

General comments

Aalberts Surface Technologies uses PFAS and especially fluoropolymers as ingredients and components of different types of thin films. Either these are independent coatings or they are upgrades for other basic coating systems, such as electroless nickel plating and anodization.

The resulting thin films do have thickness of less than 100 μm . Nevertheless, the properties of the coated parts show similar surface properties and performance as a massive fluoropolymer part. So these thin films are a very canny, ecologic and enonomic use of fluoropolymers and, compared to massive polymer parts, do save huge amount of PFAS. Moreover, this use of fluoropolymers saves resources by replacing more energy-intensive and more expensive alternatives such as stainless steel.

The fluoropolymer components are fully integrated in a solid matrix. There is no intentional and no predictable release of PFAS. In the Annex XV report on microplastics, such type of micropowder polymers is considered to be generally safe, so this consideration should be applied to the present report, too.

We would like to give some details about the background and the use of our thin films in different fields of application. We are convinced that a professional and responsible use of PFAS and in particular fluoropolymers in this field is not a risk for future generations and is a reasonable alternative to more energy- or resource-consuming technologies. Accordingly, this type of use should not get restricted.

1. Sectors and (sub-) uses

Following the scheme of Table 9 in the Annex XV restriction report, the following sectors and subuses are affected:

- Metal plating and manufacture of metal products
 - Decorative plating with chrome, plating on plastics and plating with metals other than chrome
 - Manufacture of metal products not addressed elsewhere
- Lubricants
 - Sector as a whole
- Petroleum and mining
 - Fluoropolymer applications

6. Missing uses – Analysis and socio-economic analysis

In Table A.1 in Annex A the chemical industry is mentioned as a field of PFAS application. However, this sector has not been researched in detail and accordingly is not included in Annex E as an independent application.

However, at several points in Annex A the application of PFAS in essential chemical processing steps and of fluoropolymers in processing equipment is mentioned in subuses of other sectors, e. g.

- tyre production in the Transport sector (page 98)
- Lubrication of various kinds of machinery and devices (pumps, valves, fittings, reactors etc.; table A.59, page 141)
- Other sectors (Table A.76, page 183)

Furthermore, the general importance of chemical processing equipment for almost any type of process industry is mentioned on page 188 of Annex A.

For this reason, in our opinion the chemical industry, including correlated industries like acid etching, electroplating, glass industry and others, where harsh and aggressive process conditions may occur, should be part of a separate derogation. Occurring conditions, uses and applications of fluoropolymers are well described for the sector Petroleum and mining (Annex A A.3.16.1.3; Annex E E.2.15.2.1). Many of the aspects regarding required technical properties are almost identical to the chemical industry, and the same is also true for the applicability of alternative materials (Table E.159). The occurring conditions in chemical processes may be even more extreme (higher or far lower temperature, pH, oxidizing media etc.).

For this reason, we suggest a derogation for the application of fluoropolymers in the chemical industry until 13.5 years after EiF, similar to derogation 6.f in the Annex Restriction Report for the Petroleum and mining industry.