

IPCP Webinar Series “POPs in plastic and related monitoring”



POP candidate for the Stockholm Convention

Dechlorane Plus

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Candidate POPs Under review

Article 8, Annex D, E, F,
POPs Review Committee (POPRC)

Year 1: Proposal / Annex D screening



Year 2: Annex E risk profile



Year 3: Annex F risk management
evaluation / recommendation



Year 4: COP decision

Norway submitted a proposal to list Dechlorane Plus (CAS No. 13560-89-9) and its syn-isomer (CAS No. 135821-03-3) and anti-isomer (CAS No. 135821-74-8) in Annexes A, B and/or C.

The technical DP mixture contains two stereoisomers, syn-DP and anti-DP, that are present in ratios of about 1:3 or 25% syn-DP and 75% anti-DP. Commercially available DP mixtures may also contain DP monoadducts, mono-dechlorinated DP and other substances as impurities. DP and its isomers are not known to be unintentionally produced.

The commercial mixture Dechlorane Plus (DP) is a **polychlorinated flame retardant** that has been in use since the 1960s. Since then, research has confirmed its **global ubiquitous distribution** (Wang et al., 2016) and several studies have shown increasing or stable time trend of DP (Olukunle et al., 2018; Liu et al., 2016; Vorkamp et al., 2018; Li et al., 2016).

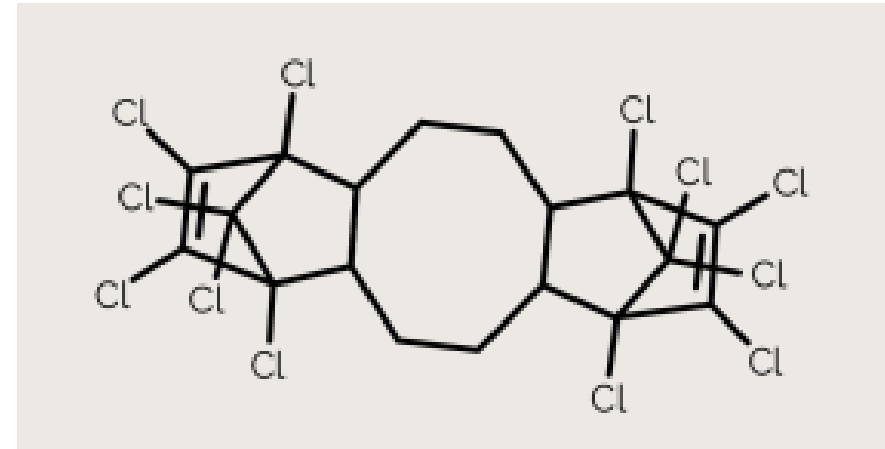
The nomination report specifically addressed the information requirements and screening criteria of Annex D to the Stockholm Convention on Persistent Organic Pollutants and summarizes relevant evidence relating to the screening criteria for **persistence, bioaccumulation, adverse effects and long-range transport**.



Uses: As a flame retardant, Dechlorane Plus is used in many polymeric systems. Examples of thermoplastics that may contain Dechlorane Plus include **nylon, polyester, acrylonitrile butadiene styrene (ABS), natural rubber, polybutylene terephthalate (PBT), polypropylene, and styrene butadiene rubber (SBR) block copolymer**. Dechlorane Plus may be used in thermosets such as **epoxy and polyester resins, polyurethane foam, polyethylene, ethylene propylene diene monomer rubber, polyurethane rubber, silicon rubber, and neoprene**.

DP is marketed as a replacement substance for commercial decabromodiphenyl ether (c-decaBDE)

-REGRETABLE SUBSTITUTION-



Trade Names: Dechlorane Plus 25 (Dech Plus); Dechlorane Plus 35 (Dech Plus-2); DP-515; Dechlorane 605; Dechlorane A; DP; DDC-CO; Escapeflam DK-15

The global production of DP has been estimated to be in the range of **750–6,000 tonnes per year**, with an estimated average of **1980 tonnes per year**.

DP production in the United States started in the 1960s; however, no domestic production was reported in 2019 and the nationally aggregated import volume for the year 2019 was less than 500 tonnes.

Production in China started in 2003 and the annual production is reported to be 300–1,000 tonnes. The Chinese manufacturer may now be the sole global manufacturer. China has released a draft of the New Pollutant Management Action Plan, and production, use, import and export of DP will be banned from 1 January 2026. Such a ban could have significant implications for the global production, use and restriction of DP.

Emissions of DP to the environment occur at all its life cycle stages.

Estimates suggest that the highest global DP emissions come from the **manufacture of DP**, while the next highest release to the environment comes from waste **dismantling and recycling followed by landfills**.

In line with these estimates, monitoring data show that DP levels are generally **highest near manufacturing sites, in areas around electronic waste and recycling plants and wastewater discharges**. In the post manufacturing phase, polymer raw materials handling, compounding and conversion are estimated to be the largest emission sources, and only account for a small share of the total global emissions.

While emissions from articles in use are estimated to be equally low, however, these emissions are particularly important in relation to human exposure as evidenced by the high DP levels measured in **indoor dust**.



POPRC 15 (2019) – Evaluation of Norway proposal

POPRC-15/2 Decision, Dechlorane plus meets the screening criteria (Annex D)

POPRC 16 (2020) – Draft risk profile (Annex E)

POPRC-16/1 The Committee was unable to agree that the information on adverse effects was sufficient to reach a conclusion on the risk profile for Dechlorane Plus; (Annex E)

UNEP/POPS/POPRC.16/INF/19.

POPRC 17 (2022) –Draft risk profile

POPRC-17/2: Decides, in accordance with paragraph 7 (a) of Article 8 of the Convention, that Dechlorane Plus is likely, as a result of its long range environmental transport, to lead to significant adverse human health and/or environmental effects such that global action is warranted;

POPRC 18 (2022) - Risk management evaluation (Annex F)

POPRC 18/1:

1. *Adopts* the risk management evaluation for Dechlorane Plus
2. *Decides*, in accordance with paragraph 9 of Article 8 of the Convention, to recommend to the Conference of the Parties that it consider listing Dechlorane Plus in Annex A to the Convention with specific exemptions for production and use

UNEP/POPS/COP.11/13 – Recommendation for listing

Chemical	Activity	Specific exemption
Dechlorane Plus (CAS No: 13560-89-9)	Production	As allowed for the Parties listed in the Register in accordance with the provisions of part [XI] of this Annex
	Use	In accordance with part [XI] of this Annex: <ul style="list-style-type: none">• Aerospace• Space and defence applications• Medical imaging and radiotherapy devices and installations• Replacement parts for, and repair of, articles in applications in accordance with the provisions of paragraph 2 (b) of part [XI] of this Annex



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Part [XI]

1. The production and use of Dechlorane Plus shall be eliminated except for Parties that have notified the Secretariat of their intention to produce and/or use it in accordance with Article 4.
2. Specific exemptions for the production and use of Dechlorane Plus may be available, limited to the following:
 - (a) For five years from the date of entry into force of the amendment in accordance with Article 4:
 - (i) Aerospace;
 - (ii) Space and defence applications;
 - (iii) Medical imaging and radiotherapy devices and installations;
 - (b) For replacement parts for, and repair of, articles in the following applications until the end of the service life of the articles or 2044, whichever comes earlier:
 - (i) Aerospace (such as aircraft engine fan case rub strip products and void-filling and edge-sealing products, aircraft engine manufacturing repairs, electrical items, structural panels and aircraft cabin interiors);
 - (ii) Space (such as satellites, probes and other exploration equipment, manned cabins and laboratories, heat-insulating materials for rocket motors and ground support equipment);
 - (iii) Defence (such as naval vessels, missiles, launch platforms, ordnance, communication equipment, radar and lidar systems and support equipment);
 - (iv) Motor vehicles (covering all land-based vehicles, such as cars, motorcycles, agricultural and construction vehicles and industrial trucks; applications include cables, wire harnesses, connectors and insulation tapes);
 - (v) Stationary industrial machines (such as tower cranes, concrete plants and hydraulic crushers; applications include cables, wire harnesses, connectors and insulation tapes) for use in agriculture, forestry and construction;
 - (vi) Marine, garden, forestry and outdoor power equipment;
 - (vii) Medical devices (such as ultrasound diagnostic devices, magnetic resonance imaging systems, X-ray imaging systems, flexible endoscopes) and in vitro diagnostic devices (such as immunoassay analysers, haematology analysers, polymerase chain reaction (PCR) testing systems, genetic analysers, clinical chemistry analysers, blood coagulation analysers, urinalysis analysers);
 - (viii) Medical imaging and radiotherapy devices and installations;
 - (ix) Instruments for analysis, measurements, control, monitoring, testing, production and inspection.



“Accelerating action: Targets for the sound management of chemicals and waste”

AGENDA: SUMMARY OF WORK OF THE 2023 MEETINGS OF THE CONFERENCE OF THE PARTIES

	Mon, 1 May 2023	Tue, 2 May 2023	Wed, 3 May 2023	Thu, 4 May 2023	Fri, 5 May 2023	Sat, 6 May 2023	
<p><i>Morning session</i> 10 a.m.– 1 p.m.</p>	<p>BC Item 1: Opening of the meeting BC Item 2: Adoption of the agenda</p> <p>RC Item 1: Opening of the meeting RC Item 2: Adoption of the agenda</p> <p>SC Item 1: Opening of the meeting SC Item 2: Adoption of the agenda</p> <p>Joint sessions of the COPs: BC Item 3; RC Item 3; SC Item 3: Organizational matters (b) Organization of work; (a) Election of officers; (c) Credentials;² BC Item 4: Matters related to the implementation of the Convention (b) Scientific and technical matters: (i) Technical guidelines (POPs wastes); SC Item 5: Matters related to the implementation of the Convention (c) Measures to reduce or eliminate releases from wastes;</p>	<p>Joint sessions of the COPs: <i>Reports of contact groups</i></p> <p>Joint sessions of the COPs: BC Item 4 (cont.) (d) Technical assistance; RC Item 5: Matters related to the implementation of the Convention (e) Technical assistance; SC Item 5 (cont.) (f) Technical assistance; BC Item 4 (c) (cont.) (i) Mechanism for Promoting Implementation and Compliance of the Basel Convention; RC Item 5 (cont.) (d) Compliance; SC Item 5 (cont.) (j) Compliance;³ BC Item 7; RC Item 8; SC Item 8: Programme of work and budget. BC Item 8; RC Item 9; SC Item 9: Implementation of the MOU between UNEP and the COPs and FAO for RC</p>	<p>Joint sessions of the COPs: <i>Reports of contact groups</i></p> <p>Session of SC COP-11: Item 5 (cont.) (a) Measures to reduce or eliminate releases from intentional production and use (cont.): (iii) Polychlorinated biphenyls; (b) Measures to reduce or eliminate releases from unintentional production; (d) Implementation plans; (h) Reporting pursuant to Article 15;</p>	<p>Joint sessions of the COPs: <i>Reports of contact groups</i></p> <p>Session of SC COP-11: <i>Consideration of the outcomes of the contact groups and draft decisions</i> Item 4: Rules of procedure.</p> <p>Joint sessions of the COPs: BC Item 6; RC Item 7; SC Item 7: Enhancing cooperation and coordination among BRS (c) Synergies in preventing and combating illegal traffic and trade in hazardous chemicals and wastes; BC Item 9; RC Item 10; SC Item 10: Venue and date of the next COPs. BC Item 10; RC Item 11; SC Item 11: Other matters (admission of observers).</p>	<p>Joint sessions of the COPs: <i>Reports of contact groups</i></p> <p>Session of BC COP-16: Item 4 (cont.) (b) Scientific and technical matters (cont.): (i) Technical guidelines (cont.) (except POPs wastes); (a) Strategic issues: (i) Strategic framework; (ii) Improving the functioning of the PIC procedure; (iii) Development of guidelines for environmentally sound management; (c) Legal, compliance and governance matters (cont.): (i) Committee Administering the Mechanism for Promoting Implementation and Compliance of the Basel Convention (cont.);</p>	<p>No formal meetings</p>	<p>Sat, 6 May 2023</p>
	<p><i>Afternoon session</i> 3–6 p.m.</p> <p>Session of BC COP-16: Item 4 (cont.) (b) Scientific and technical matters (cont.): (i) Technical guidelines (cont.) (except POPs wastes); (c) Legal, compliance and governance matters: (ii) Providing further legal clarity;⁴</p> <p>Session of SC COP-11: Item 5 (e) Listing of chemicals in Annex A, B or C to the Convention;</p>	<p>Session of SC COP-11: Item 5 (cont.) (j) Compliance (cont.); (i) Effectiveness evaluation; (a) Measures to reduce or eliminate releases from intentional production and use: (i) Exemptions; (iv) Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride; (ii) DDT;</p>	<p>Session of RC COP-11: Item 5 (cont.) (c) Enhancing the effectiveness of the Convention;⁵</p> <p>Joint sessions of the COPs: BC Item 4 (cont.) (f) Financial resources; RC Item 5 (cont.) (f) Financial resources; SC Item 5 (cont.) (g) Financial resources and mechanisms; BC Item 5; RC Item 6; SC Item 6: International cooperation and coordination (a) Cooperation and coordination with the Minamata Convention on Mercury; (b) Cooperation and coordination with other organizations.</p>	<p>Session of SC COP-11: <i>Consideration of the outcomes of the contact groups and draft decisions</i> Item 11: Other matters (cont.)</p>	<p>Session of SC COP-11: <i>Consideration of the outcomes of the contact groups and draft decisions</i> Item 12: Adoption of the report.</p> <p>Joint sessions of the COPs: <i>Adoption of the reports on credentials.</i></p>		



Webinar on Dechlorane Plus and UV-328 proposed for listing in Annex A to the Stockholm Convention

Objectives

The eleventh meeting of the Conference of the Parties to the Stockholm Convention (COP-11) will be held from 1 to 12 May 2023 in Geneva. The Conference of the Parties will consider, among other things, the recommendations of the POPs Review Committee on the listing of three new chemicals in Annex A to the Convention: Dechlorane Plus; UV-328; methoxychlor. To exchange information about the chemicals recommended for listing, in particular Dechlorane Plus and UV-328 for which the recommendations included specific exemptions, the Secretariat will organize a webinar on 26 April 2023, from 2 to 3:35 p.m. (UTC+2).

Recordings and registration

Wednesday, 26 April 2023 from
14:00 to 15:30 (session in english) -

[Register](#)

<https://unep-brs.webex.com/weblink/register/r9c5b4abcdf045468552a111d05d3ff43>

<http://chm.pops.int/Default.aspx?tabid=4163&meetId=5602A9BA-84D4-ED11-90C6-005056A3140F&lang=en>



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Many thanks

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