

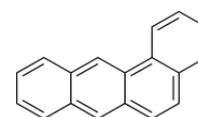
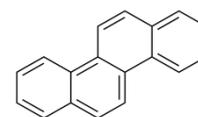
European Chemicals Agency (EChA)

## Seventeen New Substances Added to SVHC List

The [SVHC Candidate List](#) is regularly updated twice a year. In January 2018 the [European Chemicals Agency \(EChA\)](#) extended the candidate list to include seven new substances; in June 2018 a further ten substances were added. This brings the total number of listed substances of very high concern to 191 (as of July 2018). The next update is expected at the beginning of 2019.

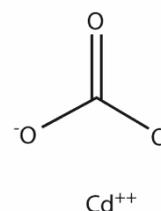
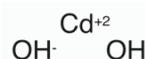
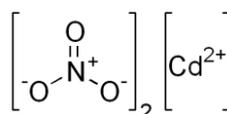
The seven candidates newly listed in January are the following substances:

- **Chrysene** (CAS 218-01-9)  
Reason for inclusion: carcinogenic, toxic, very persistent, very bioaccumulative
- **Benzo[a]anthracene** (CAS 56-55-3)  
Reason for inclusion: carcinogenic, toxic, very persistent, very bioaccumulative



Chrysene and benzo[a]anthracene belong to the group of polycyclic aromatic hydrocarbons (PAH); as so-called EU-PAH they are legally required not to exceed a concentration of 1.0 mg/kg in plastics coming into repeated contact with human skin or 0.5 mg/kg in articles intended for children. As SVHC candidates, there is a duty to communicate information for the two substances if their content in a material exceeds 0.1 % by weight (= 1000 mg/kg), independently of any expected skin contact.

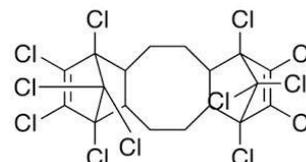
- **Cadmium nitrate** (CAS 10325-94-7)  
Reason for inclusion: mutagenic, carcinogenic
- **Cadmium hydroxide** (CAS 21041-95-2)  
Reason for inclusion: mutagenic, carcinogenic
- **Cadmium carbonate** (CAS 513-78-0)  
Reason for inclusion: mutagenic, carcinogenic



Cadmium salts are subject to regulation because of the toxicity of cadmium. They may be used as pigments in the footwear sector or as catalysts in plastics. It is unlikely that the SVHC concentration of 0.1 % will be exceeded in plastics whereas this is quite possible in pigments.

- **Dodecachloropentacyclo[12.2.1.1.1<sup>6,9</sup>.0<sup>2,13</sup>.0<sup>5,10</sup>]octadeca-7,15-diene**  
("Dechlorane Plus"<sup>™</sup>, DP, or DPMA)  
(CAS 13560-89-9, 135821-74-8, 135821-03-3)  
Reason for inclusion: very persistent, very bioaccumulative

DPMA is a chlorinated flame retardant, similar to the already known chloroparaffins. DPMA may be present in materials treated with flame retardant or may be used as a plasticiser. Concentrations exceeding the SVHC limit of 0.1 wt-% cannot be ruled out in plastics.



- **Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde, and 4-heptylphenol, branched and linear (RP-HP) with  $\geq 0.1\%$  w/w 4-heptylphenol, branched and linear (4-HPbl)**  
Reason for inclusion: hormone-like action

The reaction product described here is a mixture, one of the components of which is already listed as the SHVC candidate heptylphenol. It is a general chemical reactant with a wide range of applications, for example as a surfactant in all kinds of preparations, in colorants as well as in plastics, phenolic resins, and lubricants. The SVHC limit may be exceeded in individual cases.

The following ten candidates were added in June:

- **Octamethylcyclotetrasiloxane (D4)** (CAS 556-67-2)
- **Decamethylcyclopentasiloxane (D5)** (CAS 541-02-6)
- **Dodecamethylcyclohexasiloxane (D6)** (CAS 540-97-6)  
Reason for inclusion: very persistent, very bioaccumulative, toxic

All three of these substances of concern are siloxanes and may be present in silicone materials, such as silicone insoles, or be used in textile treatment products. Siloxanes are frequently also found in cosmetics or cleaning products. The SVHC limit may possibly be exceeded in footwear.

- **Lead** (CAS 7439-92-1)  
Reason for inclusion: toxic for reproduction

Lead is a heavy metal that is meanwhile regulated in numerous customer requirements. In the EU there is currently a legal limit of 500 mg/kg for lead for all materials in articles of a size making them likely to be placed in the mouth by children. Lead is found mainly in plastics or paints and in metals. The SVHC limit of 0.1 % may possibly be exceeded in footwear.

- **Disodium octaborate** (CAS 12008-41-2)  
Reason for inclusion: toxic for reproduction

Disodium octaborate is boron-containing salt used mainly in antifreeze products, lubricants, and cleaning products. It is unlikely that the SVHC limit of 0.1 % will be exceeded in footwear.

- **Benzo[ghi]perylene (CAS 191-24-2)**

Reason for inclusion: very persistent, very bioaccumulative, toxic

Benzo[ghi]perylene belongs to the group of PAH (polycyclic aromatic hydrocarbons) and is meanwhile regulated in numerous customer requirements. PAH are not used intentionally; PAH occur as undesired by-products in the production of mineral oils or plastics, as well as in many combustion processes and thermal production processes. It is unlikely that the SVHC limit of 0.1 % for benzo[ghi]perylene will be exceeded in footwear.

- **Terphenyl, hydrogenated (CAS 61788-32-7)**

Reason for inclusion: very persistent, very bioaccumulative

Hydrogenated terphenyl is used as a solvent or a plastic additive. Hydrogenated terphenyls may be found, for example, in plastics, polymer colorants, or cosmetics. Although it is unlikely that the SVHC limit of 0.1 % for hydrogenated terphenyl will be exceeded in footwear, this possibility cannot be completely discounted.

- **Ethylenediamine (EDA) (CAS 107-15-3)**

Reason for inclusion: respiratory sensitising properties

EDA is used as a chelating agent and pH stabiliser in numerous chemical preparations. Its presence in concentrations exceeding the SVHC limit of 0.1 % in footwear end products is unlikely.

- **Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (TMA) (CAS 552-30-7)**

Reason for inclusion: respiratory sensitising properties

Trimellitic anhydride (TMA) is a key material for the production of certain plastics such as polyesters or epoxide resins. It is unlikely that the SVHC limit will be exceeded in completely polymerized material.

- **Dicyclohexyl phthalate (DCHP) (CAS 84-61-7)**

Reason for inclusion: toxic for reproduction and hormone-like action

DCHP numbers among the phthalates and may be used as a plasticiser. The SVHC limit of 0.1% may possibly be exceeded.

Inclusion of the substances in the candidate list means a duty to inform along the entire supply chain and, where appropriate, an obligation to notify EChA. Importers of goods into the EU are recommended to enquire of manufacturers outside the EU whether one of these substances is present in the materials supplied. Manufacturers of footwear and other consumer goods whose production facilities are located in Europe must be automatically informed about the presence of SVHC substances by their materials suppliers. In their own interests, it is advisable that manufacturers also submit an enquiry to their suppliers to confirm the absence of the newly listed substances.

The complete list of SVHC candidates with reference to their relevance for footwear and footwear materials can be found on the [PFI website](#).

**Any additional questions will gladly be answered by:**

Dr. Ines Anderie

Analytical Chemistry

Tel.: +49-(0)6331 – 2490 712

E-Mail: [ines.anderie@pfi-germany.de](mailto:ines.anderie@pfi-germany.de)