

ESA Position Statement regarding PFAS

Members of the ESA strive to minimise the emissions from process machinery by providing state-of-the-art sealing materials. In addition, the emissions and contamination during the production of the sealing materials and from the materials itself are kept as low as possible. A critical and widely used component for the use in sealing products are fluoropolymers including PTFE dispersions and powders. Their main advantage is the high chemical resistance and very good sealability. This type of seal is helping the industry to reduce leakage and therefore keep environmental pollution to a minimum.

Our members purchase these components from reputable sources which claim that their products are PFOA free. Analysis of end products including PTFE yarns, braided PTFE packings and PTFE gaskets has shown that the levels of PFOA in the final product is below the REACH threshold of 25 ppb. For PFOS the level in the finished product is far below 0,1 % by weight. Regarding the other chemicals in the PFAS group there are no specific values available but testing for other substances is ongoing. However, in most cases other related PFAS chemicals should have been removed from the finished sealing product after processing.

Explanatory Notes

Perfluoroalkylated substances (PFAS) is the collective name for a very large group of fluorinated compounds (more than 4700 chemicals), which consist of neutral and anionic surface-active compounds with high thermal, chemical and biological inertness. They can be grouped in different categories and classes, Fig.1 [1]. Whereas fluoropolymers like PTFE are substances of low concern perfluoroalkyl substances, to which perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) belong are in the focus of legislators. Both PFOS and PFOA have been determined by regulators to be persistent, bioaccumulative, and toxic (PBT) substances. PFOS, PFOA and other perfluorinated organic compounds (PFCs) have been widely used in industrial and consumer applications including stain- and water-resistant coatings for fabrics and carpets, oil-resistant coatings for paper products approved for food contact, fire-fighting foams, mining and oil well surfactants, floor polishes, and insecticide formulations.

PFOA is already restricted by REACH as a constituent of other substances, as a component of mixtures or articles with the following thresholds:

<https://echa.europa.eu/documents/10162/7a04b630-e00a-a9c5-bc85-0de793f6643c>

- PFOA or its salts: < 25 ppb;
- One or a combination of PFOA-related substances: < 1000 ppb.

The restriction conditions for PFOS are set by Commission Regulation (EU) No. 757/2010 amending the Annex I of the Regulation (EC) No. 850/2004 on POPs. For semi-finished products or articles, or parts the concentration of PFOS should be < 0.1 % by weight calculated with reference to the mass of structurally or micro-structurally distinct parts that contain PFOS (<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:223:0029:0036:EN:PDF>).

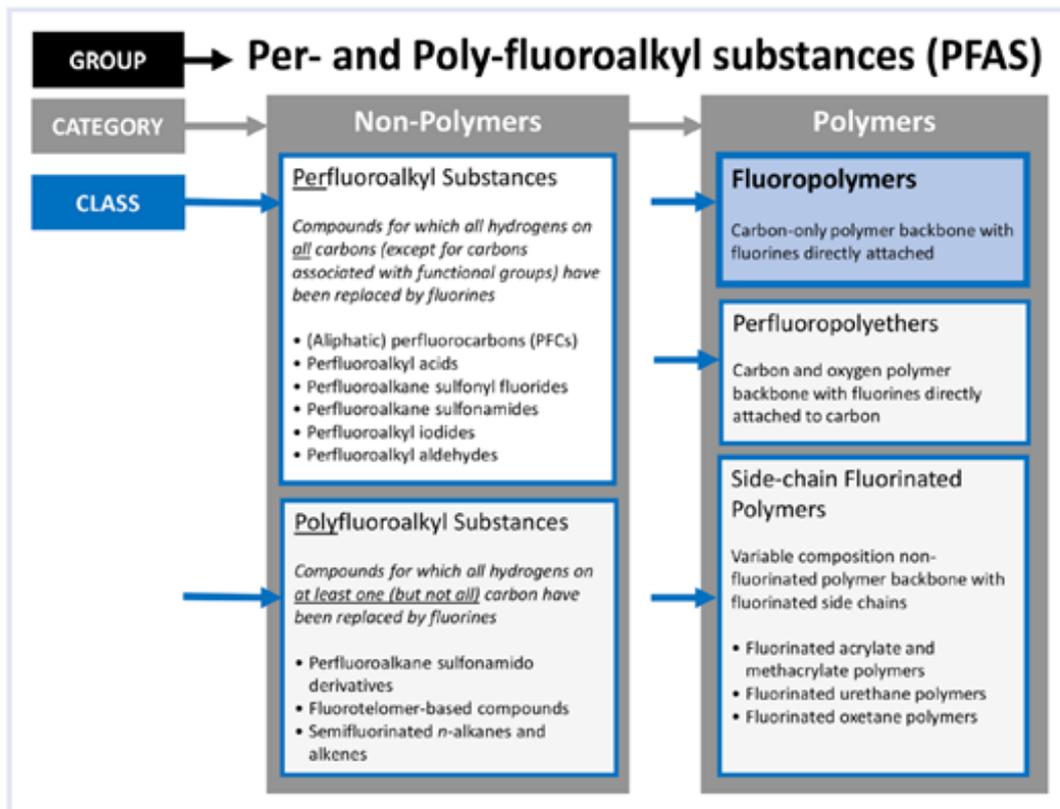


Figure 1. Per- and polyfluoroalkyl substances (PFAS)

The provisional agreement by the European Parliament and the Council in December 2019 on the recast of the Drinking Water Directive includes a limit of 0.5 µg/l for all PFAS. This is in line with a grouping approach for all PFAS (https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CONSIL:ST_6060_2020_REV_1&from=EN).

In addition the authorities of five EU countries (Germany, the Netherlands, Norway, Sweden and Denmark) have agreed to prepare a joint REACH restriction proposal to limit the risks to the environment and human health from the manufacture and use of a wide range of PFAS (<https://echa.europa.eu/-/five-european-states-call-for-evidence-on-broad-pfas-restriction>).

The call for evidence is open until the end of July 2020. Companies producing or using PFAS, selling mixtures or products containing these substances and those using alternatives to PFAS are especially invited to take part. Scientists and NGOs are also encouraged to participate. The information received through the call for evidence will be used by the five countries to refine the scope of the proposal and analyse the effectiveness and socio-economic impact of different restriction options.

The national authorities will prepare the restriction proposal (Annex XV dossier) over the coming two years. Once the proposal is submitted, it will move to ECHA's scientific committees for opinion making. Decisions on REACH restrictions are made in the European Commission by the EU Member States and scrutinised by the European Parliament and Council. The possible date of entry into force of this restriction is expected in 2025.

[1] Barbara J Henry, Joseph P Carlin, Jon A Hammerschmidt, Robert C Buck, L William Buxton, Heidelore Fiedler, Jennifer Seed, and Oscar Hernandez - A Critical Review of the Application of Polymer of Low Concern and Regulatory Criteria to Fluoropolymers; Integrated Environmental Assessment and Management — Volume 14, Number 3—pp. 316–334