

Quick Guide to IPEN Views on POPRC14

September 2018

Perfluorohexane sulfonic acid (PFHxS)

PFHxS and related compounds are persistent in water, soil and sediment and unlikely to undergo degradation in the environment including hydrolysis, aqueous photolysis or under anaerobic conditions. While it is not possible to experimentally measure its log K_{ow} , or determine BCF and BAF, PFHxS biomagnification factors (BMF) greater than 1 have been observed in food chains including Arctic bird/fish, Arctic polar bear/ringed seal, dolphin/fish, and fish/zoo plankton among others, indicating bioaccumulation. PFHxS has the longest half-life in humans determined for any PFAS. PFHxS undergoes long-range transport and is found in Arctic air, sediment, snow, ice, soil, sediment and biota (including humans) and in Antarctic biota and snow. *In vivo* and epidemiological studies show that PFHxS negatively affects liver function, thyroid, and the developing immune system resulting in reduced effects of vaccines and higher incidences of infections and asthma in children. A significant association between PFHxS exposure and breast cancer has been found in Greenlandic Inuit women. PFHxS is widely found in breast milk and is one of the most frequently detected and predominant PFAS in human blood, including maternal and infant cord blood.

> PFHxS meets Annex E criteria and should move forward to Annex F evaluation.

PFOA

To complete the listing recommendation for PFOA, the POPRC has to consider additional issues including PFOA-related substances, unintentional formation, and some proposed exemptions.

1. Sulfluramid

The listing of PFOS and PFOSF has an acceptable purpose for “Insect baits for control of leaf-cutting ants from *Atta* spp. and *Acromyrmex* spp.” However, the listing does not explicitly name sulfluramid. As a result, sulfluramid is widely used including on other species of ants and results in direct release of PFOS to the environment. Sulfluramid can also degrade to PFOA and thus should be considered a PFOA-related substance. Including sulfluramid in the PFOA listing is not “double regulation” but reflects Committee agreement to include all PFOA-related substances in the listing recommendation.

2. Unintentional formation and release

PFOA and a wide range of other PFCA substances can be generated during the thermolysis of PTFE and unintentional formation and release has been measured from a European incinerator burning municipal waste. This is also relevant to open burning. Article 5 and Annex C¹ are designed to assist Parties to reduce and eliminate unintentionally-formed POPs and do not exclude listings based on amounts. PFOA should be listed in Annex C to capture potential formation and unintentional release from anthropogenic sources and to develop BAT/BEP to avoid PFOA generation and release.

3. Membranes for medical textiles, filtration in water treatment, production processes and effluent treatment

Technical and/or economically feasible alternatives, including non-fluorinated alternatives, exist for this broad category of uses. IPEN supports the statement in the draft Addendum document that, “an exemption for membranes intended for use in medical textiles, filtration in water treatment, production processes and effluent treatment should not be considered.”

4. Transport of intermediate, PFOI, to enable reprocessing at another site to tetrafluoroethylene (TFE) and hexafluoropropylene (HFP)

Archroma proposes an exemption for PFOI transport across borders as an intermediate and removing 1-H-PFO from the list of PFOA-related substances since it is generated in an onsite production process. The proposal undermines the Convention which restricts exemptions for intermediates only to closed-system site-limited intermediates (currently only allowed for HCB and DDT). The treaty notes

¹ Article 5 covers “Measures to reduce or eliminate releases from unintentional production. Annex C applies to POPs, “when formed and released unintentionally from anthropogenic sources.”

that the manufacturing process should not lead to formation of other chemicals with POPs properties, but 1-H-PFO, TFE, and HFP all have POPs properties. In many countries, none of the “stringent” measures described as EU practice could be effectively implemented or enforced. In addition, the proposed exemption opens the door to waste dumping in developing and transition countries under the guise of “reprocessing.” Archroma itself is owned by a private equity company that recently put the company up for sale, so the request may be irrelevant in the near future. The proposed exemption undermines Stockholm Convention norms and objectives and should not be recommended.

5. Medical devices and implantable medical devices

The industry trade association argues that PTFE made in some countries might contain PFOA so a global exemption should be granted for a vague list of product categories. However, alternative medical devices made without PFOA have passed all regulatory requirements, are available on the market, and are in use. Global exemptions should not be recommended if specific products are not named and no information about alternatives is presented. No recommendation for an exemption should be made for these two use categories.

6. Photographic coatings applied to paper and printing plates

This is an obsolete use of PFOA since it has essentially been replaced by digital imaging, including in developing and transition countries. IPEN supports the statement in the draft Addendum document that, “no exemptions for photographic coatings applied to paper and printing plates should be considered necessary.”

7. Auto industry parts

The auto industry was aware of the need to phase-out PFOA in 2008 and a list of PFOA-related substances was provided three years ago when PFOA was proposed for listing. The industry admits that alternatives are widely available and has the technical capacity to retrofit parts for specific uses that do not contain PFOA. However, the auto industry appears unwilling to pay the cost of substitution and wants to externalize the cost of continued PFOA use onto governments. For these reasons, no exemptions should be considered for current use service parts and exemptions for legacy spare parts should only be considered if they are for specifically named parts and can be adequately justified.

8. Firefighting foams

Firefighting foams containing PFOA and other fluorinated substances are a dispersive use and a key source of extremely costly water pollution, soil contamination, and exposures to humans and consequent adverse health effects at many sites around the world, including as a result of training exercises. Alternatives that do not contain PFOA or fluorinated substances are in use at major airports and perform as well as PFOA-containing foams. UNEP/POPS/POPRC.14/INF/6 notes that the Parties responding to the secretariat, “would not consider firefighting foams to meet their definition of an article” and “appeared to agree that fire-fighting foams containing PFOA should be regarded as ‘stockpiles.’” The continued dispersive use of a POP is not consistent with the objectives of the Convention. No exemption should be granted for this use or for continued use of existing stockpiles of firefighting foams containing PFOA, given the availability and efficacy of fluorine-free foams.

> PFOA should be recommended for listing in Annex A with no exemptions as none of the proposed exemptions have been adequately justified. Any considerations of exemptions should be specific, include independent sources for claims about alternatives, and be consistent with the Convention objective to prioritize protection of human health and the environment from POPs. PFOA should be listed in Annex C to capture unintentional formation and release from anthropogenic sources. Sulfluramid is a PFOA-related substance and should be included in the listing recommendation.

PFOS evaluation

PFOS is listed in Annex B of the treaty and COP9 is required to evaluate the continued need for acceptable purposes and specific exemptions.

1. Photo imaging

This is an obsolete use of PFOS since it has essentially been replaced by digital imaging, including in developing and transition countries. This acceptable purpose should be ended.

2. Semiconductors (photo-resist and anti-reflective coatings for semiconductors; etching agent for compound semiconductors and ceramic filters)

The global semiconductor industry has publicly stated they have completed the phase-out of PFOS. This acceptable purpose should be ended.

3. Aviation hydraulic fluids

This is an open application of PFOS and should be prioritized for phase-out. Hydraulic fluids existed before PFOS was available and alternatives are commercially available and have been implemented. A number of Parties have reported they no longer use PFOS for this acceptable purpose and have withdrawn their notification. This acceptable purpose should be ended.

4. Metal plating (hard metal plating only in closed-loop systems)

Chemical and non-chemical alternatives are feasible and globally available. Given the information gaps and varying experiences with alternatives, but also the need to accelerate phase-out, the acceptable purpose for PFOS use in metal plating should be converted to a specific exemption.

5. Certain medical devices

Alternatives to the use of PFOS in medical devices have been developed and are commercially available. INF9 indicates that no Party uses PFOS for this purpose and this acceptable purpose should be ended.

6. Firefighting foam

Non-PFOS based fire-fighting foams, including fluorine-free formulations, are available and are as effective as PFOS-based foams. Alternatives meet established performance standards for aviation, military, and industrial applications. This acceptable purpose should be ended.

7. Insect baits for control of leaf-cutting ants from *Atta* spp. and *Acromyrmex* spp.

This is an open application of PFOS use and should be prioritized for phase-out. While drop-in chemical replacements may not be desirable, the existence of some non-chemical alternatives and the significant PFOS pollution that results from this activity must be addressed. The acceptable purpose for PFOS use in insect baits should be converted to a specific exemption for specified crops of economic importance to spur more rapid adoption of alternatives.

8. Photo masks in the semiconductor and liquid crystal display (LCD) industries

The global semiconductor industry has phased out PFOS for this use. INF9 indicates that no Party uses PFOS for this purpose and this specific exemption should be ended.

9. Electric and electronic parts for some colour printers and colour copy machines

A range of technically feasible alternatives are available and have been implemented. INF9 indicates that no Party uses PFOS for this purpose and this specific exemption should be ended.

10. Insecticides for control of red imported fire ants and termites

A range of technically feasible alternatives are available and have been implemented. INF9 indicates that no Party uses PFOS for this purpose and this specific exemption should be ended.

11. Chemically driven oil production

Considering the lack of use of PFOS in oil-producing areas and that INF9 indicates that no Party uses PFOS for this application, this specific exemption should be ended.