

Attachment 1: Non-confidential attachment to the Contribution by Wacker Chemie AG to the Public Consultation on the Restriction Proposal of PFAS under REACH

Regarding consultation form para 6, Missing uses

Generally, the use of polymeric PFAS substances (fluoropolymers) in chemical plant engineering (gaskets, pipe and reactor liners, valves, pumps and other devices) is missing.

Should the PFAS restriction come into force in the form envisaged in the restriction proposal, the impact on the European chemical industry will be so devastating that much industrial production will cease because chemical processes will no longer be feasible. Wacker Chemie AG will be forced to shut down most of its European production sites.

Comments to the sub-paragraphs:

6a) Annual tonnage of Emissions:

From today's perspective, the use of fluoropolymers in chemical plants does not lead to emissions into the environment. The vast majority of fluoropolymers meet the internationally recognized OECD criteria of Polymers of Low Concern (PLC). Fluoropolymers have been shown to be chemically and biologically stable, non-bio accumulative, non-bioavailable and non-toxic during their intended use phase. During the use phase there are no emissions from fluoropolymer devices under intended conditions of use. To the opposite, fluoropolymer gaskets are state of the art and effectively keep diffuse emissions from valves, pumps, and flanges as low as possible. Furthermore, from the point of view of a downstream user, the use of fluoropolymers is the only way to reliably avoid corrosion of the plants, equipment, etc. over long periods and thus to prevent accidental leakages with substance release to the environment.

6b) Key functionality:

Chemical resistance and stability/durability against corrosive and reactive chemicals like e. g. strong acids (hydrofluoric acid, nitric acid, hydrochloric acid as well as gaseous hydrogen chloride and hydrogen fluoride) or flammable and toxic chemicals under high pressure (vinylacetate/vinylchloride and ethylene); these media are crucial in chemical processes and polysilicon/semiconductor production. Fluoropolymers provide mechanical stability/durability and ensure safe process conditions at the same time.

6c) No. of companies affected:

Mostly every company in the chemical industry will be affected at various degree

6d) Availability, technical and economic feasibility, hazards and risks of alternatives:

There is no alternative material with comparable characteristics available to substitute fluoropolymers. Potential alternatives like tantalum or enamel coatings show limited durability compared to fluoropolymers and do not show all the outstanding properties of fluoropolymers at the same time. Furthermore, the leak-tightness of gaskets for pipe connectors, valves and pumps made from alternative materials will be less and thus diffuse emissions from these devices will increase when PTFE gaskets would be banned.

Another issue of qualification of alternative materials is the compliance with very high technical requirements of current legislation like German TA Luft which cannot be met with other gasket materials than fluoropolymers as to the state of the art.

Aspect of compliance with official plant operation permits: Modifications to existing plants and new plants cannot be approved and operated without the use of fluoropolymers, with a view to protecting the environment from gaseous and liquid leakage. There is a lack of evidence

for the legally required leak tightness, especially for long-term considerations of alternative materials. As long as no substances for substitution have been found or compliance with the requirements for leakage etc. has been proven the use of materials containing PFAS cannot be dispensed with for reasons of environmental protection.

6e) R&D processes:

As downstream users we have no information on R&D projects to find alternatives to fluoropolymers. However, for many of the aggressive media processed in chemical plants and in the semiconductor production the likelihood of success is expected to be very low. Furthermore, the qualification processes starting with basic research of alternative materials, continued with several technical application test series, long-term pertinency tests and ending with approval routines demand very long periods provided that a suitable alternative can be found.

6f) Time and costs for feasible substitution:

Substitution – as far as it is possible at all – will substantially impact the chemical industry and it will demand very long transition periods to re-equip all plants concerned. About 90% of WACKER's plants in Europe will be impacted. The effort to entirely re-equip a plant comes close to a construction of a new plant.

6g) Socio-economic impact if substitution not feasible:

See confidential attachment in Section V.