

## FEC Position Paper related to the consultation on PFAS

The Federation of European Manufacturers of Cookware and cutlery (FEC) welcomes the opportunity given by representatives from Sweden, Norway, Denmark, Germany and the Netherlands to express our opinion and give feedback on the wide topic of per- and poly-fluorinated alky substances (PFAS).

FEC is the European professional associative body representing European companies dealing with cookware, bakeware, cutlery and other products used for preparing and serving food. It promotes co-operation between members and represents their common interests before international authorities including European authorities.

Fluoropolymers should be clearly distinguished from PFAS of concern. FEC feels that the broad definition given to PFAS today unjustly merges fluoropolymers with fluorinated chemicals, each having very different properties and hazards. Fluoropolymers do not exhibit the same properties as non-polymeric PFAS of concern. More specifically, fluoropolymers are not mobile; they are not bio-accumulative and not toxic as is evidenced in the case of polytetrafluoroethylene (PTFE) below. Therefore, fluoropolymers should not be considered as PFAS of concern on the basis of persistence only.

IARC (the International Agency for Research on Cancer), in its 1987 monograph, ranked PTFE as *not classifiable as to its carcinogenicity to humans (Group 3)*<sup>1</sup> and noted that “*no toxicity was observed in male and female rats fed PTFE for 90 days, even with a level of 25% in the diet. The polymer has not been found to produce skin irritation or to act as an allergenic agent*”.<sup>2</sup>

FEC strongly believes that fluoropolymers and coatings derived from them as used in non-stick articles should not be included in any future REACH restriction on PFAS. Their use in this sector is essential for a number of reasons that will be mentioned below.

Fluoropolymers have been used as the basis for non-stick coatings since the early 1950s. Their exceptional thermal resistance properties, chemical inertness and surface properties have made them the material of choice for food contact articles. Through their barrier properties, fluoropolymer coatings limit the unintended release of potentially harmful substances from the metal substrate they cover. This is especially true and important when cooking acidic food and when using aluminium substrates that are, by far, one of the most commonly used substrates for kitchenware along with stainless steel.

The chemical inertness of the fluoropolymer translates into high durability for the coated article. Coating suppliers and article manufacturers have improved the durability of fluoropolymer based coatings over the years; meaning that consumers can use the same article for much longer. Where available, household recycling programs reduce the environmental footprint of cookware articles, including articles made with fluoropolymer coatings.

Food contact articles using fluoropolymer coatings are primarily cookware, ovenware, bakeware, and small appliances. The thermal resistance, chemical resistance, and surface properties of fluoropolymers impart unparalleled performance to these articles for the benefit of the end user.

The thermal conductivity of aluminium is far superior to alternate metals in use today.<sup>3</sup> As such, non-stick coated aluminium cookware consumes less energy during manufacturing as well as less energy in use.

<sup>1</sup> IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Supplement 7, 70 (1987)

<sup>2</sup> IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Volume 19, 288 (1979)

<sup>3</sup> [https://www.engineeringtoolbox.com/thermal-conductivity-metals-d\\_858.html](https://www.engineeringtoolbox.com/thermal-conductivity-metals-d_858.html)



Life cycle analyses for cookware articles show that most of the environmental impact occurs during consumer use through repeated washing.<sup>4</sup> Relative to alternatives, fluoropolymer coated articles require less water and less detergent to clean.

The same non-stick properties allow the end user to use less fat during cooking. This is of particular benefit when considering the harmful degradation products of oils and fats that result from cooking at elevated temperatures.<sup>5</sup> In addition, non-stick surfaces tend to prevent sticking and blackening of food, thereby reducing the consumption of carcinogens generated in the process of blackening.<sup>6</sup>

As responsible cookware manufacturers, FEC members follow Good Manufacturing Practices.<sup>7</sup> As such, they ensure that coatings suppliers' recommendations are followed. During a controlled manufacturing process, any residual non-polymeric PFAS are eliminated in the curing step at high temperature. Thus, under normal conditions of use, there is no significant exposure of the consumer to PFAS.<sup>8 9</sup>

Finally, the industrial sector representing fluoropolymer coated articles supports numerous enterprises of various sizes; any restriction would have a substantial economic impact on this sector. This would potentially impact €2 billion in manufactured products.<sup>10</sup> The impact would also be felt by consumers who would lose a cooking option of unequalled efficiency and performance.

When considering their intrinsic properties and the benefit that they bring to the consumer, fluoropolymers used in food contact coatings should be considered as irreplaceable. As such – and because they should not be considered as PFAS of concern – FEC feels strongly that fluoropolymers, as used in kitchenware articles, should not be included in any future REACH restriction on PFAS.

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<sup>4</sup> <https://www.tefal.com/eg/en/about-tefal/our-commitments>; see TEFAL-livreVERT-ANG-270411.7.pdf

<sup>5</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5616019/>

<sup>6</sup> <https://www.birmingham.ac.uk/research/perspective/does-burnt-food-give-you-cancer.aspx>

<sup>7</sup> Regulation (EC) 2023/2006 on good manufacturing practices for materials and objects to come into contact with food

<sup>8</sup> Washburn *et al.* 2005. *Environ. Sci. & Technol.* "Exposure Assessment and Risk Characterization for Perfluorooctanoate in Selected Consumer Articles." 39: 3904-3910.

<sup>9</sup> U.S. Environmental Protection Agency (EPA), 2009. Perfluorocarboxylic Acid Content in 116 Articles of Commerce. EPA/600/R-09/033. National Risk Management Research Laboratory, Office of Research and Development, Research Triangle Park, NC.

<sup>10</sup> Executive Summary of the Socio-economic Analysis of the European Fluoropolymer Industry; [https://www.plasticseurope.org/download\\_file/force/1660/181](https://www.plasticseurope.org/download_file/force/1660/181)