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**INFORMATION COLLECTION**

**PFASs and Alternatives: Commercial Availability and Current Uses**

The goal of this questionnaire is to collect information on current uses of alternatives to per- and polyfluoroalkyl substances (PFAS) in the production of products and articles in three industry sectors:

* Textile (including shoes): textile includes apparel and outerwear, workwear (worker protection, uniforms), and other textiles. Shoes include casual and protective shoes;
* Firefighting foam; and
* Food packaging: including paper and paperboard.

The questionnaire aims to collect information on:

* Alternatives and their use(s);
* Performance and related costs;
* Uptake/market penetration;
* Challenges to their development.

For the purpose of this questionnaire, alternatives include:

* Chemical alternatives: short chains PFASs (as alternatives to long chain PFASs)[[1]](#footnote-1) and non-fluorinated alternatives,
* Non chemical alternatives[[2]](#footnote-2), including technical alternatives.

The information requested in this questionnaire is likely spread amongst different stakeholders (e.g. actors along the supply chain will have access to different information). **You are invited to fill in only those sections in the questionnaire for which you have information, you can leave the others blank**.

Information collected through this questionnaire will be used to develop an OECD report on Commercial Availability and Current Uses of alternatives to PFASs. Information and data provided through this questionnaire are gathered for the purpose of dissemination and knowledge sharing and therefore those providing information should mask any confidential business information (e.g. provide ranges if necessary etc.). Stakeholders who will provide information through this questionnaire will be invited to review the different drafts of the report and provide comments.

A review of publically available information will complement the information collected. The primary audience for this report will be policy makers, regulators and other stakeholders with an interest in improving their understanding of current uses of PFASs alternatives. You will find attached the Terms of Reference describing the different elements the report will contain.

Industry (chemical manufacturers and downstream users), public authorities, NGOs and academia are invited to fill-in this questionnaire.

This project is developed by the joint OECD – UN Environment Global PFC Group. The Group was established in response to the International Conference on Chemicals Management - ICCM Resolution II/5set up to facilitate the exchange of information on per and poly-fluorinated chemicals, focusing specifically on PFASs, and to support a global transition towards safer alternatives.

Please return the completed questionnaire to marie-ange.baucher@oecd.org by the **31st of July 2018.**

**Respondent Information**

Name of the entity/company/association represented: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Email address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**I. Description of the alternative**

You are invited to provide in this section general information on alternatives to PFASs used in products and articles. You can provide information on alternative developed to a specific chemical or to a product formulation containing PFASs. The first sub-section is for chemical alternatives and the second for non-chemical alternatives.

 **1. In the case of chemical alternatives:**

***a.* *General description***

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| --- | --- | --- | --- | --- | --- | --- |
| **Original chemical**  | **Name of chemical alternative and identity (CAS number[[3]](#footnote-3), EC number)**  | **Type of chemical alternative *(short chain PFASs or non-fluorinated)*** | **Functional Use of the alternative[[4]](#footnote-4)** | **Product Or Article Use Category[[5]](#footnote-5)**  | **Product or article brand (if relevant)** | **Concentration (or range) of the Substance in Product** |
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***or***

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| **Original product formulation containing PFASs** | **Alternative product formulation**  | **Type of chemical alternative *(short chain PFASs or non-fluorinated)*** | **Functional Use of the alternative[[6]](#footnote-6)** | **Product Or Article Use Category[[7]](#footnote-7)** | **Product or article brand (if relevant)** | **Concentration (or range) of the Substance in Product** |
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***b. Properties and characteristics***

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| **Name of chemical alternative** | **Brief summary of persistence and bioaccumulation potential** | **Available GHS classifications for human health or ecotoxicity with reference OR if not classified reference to summary of key effects** | **Available monitoring or biomonitoring information**  |
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**2. In the case of non-chemical alternatives:**

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| **Original Chemical or product formulation**  | **Name of the alternative** | **Description of the process/application** | **Uses of the alternative** |
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**II. Information on Efficacy of the Alternatives (chemical and non-chemical)**

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| **Name of the alternative** | **Brief summary of required performance. Is the required performance being met? [Yes/No]. If “no”, please briefly explain** | **Comparison of capital/operating costs of the alternative**[[8]](#footnote-8)*(percentage of cost increase or decrease in national currency)* | **Added costs or cost savings associated with using the alternative**[[9]](#footnote-9)*(percentage of cost increase or decrease in national currency)* |
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**III. Uptake/market penetration of the alternative and reasons for the level of uptake (chemical and non-chemical)**

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| **Name of the alternative** | **Anticipated time frame for the substitute to completely eliminate the use of PFASs in the particular use** | **Has the alternative received regulatory approval by relevant authorities for a specific use?** | **What has driven the development of the alternative (e.g. market pressure, response to a regulation)?** |
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| **Name of the alternative** | **Has the alternative being used commercially?**  | **What is the extent of commercial use?**  | **Since how long the alternative has been in use?** |
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**IV. Challenges by sector or for particular uses of PFASs (chemical and non-chemical)**

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| **Name of the alternative** | **Estimate of anticipated cost and time necessary to qualify the alternative** | **Main challenges met during the substitution process** |
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**V. Open section**

Please provide in this section any additional information that you think will be useful to the study or will help complement the information you have provided in the above sections.

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1. As per [the OECD Synthesis Report on Per and Poly Fluorinated Chemicals](https://www.oecd.org/env/ehs/risk-management/PFC_FINAL-Web.pdf), the term “long-chain PFASs” refers to: (i) PFCAs with 7 and more perfluoroalkyl carbons, such as PFOA (with 8 carbons or C8 PFCA) and PFNA (with 9 carbons or C9 PFCA); (ii) PFSAs with 6 and more perfluoroalkyl carbons, such as PFHxS (with 6 perfluoroalkyl carbons, or C6 PFSA) and PFOS (with 8 perfluoroalkyl carbons or C8 PFSA); and (iii) Substances that have the potential to degrade to long-chain PFCAs or PFSAs, i.e. precursors such as PASF- and fluorotelomerbased compounds. Major substances groups with shorter per- or polyfluorinated carbon chain include:

6:2 fluorotelomer-based chemicals as replacements of their higher homologues;

perfluorobutane sulfonyl fluoride (PBSF)-based derivatives as replacements of chemicals based on perfluorooctane sulfonyl fluoride (POSF) in surface treatment and coatings;1

mono- and polyfluorinated-ether-functionality compounds (e.g., polyfluoroalkyl ether carboxylic acids are alternative processing aids for fluoropolymer manufacturing);

fluorinated oxetanes;

other fluorinated polymers. [↑](#footnote-ref-1)
2. Non chemical alternatives are for example process changes that eliminate the use of the chemical of concern, provide the function of the chemical through other means (e.g. physical vs chemical abrasion) or a redesign that obviates the need for the chemical of interest. [↑](#footnote-ref-2)
3. The respondent can refer to the newly released OECD [Database of Per- and Polyfluoroalkyl Substances (PFASs)](http://www.oecd.org/chemicalsafety/risk-management/global-database-of-per-and-polyfluoroalkyl-substances.xlsx); [↑](#footnote-ref-3)
4. For your description, please refer to Table 2 “*Functional Use Categories and Definitions*” of the Internationally Harmonised Functional, Product and Article Use Categories, <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=env/jm/mono(2017)14&doclanguage=en> [↑](#footnote-ref-4)
5. For your description, please refer to Section 3 “*Product and Article Use Categories”* of the Internationally Harmonised Functional, Product and Article Use Categories, <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=env/jm/mono(2017)14&doclanguage=en> [↑](#footnote-ref-5)
6. For your description, please refer to Table 2 “*Functional Use Categories and Definitions*” of the Internationally Harmonised Functional, Product and Article Use Categories, <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=env/jm/mono(2017)14&doclanguage=en> [↑](#footnote-ref-6)
7. For your description, please refer to Section 3 “*Product and Article Use Categories”* of the Internationally Harmonised Functional, Product and Article Use Categories, <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=env/jm/mono(2017)14&doclanguage=en> [↑](#footnote-ref-7)
8. It is recognised that cost measure might vary between countries or regions but should provide indicative information [↑](#footnote-ref-8)
9. It is recognised that cost measure might vary between countries or regions but should provide indicative information [↑](#footnote-ref-9)