

PAH limit values in consumer articles



Legal requirements in Germany and Europe

Regulation (EU) No. 1272/2013 amending Annex 17 (entry No. 50) of Regulation (EC) No. 1907/2006 (REACH) regarding polycyclic aromatic hydrocarbons. Applicable to products which are placed on the market from 27.12.2015. Corresponding violations against REACH Annex 17 are regulated (in Germany) in the Chemicals Sanctions Regulation (ChemSanktionsV).

Articles may not be marketed to the general public if any of their components made of plastic or rubber which, under normal or reasonably foreseeable conditions of use, comes into direct, prolonged or short-term repetitive contact with human skin or the oral cavity, contains more than 1.0 mg/kg of one of the 8 listed PAHs.

Such products include, for example, sports equipment such as bicycles, golf clubs, household appliances, wheeled trolleys, walking frames, tools for home use, clothing, shoes, gloves, sportswear, watch straps, masks and headbands.

Toys, including activity toys and child care articles shall not be placed on the market if any of their components made of plastic or rubber that come into direct, prolonged or short-term repetitive contact with human skin or the oral cavity, under normal or reasonably foreseeable conditions of use, contain more than 0.5 mg/kg of any of the 8 listed PAHs.

8PAHs-EU	General products	Toys, child care articles
	Limit value for each component of rubber or plastic	
Benzo[a]pyrene	1.0 mg/kg	0.5 mg/kg
Benzo[e]pyrene	1.0 mg/kg	0.5 mg/kg
Benzo[a]anthracene	1.0 mg/kg	0.5 mg/kg
Chrysene	1.0 mg/kg	0.5 mg/kg
Benzo[b]fluoranthene	1.0 mg/kg	0.5 mg/kg
Benzo[j]fluoranthene	1.0 mg/kg	0.5 mg/kg
Benzo[k]fluoranthene	1.0 mg/kg	0.5 mg/kg
Dibenzo[a,h]anthracene	1.0 mg/kg	0.5 mg/kg

(1.0 mg/kg; corresponds to 1 ppm or 0.0001%)

(0.5 mg/kg; corresponds to 0.5 ppm or 0.00005%)

Additional PAH requirements for the award of the GS mark

The GS mark is governed by the German Product Safety Act (ProdSG). The grant for certain product groups is optional and awarded only at the manufacturer's request after accredited testing.

For **15 PAKs**, the limit values defined in accordance with **AfPS GS 2019:01 PAK** apply up to **01.07.2020**. Besides plastic and rubber, this is **also applicable to other materials and coatings**.

15 PAHs - GS	Limit value Class 1	Limit value Class 2		Limit value Class 3	
Materials with:	intended mouth contact / in toys with intended and prolonged skin contact >30 s	not Class 1, anticipated prolonged skin contact >30 s (or repeated short term)		not Class 1/Class 2, anticipated skin contact up to 30 s (short term)	
		Toys	Products	Toys	Products
10 PAH carcinogens	< 0.2 mg/kg	< 0.2 mg/kg	< 0.5 mg/kg	< 0.5 mg/kg	< 1 mg/kg
	Limit value applies to any of the 10 individual carcinogenic PAH substances				
4 PAH not carcinogens	< 1 mg/kg	< 5 mg/kg	< 10 mg/kg	< 20 mg/kg	< 50 mg/kg
	Total limit value for the 4 non-carcinogenic PAHs combined				
Naphthalene	< 1 mg/kg	< 2 mg/kg		< 10 mg/kg	
15 PAH	< 1 mg/kg	< 5 mg/kg	< 10 mg/kg	< 20 mg/kg	< 50 mg/kg
	Total limit value for all 15 PAHs combined				

DEKRA offers fast and reliable PAH analysis of your materials, components and products in our accredited laboratories in Germany and in China.

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