



**Stockholm Convention
on Persistent Organic
Pollutants**

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English only

Persistent Organic Pollutants Review Committee

Seventh meeting

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Item 7 (b) of the provisional agenda*

**Technical work in relation to chemicals listed in the annexes to the
Convention with exemptions: assessment of alternatives to
perfluorooctane sulfonic acid in open applications**

**Draft format for collection of information on alternatives to the
use of perfluorooctane sulfonic acid in open applications and a
possible outline of the technical paper**

Note by the Secretariat

1. As referred to in document UNEP/POPS/POPRC.7/10, a draft format for collection of information on alternatives to the use of perfluorooctane sulfonic acid in open applications and a possible outline of the technical paper on the identification and assessment of such alternatives are set out in annexes I and II to the present note, respectively.
2. The annexes have reproduced as revised during the Committee's seventh meeting without formal editing.

* UNEP/POPS/POPRC.7/1.

Annex I**Draft format for collection of information on alternatives to the use of perfluorooctane sulfonic acid in open applications***The information should preferably be submitted in English.*

Introductory information	
Name of the submitting Party/observer	
Contact details (name, telephone, e-mail) of the submitting Party/observer	
Date of submission	

Please provide information on any alternative chemical or non-chemical products and processes to the use of perfluorooctane sulfonic acid in open applications in the table below. Please refer to the explanatory notes and provide information with relevant references if available.

If you are submitting information on several alternatives, please replicate the whole table and provide information for each alternative.

Information on alternatives to perfluorooctane sulfonic acid in open applications:		
1. Description of the alternative		
2. Quantities of use per year		
3. Type of use	<input type="checkbox"/> Aviation hydraulic fluids <input type="checkbox"/> Insecticides for control of red imported fired ants and termites <input type="checkbox"/> Chemically driven oil production <input type="checkbox"/> Carpets <input type="checkbox"/> Textiles and upholstery <input type="checkbox"/> Leather and apparel <input type="checkbox"/> Electric and electronic parts for some colour printers and colour copy machines <input type="checkbox"/> Paper and packaging	
4. Technical feasibility		
5. Health and environmental effects		
6. Cost-effectiveness		
7. Efficacy		
8. Risks, taking into account the characteristics of potential persistent organic pollutants as specified in Annex D to the Convention		

9. Availability	
10. Accessibility	
11. Socio-economic considerations	
12. Any other relevant information	

Explanatory notes¹

1. Description of the alternative:

- (a) For an alternative chemical product, please specify the chemical name, CAS number and trade name.
- (b) For an alternative chemical, please describe its physicochemical properties, such as vapour pressure, water solubility's constant, octanol/water partition coefficient, half-lives in media.
- (c) For a non-chemical alternative product, please describe main, characteristics, or features.
- (d) For an alternative process, please briefly describe the technology including the chemicals used, if any.

2. Quantities used per year:

Please provide, if possible, approximate quantities of the use per year.

3. Type of use:

Please tick off type of use. Tick others to indicate if any other application of PFOS is an open application in the context of your country.

Also indicate if the alternative to PFOS is being used as an intermediate in the production for other chemicals to be used solely for the uses indicated.

4. Technical feasibility:

- (a) Technical feasibility refers to whether an alternative technology exists and is applicable or is expected to be developed in the foreseeable future.
- (b) Please specify for each proposed alternative, whether it has actually been implemented, whether it has only reached the trial stage or whether it is just a proposal. If an alternative has not been tried or tested, information on projected impacts may also be useful.

5. Health and environmental effects:

- (a) Please specify, if possible, the classification according to the Global Harmonization System (GHS) or any other relevant systems.
- (b) Please also provide, if possible, information relating to toxicological/ecotoxicological information.
- (c) Please provide an exposure aspects (e.g. monitoring data) and environmental fate of alternative chemical, if available

¹ This note is based on the form for submission of information specified in Annex F to the Stockholm Convention. Please also refer to the “General guidance on consideration related to alternatives and substitutes to listed persistent organic pollutants and candidate chemicals” (UNEP/POPS/POPRC.5/10/Add.1). The guidance is available at the Convention’s website (www.pops.int/poprc/) or from the Secretariat (ssc@pops.int).

6. Cost-effectiveness:

Information on any evaluation of costs associated with the use of the alternative including, if available, environmental and health costs. Evaluation of costs should, if available, include environmental and health costs and socio-economic costs.

7. Efficacy:

Evaluation of efficacy should, if available, include any information on performance, benefits, costs and limitations of potential alternatives.

8. Risk, taking into account the characteristics of potential persistent organic pollutants as specified in Annex D to the Convention:

- (a) Evaluation of risk should, if available, include any information on whether a proposed alternative has been thoroughly tested or evaluated in order to avoid inadvertently increasing risks to human health and the environment. It could also include any information on potential risks associated with untested alternatives and any increased risk over the life-cycle of alternatives, including manufacture, distribution, use, maintenance and disposal.
- (b) Please provide, if possible, data used for assessing a chemical whether it is a persistent organic pollutant taking into consideration the criteria in paragraph 1 of Annex D to the Stockholm Convention (persistence, bioaccumulation, potential for long-range transport, and adverse effects to human health or environment).

9. Availability:

Availability refers to whether an alternative is on the market and ready for immediate use. Information on producers and traders, if available, should be included.

10. Accessibility:

- (a) Accessibility refers to the extent to which geographic, legal or other limiting factors affect whether an alternative can be used. Information or comments on improving the availability and accessibility of alternatives may also be useful.
- (b) Please specify if the information provided is connected to the specific needs and circumstances of your country.

11. Socio-economic considerations:

- (c) Please specify socio-economic impacts associated with the alternative, if any.

12. Any other relevant information:

Please provide any other relevant information on how the alternatives to perfluorooctane sulfonic acid in open application have been implemented. If available, provide examples.

Annex II

Possible outline of the technical paper on the identification and assessment on alternatives to the use of perfluorooctane sulfonic acid in open applications

1. The technical paper should be prepared following the outline given below, based on the information provided by parties and observers and other available information with reference.

TABLE OF CONTENTS

Executive summary

I. Introduction

II. Objectives

III. Methodology

IV. Identification and description of alternatives:

1. Identity

2. Physicochemical properties, such as vapour pressure, water solubility's constant, octanol/water partition coefficient, half-lives in media

3. Type of uses, producers, traders and quantities

4. Risks, taking into account the characteristics of potential persistent organic pollutants as specified in Annex D to the Convention

V. Assessment of alternatives

1. Evaluation of alternatives

Evaluate each alternative based on the criteria below and provide overall evaluation:

i. Technical feasibility

ii. Health and environmental effects including toxicological and ecotoxicological information

iii. Cost-effectiveness

iv. Efficacy

v. Availability

vi. Accessibility

vii. Socio-economic considerations

VI. Comparative analysis of the use of PFOS in open applications and the use of alternatives by different types of use in terms of the criteria specified under V (1) above

VII. Case studies where PFOS has been substituted

VIII. Knowledge gaps and challenges

IX. Conclusions

X. Recommendations

References

Acronyms

2. Simple explanations, tables, diagrams, flow charts should be used for easy understanding.
 3. The technical paper should take into account the general guidance on considerations related to alternatives to and substitutes for listed chemicals and candidates chemicals (UNEP/POPS/POPRC.5/10/Add.1), the guidance on alternatives to perfluorooctane sulfonate and its derivatives (UNEP/POPS/POPRC.6/13/Add.3), the recommendations on risk reduction for perfluorooctane sulfonic acid and its salts and perfluorooctane sulfonyl fluoride (UNEP/POPS/COP.5/15, annex), and any other relevant documents.
 4. The technical paper should be in English and up to 20 pages in length, excluding the references. Any supporting information can be presented as an information document.
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