

Per- and polyfluoroalkyl substances (PFAS)

PFAS are substances containing fluorine attached to carbon (not all substances containing a carbon-fluorine bond are considered PFAS – more strict definitions are available, and authorities in various countries may have different definitions). The term PFAS covers small molecules as well as large ones (polymers). M Seals A/S offer the following types of plastics and rubbers (polymers) that are considered PFAS:

PLASTICS

PTFE	Polytetrafluoroethylene
PCTFE	Polychlorotrifluoroethylene
PVDF	Polyvinylidenedifluoride
FEP	Fluorinated ethylene propylene
PFA	Perfluoroalkoxy alkane

RUBBER

FEPM	Tetrafluoroethylene-propylene copolymer (TFE/P, AFLAS®)
FPM/FKM	Fluoro rubber (Viton®)
FFPM/FFKM	Perfluoro rubber (Kalrez®)
FVMQ	Fluorosilicone rubber

The majority of PFAS are very persistent in the environment and some of them are harmful to humans and the environment. Due to their persistence and hazardous properties, users (companies as well as individuals) of products containing PFAS and authorities are increasingly concerned. This has led to (proposed) restrictions/bans around the world and obligations to report production and import of PFAS. Polymeric PFAS like plastics and rubber are not considered hazardous, which is why the current bans/restrictions concern small molecules. Polymeric PFAS are, however, very persistent in the environment.

In the EU, a number of PFAS are currently restricted/prohibited by a number of regulations. Three PFAS (PFOA, PFOS, PFHxS and substances related to them) are prohibited/restricted under the EU regulation on persistent organic pollutants (EU/2019/1021). The production, import, and use of several fluorinated greenhouse gases are restricted (EU/202/573). A few PFAS are restricted under Annex XVII of the REACH regulation. This includes entries 68 and 79 as well as some PFAS falling under the general categories of carcinogens and reproductive toxicants. Common for these restricted substances are that they are small molecules. Currently, there are no restrictions on polymeric PFAS.

Germany, the Netherlands, Norway, Sweden, and Denmark in 2023 proposed an EU-wide restriction on all PFAS. The restriction proposal is currently being reviewed by two committees under the European Chemicals Agency. Their opinions are expected to be finalized in the spring of 2026, after which a consultation period will follow. The European Chemicals Agency plans to deliver the opinions to the European Commission in 2026. In the updated proposal, the restriction for sealing applications is proposed to become effective 13.5 after entry into force of the restriction. This means that the restriction will become effective in 2040 at the earliest. More information on the restriction proposal and the process is available here: <https://echa.europa.eu/hot-topics/perfluoroalkyl-chemicals-pfas>.

In the USA under TSCA section 8(a)(7), any person manufacturing or importing PFAS must report this to the Environmental Protection Agency. Some states in the USA have adopted their own legislation on PFAS. Likewise, in Canada any person manufacturing or importing PFAS must report this in accordance with the Canadian Environmental Protection Act (this requirement only pertains to a select group of PFAS and not all PFAS).

At M Seals A/S we closely follow the regulatory development. We work closely together with our suppliers to ensure that all regulations and restrictions are complied with.

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