




Phasing out PFOS under the Stockholm Convention

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Conventions**

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THIS PRESENTATION

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- 1. Listing of PFOS under the Stockholm Convention**
 - 2. Activities related to alternatives to PFOS**

Stockholm Convention on Persistent Organic Pollutants

- Global treaty with 179 parties
- Aimed at protecting human health and the environment from harmful impacts of POPs
- 23 chemicals listed



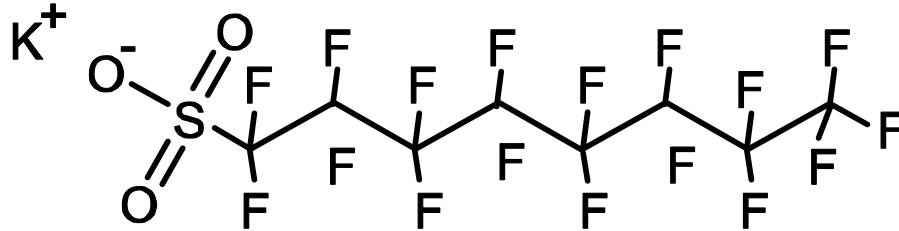
Key provisions of the Stockholm Convention

- **Elimination (POPs listed in annex A)**
- **Restriction (POPs listed in annex B)**
- **Continuous reduction (POPs listed in annex C)**

- Management of stockpiles and wastes
- Listing of new chemicals
- National Implementation Plan
- Reporting
- Effectiveness evaluation
- Technical assistance and financial mechanism



PFC listed under the Stockholm Convention



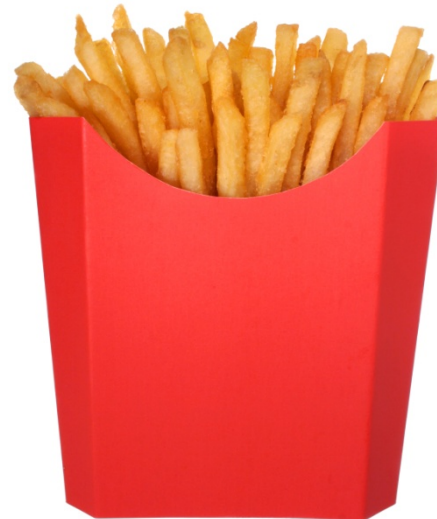
- Perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF)
- Listed in 2009
- Annex B:
 - Production and use allowed for acceptable purposes and specific exemptions



Specific exemptions

Time-limited phase-out

- Photo masks in the semiconductor and LCD industries
- Hard metal plating
- Decorative metal plating
- Electric and electronic parts for some color printers and color copy machines
- Insecticides for control of red imported fire ants and termites
- Chemically driven oil production
- Carpets
- Leather and apparel
- Textiles and upholstery
- Paper and packaging
- Coatings and coating additives
- Rubber and plastics



Acceptable purposes

- Photo imaging,
- Photo resist and anti-reflective coatings for semi-conductors
- Etching agent for compound semi-conductors and ceramic filters
- Aviation hydraulic fluids



- Metal plating only in closed-loop systems
- Certain medical devices
(e.g. ETFE layers, radio-opaque ETFE, in vitro diagnostic medical devices, CCD color filters)
- Fire fighting foam
- Insect baits for control of leaf-cutting ants



Reducing and ultimately eliminating PFOS

- ❖ Phase out through use of **alternatives** and research on safe alternatives encouraged
- ❖ Evaluation for the continued need for PFOS:
 - To start in 2015; every 4 years
 - Based on information:
 - the availability, suitability and implementation of **alternatives**
 - Progress in capacity building to transfer safely to alternatives





Activities related to alternatives to PFOS

Sharing information on alternatives to PFOS

Guidance documents developed by POPs Review Committee (POPRC):

- Guidance on alternatives to PFOS, its salts, PFOSF and related chemicals
 - (living document, regular updates)
- Technical paper on identification and assessment of alternatives to PFOS in open applications



Assessment of alternatives to PFOS

- Currently undertaken by working group under POPRC
- Screening assessment of POP characteristics (criteria in Annex D of the Stockholm Convention)
- Outcomes to be considered for evaluation of continued for PFOS



Other guidance documents related to PFOS

- Guidance documents for updating of national implementation plans:
 - Draft guidance for the inventory of PFOS and related chemicals
 - Draft guidance on best available techniques and best environmental practices for the use of PFOS

- Basel Convention: Technical guidelines for environmentally sound management of POPs wastes:
 - Guidelines on PFOS wastes (under development)



Summary

- ❖ PFOS, its salts and PFOSF were listed under the Convention in 2009
- ❖ Production and use still allowed for several applications
- ❖ Substitution with safer alternatives essential for phase-out
- ❖ Information on alternatives important for evaluation of the continued need for PFOS



FURTHER READING

- Guidance on alternatives to PFOS, its salts, PFOSF and related chemicals (UNEP/POPS/POPRC.9/INF/11/Rev.1)
- Technical paper on identification and assessment of alternatives to PFOS in open applications (UNEP/POPS/POPRC.8/INF/17)
- Recommendations on alternatives to the use of perfluorooctane sulfonic acid, its salts, perfluorooctane sulfonyl fluoride and their related chemicals in open applications (Annex to decision POPRC-8/8)
- Recommendations on the elimination of brominated diphenyl ethers from the waste stream and on risk reduction for perfluorooctane sulfonic acid and its salts and perfluorooctane sulfonyl fluoride (Annex to decision POPRC-6/2)
- Guidance for the inventory of perfluorooctane sulfonic acid (PFOS) and related chemicals listed under the Stockholm Convention on Persistent Organic Pollutants (Draft)
- Guidance on best available techniques and best environmental practices for the use of perfluorooctane sulfonic acid and related chemicals listed under the Stockholm Convention on POPs (Draft)





THANK YOU

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