

Introduction:

PFAS are perfluorinated and polyfluorinated alkyl substances that are used in numerous industrial processes and products due to their special technical properties.

On 13 January 2023, the national authorities of Denmark, Germany, the Netherlands, Norway and Sweden submitted a proposal to ECHA to restrict PFAS under REACH, the European Union (EU) chemicals regulation. The restriction proposal was published after the five authorities identified risks in the manufacture, placing on the market and use of PFAS that are not adequately controlled and are to be addressed across the EU and the European Economic Area. On 07 February 2023 a restriction proposal was published. On March 22nd 2023 has the official six-month consultation period started which will end on September 25th 2023.

Restriction proposal:

The restriction includes two different scenarios. In the first scenario, a complete ban of all PFAS substances and PFAS-containing products without exception should take place 18 months after the restriction comes into force. In scenario two, a ban is planned with specific exceptions that are unlimited in time or allow a transition period of 5 or 12 years in addition to the 18 months after entry into force. Both scenarios are currently considered proportionate, with those submitting the restriction proposal seeing option 2 as the more balanced option, as it allows for the search for alternatives and the smoothest possible exchange.

Proposal two and its effects are to be considered in more detail below:

Concern for drug manufacturers:

Scenario two involves an indefinite exemption for active substances in pharmaceutical products (API, Active Pharmaceutical Ingredient). Other substances used in drug manufacture (ingredients, excipients) and (manufacturing) processes are not excluded from the restriction proposal:

1. APIs without EU approval, this concerns e.g., PFAS-API for worldwide export.
2. Chemical raw materials, synthesis starting materials, catalysts as well as e.g., intermediate products and other substances and auxiliary materials (e.g., solvents, hoses, filters, etc.) required for the synthesis for API production.
3. The API under development. From a production volume of 1 ton per year, the exemption for scientific research and development no longer applies, and both production and further development are no longer possible in the EU.

4. Other "non-active" ingredients in medicinal products such as additives/excipients and propellants (e.g., for metered dose inhalers) as well as substances and auxiliary materials required for their manufacture (e.g., solvents, tubes, filters, etc.).
5. Primary packaging and sterile barrier systems, even if they are part of the marketing authorization.
6. Products containing PFAS, such as seals, valves, hoses, filters and membranes, which are required in production plants for the manufacture of drugs and for their analysis, among other things.

Concern for medical device manufacturers:

Scenario two includes an exemption for fluoropolymers or perfluoropolyethers in implantable medical devices (e.g. acetabular cups made of TEFLON). This exemption does not apply to meshes, wound care products, tubing and catheters. All other medical devices, substances used in production and (manufacturing) processes are not excluded from the restriction proposal:

1. **PFAS-containing ingredients in medical devices**, some examples below:
 - a) Material medical devices (example: ocular endotamponades (perfluorodecalin and perfluorooctane), auxiliary substances for sperm transfer in in vitro fertilization (perfluorooctane)), these contribute to the physical effect of the medical devices in their entirety.
 - b) Medical devices (e.g., ventilators, X-ray machines) containing PFAS polymers or polymers with PFAS coatings (e.g., tubes, catheters, films, membranes or containers for 3D printing).
2. All substances that are required for the **production of the ingredients/components of a medical device**, such as chemical raw materials, catalysts as well as e.g., intermediate products and other substances and aids required for synthesis (e.g., solvents, tubes, filters, foils, etc.).
3. **Medical devices under development.** (including the above mentioned exceptions).
4. **Primary packaging and sterile barrier systems** for medical devices. These are decisive for the shelf life of the product and are part of the technical documentation of the medical device.
5. Products containing PFAS such as seals, valves, hoses and membranes used for **Manufacturing processes including associated production facilities and analyzes for medical devices** are required.

Consequences of the restriction proposal:

The overriding goal of all regulations that are made must be to ensure that the population is supplied with medicines and medical devices. This goal must not be lost sight of, particularly

in view of the ever-increasing problem of supply bottlenecks (good practices for industry for the prevention of human medicinal product shortages). The restriction proposal also refers to the safety of supplying the population with medicinal products in the justification on page 72 for the exception for active substances (API): "Human MP are important for the protection of humans from diseases."

In scenario two of the restriction proposal, there is an indefinite exemption for active substances in pharmaceutical products (API) and an exemption for fluoropolymers or perfluoropolyethers in implantable medical devices, this does not apply to meshes, wound treatment products, tubing and catheters.

All other substances as well as processes in and in the manufacture of pharmaceuticals and medical devices, as listed in detail above, are affected by the restriction. This will have far-reaching effects both in the area of pharmaceuticals and medical devices, e.g., many medical devices (e.g. ocular endotamponades, auxiliary substances for sperm transfer in IVF) may then no longer be available on the market without any alternative. This also applies to other medical devices (e.g., ventilators, X-ray machines) that contain PFAS polymers or polymers with PFAS coatings (e.g., tubes, catheters, foils or containers for 3D printing). Since all substances required for the manufacture of ingredients/components for a medical device, such as chemical raw materials, catalysts as well as e.g., intermediate products and other substances required for synthesis (e.g., hoses, filters, foils, etc.), are also not exempt from the restriction, massive problems will also arise here. This can also be applied to e.g., PFAS-containing seals, valves, hoses and membranes, which are necessary for the manufacturing process for medical products.

These problems also exist for the manufacture of pharmaceuticals, because despite an unlimited exception for active substances in pharmaceutical products (API), the (manufacturing) processes (see above: affected pharmaceutical manufacturers) and the required substances such as the chemical raw materials, Catalysts as well as e.g., intermediates and other substances required for the synthesis of API production are not excluded.

General requirements:

A **clear legal structure** without multiple regulations is absolutely necessary. Drugs and medical devices that have market approval (API approval, market approval, MDR/IVDR, etc.) and restricted or regulated substances (F-Gas, specific reach restrictions) should generally be excluded from the restriction proposal in order to avoid regulatory conflicts.

Drug requirements:

In order to ensure that the population is supplied with pharmaceuticals and to achieve the goal that pharmaceutical production can remain in Europe or even be expanded, there are other exceptions in addition to the unlimited exception for active substances in pharmaceutical products (API, Active Pharmaceutical Ingredient). specific exceptions necessary (raw materials/intermediates, reagents, materials such as PVDF filters, PFAS-coated

plant parts for manufacturing). Transition periods must not only take technical development and substitution into account, but must also take into account the duration/time required for requalification and revalidation, the implementation of stability studies, regulatory changes (variations) or new approvals (up to 10 years).

Therefore, FIDE is calling for a complete exemption for the entire finished medicinal product, including production. This includes:

1. APIs without EU approval.

2. Chemical raw materials, starting materials for synthesis, catalysts as well as e.g., intermediates and other substances and auxiliaries required for synthesis (e.g., solvents, hoses, filters, etc.) for **API production**.

3. APIs under development.

4. Other "**non-active**" ingredients in medicinal products such as additives/excipients and propellants, as well as substances and auxiliaries **required for their manufacture** (e.g., solvents, tubes, filters, etc.).

5. **Primary packaging and sterile barrier systems**, even if they are part of the marketing authorization.

6. Products containing PFAS, such as seals, valves, hoses, filters and membranes, which are required in production plants **for the manufacture of drugs** and for their **analysis**, among other things.

In addition to a complete exemption, an exemption would be subject to conditions (see ANNEX XV RESTRICTION REPORT - Per- and polyfluoroalkyl substances (PFASs), Proposed restriction - Annex XVII entry PFASs (Restriction Option 2), Point 8), such as the creation and regular maintenance of site management plans conceivable.

If a complete exception or a complete exception under the conditions of the required points 1. - 6. is not possible, we call for an additional transitional period of 10 years to the maximum transitional period of 13.5 years granted in the restriction proposal, i.e., a total of 23.5 years for the above points 1. - 6.

An extension of the proposed transition periods is necessary, since not only the technical development and substitution may be taken into account, but additional periods for requalification, revalidation, implementation of stability studies, regulatory changes or new approval are required.

Medical device requirements:

In order to ensure that the population is supplied with medical devices, other specific exceptions are necessary in addition to the unlimited exception for fluoropolymers or perfluoropolyethers in implantable medical devices (PFAS-containing ingredients, e.g. raw

materials/intermediate products, reagents and materials such as PVDF filters, PFAS-coated Plant parts for production): Transitional periods must not only take technical development and substitution into account, but must also take into account the duration/time required for requalification and revalidation, the implementation of stability studies, regulatory changes or recertification.

Therefore, FIDE calls for a complete exemption for all medical devices including their manufacture. This includes:

1. All medical devices.

2. All substances that are required for **the production of the ingredients/components of a medical device**, Intermediates and other substances (raw material, catalysts) as well as auxiliaries required for synthesis (e.g., solvents, hoses, filters, etc.)

3. Medical devices under development.

4. **Primary packaging and sterile barrier systems** of medical devices, even if they are part of the technical documentation.

5. Products containing PFAS such as seals, valves, hoses and membranes used for **Manufacturing processes including associated production facilities and analyzes for medical devices** are required.

In addition to a complete exemption, an exemption would be subject to conditions (see ANNEX XV RESTRICTION REPORT - Per- and polyfluoroalkyl substances (PFASs), Proposed restriction - Annex XVII entry PFASs (Restriction Option 2), Point 8), such as the creation and regular maintenance of site management plans conceivable.

If a complete exception or a complete exception under the conditions of the required points 1. - 5. is not possible, we call for an additional transitional period of 10 years to the maximum transitional period of 13.5 years granted in the restriction proposal, i.e., a total of 23.5 years for the above points 1. - 5.

An extension of the proposed transition periods is necessary, since not only the technical development and substitution may be taken into account, but additional periods for requalification, revalidation, implementation of stability studies, preclinical and possibly clinical studies and their evaluation, regulatory changes or new certifications are required.