

## Compliance Clip

Disclaimer: This document provides guidance and is not a legally binding interpretation and shall therefore not be relied upon as legal advice.

### What are POPs?

POP is the abbreviation for Persistent Organic Pollutants. It is a group of chemicals that persist in the environment, bioaccumulate through the food web, and pose a severe risk to human health and the environment. Exposure to POPs can lead to cancer, endocrine disruption, reproductive and immune dysfunction, and neurobehavioral and developmental disorders.

### POP's, PBT's and vPvB's

There are three groups of persistent substances mentioned in regulations:

- POP, Persistent Organic Pollutants
- PBT, Persistent, Bio-accumulative and Toxic substances
- vPvB, very Persistent and very Bio-accumulative substances

Persistent means that these substances will not (bio)degrade. Because of this, they persist for a (very) long time in the environment, travel across the whole world via water and air and jeopardise human health and environment.

Bio-accumulation occurs when humans or animals absorb a toxic substance faster than that it can lose it.

A fish swimming in polluted water will contain more and more toxins in its body because it is not able to get rid of the pollutant by itself. The accumulation continues when a predator eats the fish.

### Historic background

The risks of POPs are known for many decades; in 1978, the EU prohibited eight pesticides (directive 79/117/EEC).

Many POPs were used as pesticides, for instance, DDT, but they are also involved in industrial processes and used in solvents, plastics, flame retardants and more. They are created intentionally but also as unwanted by-products.

The EU, and also Canada and the USA, are signatories to the United Nations Environmental Programme (UNEP).

UNEP is the global environmental authority that strives for a healthy planet for all of us. Their work includes worldwide bans of hazardous chemicals and waste, including persistent organic pollutants. During several Conventions (e.g. Stockholm, Basel, Rotterdam and Geneva) provisions have been established.

In 2004 the EU published Regulation (EC) 850/2004 based on the UN provisions. It has been amended 12 times since. In 2019, further measures were found necessary. As a result, the EU has recast the first POP regulation.

**This POP Regulation (EU) 2019/1021 entered into force on July 15, 2019.**

### Relation between REACH and POP regulations

The EU has legislated the Registration, Evaluation and Authorisation of Chemicals in the REACH Regulation (EC) 1907/2006. REACH has a broader scope and more objectives than the POP regulations, but they share one goal: the ban or restriction of dangerous chemical substances.

The restrictions in Annex XVII of REACH are very similar to those in Annex I of the POP regulation.

A proposal on a POP, accepted as part of the UNEP conventions and protocols, is added to the POP regulation.

A POP already listed in Annex XVII of REACH will move to the POP regulation.



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### Recalls on POPs

The most often recalled POP is SCCP (Short Chain Chlorinated Paraffins). You will find these SCCP's in plastic parts of a wide variety of products. If market surveillance authorities do find a product containing an SCCP, then this will result in a full-scale recall. Even for products containing very low percentages of SCCP.

**The authorities will also report the selling company to the prosecutor.**

### What is new in the recast POP Regulation (EU) 2019/1021?

The main objective of the POP Regulation still is to prohibit (or severely restrict) the production, placing on the market and use of persistent organic pollutants.

The first POP regulation (EC) 850/2004 was published in 2004, two years before the REACH Regulation (EC) 1907/2006 was released and four years before the Waste Directive 2008/98/EC. The definitions and terminology of the new POP Regulation have been aligned with the REACH legislation.

The main changes of POP Regulation (EU) 2019/1021 are:

- **Deca-BDE** has been added to Annex I of the POP Regulation. Deca-BDE was already prohibited for use because it is listed as entry #67 in Annex XVII of the REACH Regulation. It is expected that it will soon be deleted from the REACH Regulation now that it is mentioned in the POP Regulation. Deca-BDE is part of poly-BDE (PBDE) group of substances that is restricted for electrical and electronic products (EEE) by the RoHS Directive 2011/65/EU. For these EEE products the RoHS Directive remains applicable instead of the POP Regulation.
- The limits for the 5 poly-BDEs (tetra, penta, hexa, hepta and deca) is 10 mg/kg each when used in substances. In addition a new limit of 500 mg/kg is now applicable to the sum of all PBDEs present in mixtures or articles.
- Pentachlorophenol (**PCP**) and its salts and esters is added to Annex I. PCP in substances was already prohibited for use because it is listed as entry #22 in Annex XVII of the REACH Regulation. Several countries (Germany, Austria and the Netherlands) regulated the presence of PCP in articles as well. It is expected that it will soon be deleted from the REACH Regulation now that it is mentioned in the POP Regulation.
- Hexachlorobutadiene (HCBd) and polychlorinated naphthalenes (PCN) were already listed in Annex I of the POP Regulation. They have now also been added to the Annex III. This implies that member states shall take action to eliminate the release of these substances into the environment as soon as possible.

### Upcoming

The European Chemical Agency (ECHA) keeps a [list of substances proposed as POPs](#).

These substances may be published in a future amendment to the POP Regulation.



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### Prohibited chemicals listed in Annex I of the POP Regulation

The production, placing on the market and use of these POPs, whether on their own, in preparations or as constituents of articles, are prohibited.

Name	CAS#	EC#	Use
Tetrabromodiphenyl ether	1) 40088-47-9 a.o	254-787-2 a.o	Flame-retardant, enclosures, circuit boards
Pentabromodiphenyl ether	1) 32534-81-9 a.o	251-084-2 a.o	Flame-retardant, enclosures, circuit boards; industrial
Hexabromodiphenyl ether	1) 36483-60-0 a.o	253-058-6 a.o	Flame-retardant, enclosures, circuit boards
Heptabromodiphenyl ether	1) 68928-80-3 a.o	273-031-2 a.o	Flame-retardant, enclosures, circuit boards; industrial
<b>Bis(pentabromophenyl) ether, Deca-bromodiphenyl ether (decaBDE)</b>	1) 1163-19-5	214-604-9	Flame-retardant, enclosures, televisions, textiles, carpets
Perfluorooctane sulfonic acid and derivatives (PFOS)	Several	Several	Many applications; printed circuit boards, water repellant /stain resistant coatings, textiles, leather, carpet, coatings and paint, adhesives, paper(board) and fire fighting foams
DDT	50-29-3	200-024-3	Pesticide
Chlordane	57-74-9	200-349-0	Pesticide, insecticide
Hexachlorocyclohexanes (HCH) including lindane	58-89-9	200-401-2	Pesticide, insecticide; unintentional by-product
Dieldrin	60-57-1	200-484-5	Agricultural; Pesticide
Endrin	72-20-8	200-775-7	Pesticide
Heptachlor	76-44-8	200-962-3	Pesticide, termiticide, wood treatment, underground cable boxes
Endosulfan	Several	204-079-4	Pesticide, insecticide
Hexachlorobenzene (HCB)	118-74-1	204-273-9	Solvent in pesticides, fungicide, fireworks, by-product industrial processes
Chlordecone	143-50-0	205-601-3	Pesticide
Aldrin	309-00-2	206-215-8	Pesticide, insecticide
Pentachlorobenzene (PeCB)	608-93-5	210-172-0	Industrial; fire-retardant; unintentional by-product
Polychlorinated biphenyls (PCB)	1336-36-3 a.o	215-648-1	Industrial; paints, kits, oils, electrical equipment, coolant fluids, insulating fluids, plasticisers
Mirex	2385-85-5	219-196-6	Insecticide, termiticide , flame-retardant
Toxaphene	8001-35-2	232-283-3	Pesticide
Hexabromobiphenyl (HBB)	1) 36355-01-8	252-994-2	Industrial, flame-retardant, electronic equipment
Hexabromocyclododecane (HBCDD)	Several	247-148-4 221-695-9	Flame-retardant, most commonly used for extended polystyrene (EPS)
Hexachlorobutadiene (HCBD)	87-68-3	201-765-5	Industrial (by-product); solvents, synthetic rubbers
<b>Pentachlorophenol and its salts and esters</b>	87-86-5 a.o	201-778-6 a.o	Insecticide, herbicide, fungicides, leather and wood preservative. Residues can be found in textiles, leather, wood and paper in products.
Polychlorinated naphthalenes (PCN)	70776-03-3 a.o	274-864-4 a.o	Many industrial applications; capacitors, additives, cable insulators, preservatives
Alkanes C <sub>10</sub> -C <sub>13</sub> , chloro (short-chain chlorinated paraffins) (SCCP)	85535-84-8 a.o	287-476-5	Many applications; lubricants, metalworking, (artificial) leather, flame-retardants, softeners, plasticisers, sealants, coolants, paints, coatings

1) Poly-brominated biphenyls (PBB) and poly-brominated diphenyl ethers (PBDE) are restricted for electrical equipment in RoHS Directive 2011/65/EU, therefore the POP Regulation does not apply for these products.



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