposing European companies to reduced competitiveness. Any technological lead should guarantee adequate business continuity and safeguard key sectors where no alternative is met

¹ OECD (2021), Reconciling Terminology of the Universe of Per- and Polyfluoroalkyl Substances: Recommendations and Practical Guidance, OECD Series on Risk Management, No. 61, OECD Publishing, Paris