



**Stockholm Convention
on Persistent Organic
Pollutants**

Persistent Organic Pollutants Review Committee

Thirteenth meeting

Rome, 17–20 October 2017

Item 5 (c) of the provisional agenda*

**Technical work: process for the evaluation of
perfluorooctane sulfonic acid, its salts and
perfluorooctane sulfonyl fluoride pursuant to
paragraphs 5 and 6 of part III of Annex B to the
Stockholm Convention**

**Draft terms of reference for the assessment of alternatives to
perfluorooctane sulfonic acid, its salts and perfluorooctane
sulfonyl fluoride**

Note by the Secretariat

As referred to in the note by the Secretariat on the process for the evaluation of perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride pursuant to paragraphs 5 and 6 of part III of Annex B to the Stockholm Convention (UNEP/POPS/POPRC.13/5), the annex to the present note sets out draft terms of reference for the assessment of alternatives to perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride. The present note, including its annex, has not been formally edited.

* UNEP/POPS/POPRC.13/1.

Annex

Draft terms of reference for the assessment of alternatives to perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride

I. Objective

1. The present terms of reference are for the Persistent Organic Pollutants Review Committee to undertake the activities specified in the process set out in the annex to decision SC-6/4, as amended by paragraph 7 of decision SC-7/5, for the evaluation of perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF) pursuant to paragraphs 5 and 6 of part III of Annex B to the Stockholm Convention on Persistent Organic Pollutants.
2. According to the abovementioned process, by October 2018, the Persistent Organic Pollutants Review Committee is to complete the report on the assessment of alternatives to PFOS, its salts and PFOSF and provide comments on the draft report prepared by the Secretariat on the evaluation of PFOS, its salts and PFOSF.
3. At its ninth meeting in 2019, the Conference of the Parties to the Stockholm Convention will evaluate the continued need for PFOS, its salts and PFOSF for the various acceptable purposes and specific exemptions, taking into account the reports prepared by the Committee and the Secretariat.

II. Information collection

4. According to the process set out in the annex to decision SC-6/4, Parties are requested to submit information as follows:
 - (a) Information on PFOS, its salts and PFOSF provided in the process of reporting under Article 15 of the Convention, which includes the following:
 - (i) Information on the review of the continued need for the various acceptable purposes and specific exemptions, if the submitting Party is registered;¹
 - (ii) Information on the progress made in eliminating PFOS, its salts and PFOSF;²
 - (iii) Information on the production and use of PFOS, its salts and PFOSF;³
 - (iv) Information on the availability, suitability and implementation of alternatives to PFOS, its salts and PFOSF;⁴
 - (b) Information on the progress made in building the capacity of countries to transfer safely to reliance on such alternatives.
5. Observers are invited to provide information referred to in paragraphs 4 (a) (ii)–(iv) and (b) above.⁵
6. In addition, in paragraph 1 of decision SC-8/5, the Conference of the Parties welcomed the consolidated guidance on alternatives to PFOS and its related chemicals⁶ developed by the Committee, which the Committee in its decision POPRC-12/6 had decided to make use of when carrying out the assessment of alternatives to PFOS, its salts and PFOSF in accordance with the process set out in the annex to decision SC-6/4.

¹ See question 3 of part D of the format for national reporting pursuant to Article 15 reproduced for reference in appendix I to the present terms of reference. According to the registers for acceptable purposes and specific exemptions for PFOS, its salts and PFOSF available on the Convention website (<http://chm.pops.int/tabid/794/Default.aspx> and <http://chm.pops.int/tabid/4644/Default.aspx>), as of August 2017, Brazil, Cambodia, Canada, China, Czechia, European Union, Japan, Norway, Switzerland, Turkey, Vietnam and Zambia are listed in the register for acceptable purposes and China for specific exemptions.

² See question 4 of part D of the format for national reporting pursuant to Article 15 reproduced for reference in appendix I to the present terms of reference.

³ Ibid., questions 5 and 6.

⁴ Ibid., questions 7 and 8.

⁵ See draft format for information collection set out in appendix III to the present terms of reference.

⁶ UNEP/POPS/POPRC.12/INF/15/Rev.1.

7. In paragraph 4 of decision SC-8/5, the Conference of the Parties invited Parties and others to submit to the Secretariat, by 15 February 2018, the following information for use by the Secretariat in preparing its report on the evaluation of PFOS, its salts and PFOSE in accordance with the process set out in the annex to decision SC-6/4 and by the Committee in its future updating of the guidance on alternatives to PFOS and its related chemicals:

- (a) Information on the production and use of sulfluramid;
- (b) Information on local monitoring of releases of PFOS from the use of sulfluramid;
- (c) Information on research on and the development of safe alternatives to PFOS, its salts and PFOSE as stipulated in paragraph 4 (c) of part III of Annex B to the Convention.

8. In order to facilitate collection of the information required in this process from Parties and observers and to supplement the information submitted by Parties through the process of reporting under Article 15 of the Convention, a draft format has been prepared as set out in appendix II to the present terms of reference.

9. The format consists of the following three parts:

- (a) Part I: Information on PFOS, its salts and PFOSE including information on production, import, export, use, continued need for acceptable purposes and specific exemptions, progress in eliminating PFOS, its salts and PFOSE, progress in building the capacity of countries to transfer safely to reliance on alternatives, research and development of safe alternatives;
- (b) Part II: Information on sulfluramid including information on production, import, export, use, local monitoring of releases of PFOS from the use of sulfluramid;
- (c) Part III: Information on chemical and non-chemical alternatives to PFOS, its salts, PFOSE and their related chemicals including information on whether they are economically viable, technically feasible and available on the market, and information on health and environmental effects, risks and socio-economic consideration.

10. The Secretariat solicits information from Parties and observers using a format that facilitates the engagement of industry and key downstream users, through relevant industry associations as appropriate, that have particular experience with these products and the specific designated uses.

11. The Secretariat compiles the information submitted by Parties and observers and makes it available on the Convention website.

III. Information analysis, screening and preparation of draft reports

12. Information submitted by Parties and observers in accordance with paragraph 10 above; information contained in the national reports relevant to PFOS, its salts and PFOSE; information in the consolidated guidance on alternatives to PFOS and its related chemicals;⁷ and any other additional information collected by the Secretariat should be considered in the preparation of the draft report on the assessment of alternatives to PFOS, its salts and PFOSE and the draft report by the Secretariat on the evaluation of PFOS, its salts and PFOSE.

Prioritizing applications⁸ to be assessed

13. In order to prioritize its work, the Committee may consider whether it wishes to prioritise certain applications on which to focus the assessment of alternatives to PFOS, its salts and PFOSE, taking into account the information already available in particular in the consolidated guidance on alternatives to PFOS and its related chemicals⁹ and in the recommendations of the Committee set out in decision POPRC-8/8.¹⁰

Feasibility screening

14. As a first step of the assessment, a feasibility screening to identify chemicals that are capable of serving as alternatives to PFOS, its salts and PFOSE should be conducted.

⁷ UNEP/POPS/POPRC.12/INF/15/Rev.1.

⁸ The term “application” within this document refers to the various acceptable purposes and specific exemptions for PFOS, its salts and PFOSE listed in Annex B to the Convention.

⁹ UNEP/POPS/POPRC.12/INF/15/Rev.1.

¹⁰ See UNEP/POPS/POPRC.8/16, annex I.

15. From the information submitted by Parties and observers, the Secretariat extracts and compiles relevant information to identify such alternatives and makes it available to an intersessional working group to be established by the Committee at its thirteenth meeting, experts with specific expertise in best available techniques and best environmental practices (hereinafter referred to as BAT/BEP experts)¹¹ and other observers with specific expertise identified through the process described in section V below.

16. In compiling this information the Secretariat should focus on those alternatives that are economically viable, technically feasible, have demonstrated equivalent function and provide similar product performance characteristics.

17. The intersessional working group, BAT/BEP experts and other observers review the information referred to in paragraph 15 above and provide comments, particularly as to whether the chemicals are economically viable, technically feasible, have demonstrated equivalent function and provide similar product performance characteristics.

Preparing draft reports

18. Based on the screening, the Secretariat prepares a preliminary report on the assessment of alternatives to PFOS, its salts and PFOSE.

19. The preliminary report of the assessment should apply recognized, established methodologies for conducting assessments of alternatives, such as the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) guidance on analysis of alternatives (European Union)¹² and a framework to guide selection of chemical alternatives (National Research Council, National Academy of Sciences, United States).¹³

20. In evaluating data and studies for the assessment, the following general principles should be applied:

- (a) Studies should be critically evaluated with respect to their validity and acceptability;
- (b) Where possible, existing, internationally recognized approaches for assessing the validity of studies should be applied;
- (c) Consideration should be given to whether studies are statistically robust and to the replicability of the results.

21. The Secretariat also prepares a draft report on the evaluation of PFOS, its salts and PFOSE, building on the report considered at the seventh meeting of the Conference of the Parties.¹⁴

22. The Secretariat, subject to the availability of resources, may engage a consultant to assist it in undertaking these activities.

IV. Assessment of alternatives to PFOS, its salts and PFOSE

23. During the intersessional period between the thirteenth and fourteenth meetings of the Committee, the intersessional working group, BAT/BEP experts and other observers¹⁵ review the preliminary report on the assessment of alternatives to PFOS, its salts and PFOSE prepared by the Secretariat.

24. To ensure transparency and accountability, the comments and responses relating to the preliminary report are compiled and made available as an information document of the fourteenth meeting of the Committee, and further clarification and additional inputs sought as may be necessary.

25. At its fourteenth meeting, the Committee completes the report on the assessment of alternatives to PFOS, its salts and PFOSE for consideration by the Conference of the Parties at its ninth meeting.

26. In addition, at its fourteenth meeting, the Committee provides comments on the draft report on

¹¹ UNEP/POPS/COP.8/INF/14.

¹² https://echa.europa.eu/documents/10162/13643/authorisation_application_en.pdf.

¹³ National Research Council. 2014. A Framework to Guide Selection of Chemical Alternatives. Washington, DC: The National Academies Press. <https://doi.org/10.17226/18872>.

¹⁴ UNEP/POPS/COP.7/INF/11.

¹⁵ Observers with specific expertise as identified through the process in section V of the present terms of reference.

the evaluation of PFOS, its salts and PFOSF prepared by the Secretariat.

27. Furthermore, in paragraph 2 of decision SC-8/5, the Conference of the Parties took note of the options for possible action by the Conference of the Parties should it conclude that there is no continued need for the various acceptable purposes for PFOS, its salts and PFOSF listed in Annex B to the Convention provided in paragraphs 10–15 of document UNEP/POPS/COP.8/8.

28. According to paragraph 14 of the same document, the Committee, taking into account its report on the assessment of alternatives to PFOS, its salts and PFOSF and the draft report on the evaluation prepared by the Secretariat, prepares recommendations on the continued need for those chemicals for the various acceptable purposes for consideration by the Conference of the Parties. It is understood that those recommendations should include any action that might be needed to amend the annexes to the Convention should the Conference of the Parties conclude that there is no continued need for one, several or all of the acceptable purposes.

V. Call for specific expertise

29. The assessment should be prepared in consultation with BAT/BEP experts and other observers with specific expertise in the use of PFOS, its salts and PFOSF and their alternatives.

30. To encourage greater participation of such BAT/BEP experts and other observers, the Secretariat sends a communication by email to Parties and observers and makes this available on the website of the Stockholm Convention.

VI. Draft schedule of activities

<i>Scheduled date</i>	<i>Interval between activities (weeks)</i>	<i>Activity</i>
20 October 2017	–	The Committee agrees to terms of reference and establishes an intersessional working group
27 October 2017	1	The Secretariat sends an invitation to Parties and observers to submit information on PFOS, its salts and PFOSF using the format set out in appendix II to the present terms of reference
15 February 2018	15	Parties and observers submit the information on PFOS, its salts and PFOSF using the format
23 February 2018	1	The Secretariat compiles the information submitted by Parties and observers and makes it available on the Convention website
9 March 2018	2	The Secretariat prepares and makes available to the intersessional working group, BAT/BEP experts and other observers identified in accordance with section V of the present terms of reference: <ul style="list-style-type: none"> (i) A compilation of relevant information to identify alternatives; (ii) A draft outline of the preliminary report.
30 March 2018	3	Members of the intersessional working group, BAT/BEP experts and other observers (see section V above) conduct feasibility screening (review the compilation of the information and provide comments as to whether the alternatives are economically viable, technically feasible, have demonstrated equivalent function and provide similar product performance characteristics) <p>Members of the intersessional working group, BAT/BEP experts and other observers (see section V above) provide comments on the draft outline</p>

<i>Scheduled date</i>	<i>Interval between activities (weeks)</i>	<i>Activity</i>
20 April 2018	3	The Secretariat collects additional information, taking into account the feasibility screening
1 June 2018	6	The Secretariat prepares a preliminary report on the assessment of alternatives to PFOS, its salts and PFOSF
22 June 2018	3	Members of the intersessional working group, BAT/BEP experts and other observers (see section V above) provide comments on the preliminary report
13 July 2018	3	The Secretariat reviews the comments and revises the preliminary report
31 August 2018	–	Parties submit information on PFOS, its salts and PFOSF in the process of reporting under Article 15
7 September 2018	1	The Secretariat prepares and submits to the Committee a draft report on the evaluation of PFOS, its salts and PFOSF, taking into account the information submitted by Parties and observers using the format set out in appendix II to the terms of reference and by Parties in the process of reporting under Article 15
17–21 September 2018	1	The Committee, at its fourteenth meeting, completes the report on the assessment of alternatives to PFOS, its salts and PFOSF, including recommendations, for consideration by the Conference of the Parties, and provides comments on the draft report on the evaluation of PFOS, its salts and PFOSF prepared by the Secretariat
12 November 2018	7	The Secretariat reviews the comments and finalizes the report on the evaluation of PFOS, its salts and PFOSF
29 April–10 May 2019	24	At its ninth meeting, the Conference of the Parties undertakes the evaluation pursuant to paragraphs 5 and 6 of part III of Annex B to the Convention

Appendix I

Excerpt of the format for national reporting pursuant to Article 15 adopted by the Conference of the Parties in its decision SC-6/21

At its sixth meeting, the Conference of the Parties adopted a revised format for national reporting under Article 15 set out in the annex to document UNEP/POPS/COP.6/26/Add.1/Rev.1.

Below is an excerpt of part D of the format for national reporting pertaining to PFOS, its salts and PFOSF.

Part D: Information specifically on the progress made in eliminating perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride in accordance with paragraph 3 in Part III of Annex B to the Convention

Note 1: In this reporting format, the term "PFOS" refers to: perfluorooctane sulfonic acid (CAS No: 1763-23-1) its salts and perfluorooctane sulfonyl fluoride (CAS No: 307-35-7).*

**For example: potassium perfluorooctane sulfonate (CAS No: 2795-39-3), lithium perfluorooctane sulfonate (CAS No: 29457-72-5), ammonium perfluorooctane sulfonate (CAS No: 29081-56-9), diethanolammonium perfluorooctane sulfonate (CAS No: 70225-14-8), tetraethylammonium perfluorooctane sulfonate (CAS No: 56773-42-3), didecyldimethylammonium perfluorooctane sulfonate (CAS No: 251099-16-8).*

Note 2: In this reporting format, please use information commencing from the year in which the amendment to add PFOS in Annex B of the Convention entered into force for your country.

1. Has your country registered for any of the specific exemptions related to PFOS listed in Annex B to the Convention? If yes, please specify the specific exemptions for which your country has registered.
2. Has your country registered for any of the acceptable purposes related to PFOS listed in Annex B to the Convention? If yes, please specify the acceptable purposes for which your country has registered.
3. If you answered yes to questions 1 and/or 2, has your country reviewed the continued need for the specific exemptions and/or acceptable purposes? If yes, please provide information on the review.
4. Has your country developed and implemented an action plan with the goal of reducing and ultimately eliminating the production and/or use of PFOS as encouraged to do so in accordance with paragraph 4 (b) of Part III of Annex B? If yes, please select the years in which the action plan was developed.
5. Has your country produced PFOS? If yes, please provide statistical data on your country's production of PFOS for the acceptable purposes and specific exemptions listed in Annex B of the Convention, when such information is available.
6. Has your country used PFOS? If yes, please provide statistical data on your country's use of PFOS, its salts and PFOSF for the acceptable purposes specific exemptions listed in Annex B of the Convention, when such information is available.
7. Has your country taken any actions to phase out the use of PFOS as safer alternative substances or methods have become available, as encouraged to do so in accordance with paragraph 4 (a) of part III of Annex B? If yes, please describe the alternative substances or methods.
8. Has your country taken action to promote research on and development of safe alternative chemicals and non-chemical products and processes, methods and strategies to the use of PFOS as encouraged to do so in accordance with paragraph 4 (c) of part III of Annex B? If yes, please specify.

Appendix II

Draft format for the collection of information on PFOS, its salts, PFOSF and their related chemicals to be used in the evaluation of the continued need for the various acceptable purposes and specific exemptions¹

Note:

This format is to be used by Parties and observers for submitting information on PFOS, its salts, PFOSF and their related chemicals,² which will be considered in the evaluation pursuant to paragraphs 5 and 6 of part III of Annex B to the Convention to be undertaken by the Conference of the Parties at its ninth meeting in 2019.

The information submitted by Parties and observers will be compiled and made available on the website of the Stockholm Convention. In accordance with decision SC-8/5 and the process set out in the annex to decision SC-6/4, the information submitted by Parties and observers in this format, together with the information submitted by Parties in the process of reporting pursuant to Article 15, will be used by the Persistent Organic Pollutants Review Committee in its preparation of the report on the assessment of alternatives to PFOS, its salts and PFOSF and by the Secretariat in its preparation of the report on the evaluation of PFOS, its salts and PFOSF.

The following guidance contains information that may be useful in filling out this format:

- (a) Consolidated guidance on alternatives to PFOS and its related chemicals (2017);³*
- (b) Guidance for the inventory of PFOS and related chemicals listed under the Stockholm Convention (2017);⁴*
- (c) Guidance on best available techniques and best environmental practices for the use of PFOS and related chemicals listed under the Stockholm Convention (2017);⁵*
- (d) General guidance on considerations related to alternatives and substitutes for listed persistent organic pollutants and candidate chemicals (2009);⁶*
- (e) Recommendations on risk reduction for PFOS, its salts and PFOSF set out in the annex to decision POPRC-6/2 (2010).⁷*

The information should preferably be submitted in English.

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

¹ Prepared based on the format set out in the annex to document UNEP/POPS/POPRC.9/INF/10/Rev.1.

² Related chemicals refer to chemicals that contain the structural element of PFOS in their molecular structure and are/were produced from PFOSF as a starting material or an intermediate.

³ UNEP/POPS/POPRC.12/INF/15/Rev.1.

⁴ <http://chm.pops.int/tabid/3169/Default.aspx>.

⁵ <http://chm.pops.int/tabid/3170/Default.aspx>

⁶ UNEP/POPS/POPRC.5/10/Add.1.

⁷ UNEP/POPS/POPRC.6/13, annex.

I. Information on PFOS, its salts and PFOSE	
<p>1. Production of PFOS, its salts and PFOSE</p> <p>Please provide the chemical names/CAS numbers of the chemicals produced.</p> <p>Please specify the purpose of the production and the years in which the chemicals were produced.</p> <p>Please provide the quantities in kg/year.</p>	
<p>2. Import of PFOS, its salts and PFOSE</p> <p>Please provide the chemical names/CAS numbers of the chemicals imported.</p> <p>Please specify the purpose of the import, the countries from which the chemicals were imported and the years in which the chemicals were imported.</p> <p>Please provide the quantities in kg/year.</p>	
<p>3. Export of PFOS, its salts and PFOSE</p> <p>Please provide the chemical names/CAS numbers of the chemicals exported.</p> <p>Please specify the purpose of the export, countries to which the chemicals were exported and the years in which the chemicals were exported.</p> <p>Please provide the quantities in kg/year.</p>	
<p>4. Use of PFOS, its salts and PFOSE</p> <p>Please provide the chemical names/CAS numbers of the chemicals used.</p> <p>Please specify the purpose of the use and the years in which the chemicals were used.</p> <p>Please provide the quantities in kg/year.</p>	
<p>5. Continued need for acceptable purposes and specific exemptions</p> <p>If your country is currently registered for any of the acceptable purposes or specific exemptions for PFOS, its salts and PFOSE, please provide information on the review of the continued need for those acceptable purposes or specific exemptions.</p>	
<p>6. Progress in eliminating PFOS, its salts and PFOSE</p> <p>Please provide information on the progress in eliminating PFOS, its salts and PFOSE.</p>	
<p>7. Progress in building the capacity of countries to transfer safely to reliance on alternatives</p> <p>Please provide information on the progress in building the capacity of countries to transfer safely to reliance on alternatives.</p>	
<p>8. Research/development of safe alternatives</p> <p>Please provide information on research on and development of safe alternatives to PFOS, its salts and PFOSE as stipulated in paragraph 4 (c) of part III of Annex B to the Convention.</p>	

II. Information on sulfluramid Please skip this section if you are not producing or using sulfluramid.	
1. Production of sulfluramid Please specify the purpose of the production and the years in which the chemicals were produced. Please provide the quantities in kg/year.	
2. Import of sulfluramid Please specify the purpose of the import, the countries from which the chemicals were imported and the years in which the chemicals were imported. Please provide the quantities in kg/year.	
3. Export of sulfluramid Please specify the purpose of the export, countries to which the chemicals were exported and the years in which the chemicals were exported. Please provide the quantities in kg/year.	
4. Use of sulfluramid Please specify the purpose of the use and the years in which the chemicals were used. Please provide the quantities in kg/year.	
5. Local monitoring of releases of PFOS from the use of sulfluramid Please provide information if such local monitoring is conducted.	

III. Information on alternatives to PFOS, its salts, PFOSF and their related chemicals (chemical/non-chemical alternatives or processes)							
If you are submitting information on several alternatives, please replicate this table and provide information for each alternative. Please provide information with references if available.							
1. Application Please select the relevant application of the alternative.	<table border="0"> <tr> <td style="vertical-align: top;"> <u>Acceptable purpose</u> <input type="checkbox"/> Photo-imaging <input type="checkbox"/> Photo-resist and anti-reflective coatings for semi-conductors <input type="checkbox"/> Etching agent for compound semi-conductors and ceramic filters <input type="checkbox"/> Aviation hydraulic fluids </td> <td style="vertical-align: top;"> <input type="checkbox"/> Metal plating (hard metal plating) only in closed-loop systems <input type="checkbox"/> Certain medical devices <input type="checkbox"/> Fire-fighting foam <input type="checkbox"/> Insect baits for control of leaf-cutting ants from <i>Atta spp.</i> and <i>Acromyrmex spp.</i> </td> </tr> <tr> <td style="vertical-align: top;"> <u>Specific exemptions</u> <input type="checkbox"/> Photo masks in the semiconductor and liquid crystal display industries <input type="checkbox"/> Metal plating (hard metal plating) <input type="checkbox"/> Metal plating (decorative plating) <input type="checkbox"/> Electric and electronic parts for some colour printers and colour copy machines </td> <td style="vertical-align: top;"> <input type="checkbox"/> Insecticides for control of red imported fire ants and termites <input type="checkbox"/> Chemically driven oil production <input type="checkbox"/> Carpets <input type="checkbox"/> Leather and apparel <input type="checkbox"/> Textiles and upholstery <input type="checkbox"/> Paper and packaging <input type="checkbox"/> Coatings and coating additives <input type="checkbox"/> Rubber and plastics </td> </tr> <tr> <td colspan="2"> <input type="checkbox"/> Other use (please specify) </td> </tr> </table>	<u>Acceptable purpose</u> <input type="checkbox"/> Photo-imaging <input type="checkbox"/> Photo-resist and anti-reflective coatings for semi-conductors <input type="checkbox"/> Etching agent for compound semi-conductors and ceramic filters <input type="checkbox"/> Aviation hydraulic fluids	<input type="checkbox"/> Metal plating (hard metal plating) only in closed-loop systems <input type="checkbox"/> Certain medical devices <input type="checkbox"/> Fire-fighting foam <input type="checkbox"/> Insect baits for control of leaf-cutting ants from <i>Atta spp.</i> and <i>Acromyrmex spp.</i>	<u>Specific exemptions</u> <input type="checkbox"/> Photo masks in the semiconductor and liquid crystal display industries <input type="checkbox"/> Metal plating (hard metal plating) <input type="checkbox"/> Metal plating (decorative plating) <input type="checkbox"/> Electric and electronic parts for some colour printers and colour copy machines	<input type="checkbox"/> Insecticides for control of red imported fire ants and termites <input type="checkbox"/> Chemically driven oil production <input type="checkbox"/> Carpets <input type="checkbox"/> Leather and apparel <input type="checkbox"/> Textiles and upholstery <input type="checkbox"/> Paper and packaging <input type="checkbox"/> Coatings and coating additives <input type="checkbox"/> Rubber and plastics	<input type="checkbox"/> Other use (please specify)	
<u>Acceptable purpose</u> <input type="checkbox"/> Photo-imaging <input type="checkbox"/> Photo-resist and anti-reflective coatings for semi-conductors <input type="checkbox"/> Etching agent for compound semi-conductors and ceramic filters <input type="checkbox"/> Aviation hydraulic fluids	<input type="checkbox"/> Metal plating (hard metal plating) only in closed-loop systems <input type="checkbox"/> Certain medical devices <input type="checkbox"/> Fire-fighting foam <input type="checkbox"/> Insect baits for control of leaf-cutting ants from <i>Atta spp.</i> and <i>Acromyrmex spp.</i>						
<u>Specific exemptions</u> <input type="checkbox"/> Photo masks in the semiconductor and liquid crystal display industries <input type="checkbox"/> Metal plating (hard metal plating) <input type="checkbox"/> Metal plating (decorative plating) <input type="checkbox"/> Electric and electronic parts for some colour printers and colour copy machines	<input type="checkbox"/> Insecticides for control of red imported fire ants and termites <input type="checkbox"/> Chemically driven oil production <input type="checkbox"/> Carpets <input type="checkbox"/> Leather and apparel <input type="checkbox"/> Textiles and upholstery <input type="checkbox"/> Paper and packaging <input type="checkbox"/> Coatings and coating additives <input type="checkbox"/> Rubber and plastics						
<input type="checkbox"/> Other use (please specify)							
2. Description of alternative Please provide the chemical name, CAS number and trade names of the alternative. Please specify the name of the chemical substituted. Please provide quantities of production and use of the alternative in kg/year, where relevant. For non-chemical alternatives or processes, please describe the characteristics of the alternative.							
3. Is the alternative economically viable? Please provide information as to whether the alternative is economically viable. Please provide information on cost-effectiveness, including environmental, health and socio-economic costs. Please provide information on the general price of the alternative (e.g. USD/kg).							

<p>4. Is the alternative technically feasible? What is its efficacy?</p> <p>Please provide information as to whether the alternative has demonstrated equivalent function and provides similar product performance characteristics.</p> <p>Please provide information on efficacy, including performance, benefits and limitations of the alternative.</p> <p>Please specify whether the alternative has actually been implemented or is at the trial or proposal stage.</p>	
<p>5. Is the alternative available on the market? How accessible is it?</p> <p>Please specify whether the alternative is on the market and ready for immediate use.</p> <p>Are there geographic, legal or other limiting factors affecting whether the alternative can be used?</p>	
<p>6. Health/environmental effects including POPs characteristics and other hazards</p> <p>Please specify the classification according to the Global Harmonization System or other systems, if relevant.</p> <p>Please provide data used for assessing POPs characteristics (persistence, bioaccumulation, potential for long-range environmental transport, adverse effects) or other hazards.</p> <p>Please provide information on exposure (e.g. monitoring data) and environmental fate of the chemical.</p>	
<p>7. Risks, taking into account the criteria in Annex D for POPs characteristics and other hazard indicators</p> <p>Please provide information on whether the alternative has been thoroughly tested or evaluated to avoid inadvertently increasing risks to human health/environment.</p>	
<p>8. Socio-economic considerations</p> <p>Please provide information on socio-economic impacts associated with the alternative.</p>	
<p>9. Any other information</p>	