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USE OF PAHS UNDER REVIEW FOR INCLUSION ON REACH SVHC CANDIDATE LIST¹

Pitch coal tar and related oil distillates are now included on the Registry of Intentions, leading to possible inclusion on candidate list for authorization. Polycyclic-aromatic Hydrocarbons (PAHs) are high percentage constituents of Pitch Coal Tars and related oil distillates. Hence PAHs are an important characteristic, permitting estimation of the possible use of tar or oil in commercial products².

Coal tars and related oil distillates are the pre-dominant substance group on the intention list to be included in the SVHC candidate list and subsequently in Annex XIV of the REACH regulation¹. Coal tars, oil distillates and other organic materials are used in the production of commercial products as plasticizers, adhesives, additives, mold process chemicals and lubricants.

PAHs as important constituents are composed from incomplete combusting or simply contained in the distillate fraction like in Anthracene oils^{2,3}. In addition, the incomplete combustion can cause the substance to be discharged, which when absorbed by other solid matters can lead to environmental contamination and hazard to humans⁴. Whereas the PAH themselves may not be carcinogenic, it is their metabolism products which makes them harmful to humans.



¹ [More Information](#)

² Journal of Analytical Chemistry, 2009 Vol.64, No.4, pp361-365. Determining the content of Polycyclic-aromatic Hydrocarbons in Coal Tar Pitch. I.M. Afanasov et al.

³ Coke and Chemistry, 2008 Vol.51, No.8 pp.321-325 Determining the content of Polycyclic-aromatic Hydrocarbons in Industrial Samples of Coar Tar and Pitch.

⁴ [SGS safeguards reference number: 04305, August 05.](#)

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Generally, PAH can be found not only in organic matters i.e. rubbers, plastics etc but also in other environments i.e. factory- sites (gas works, refineries..) and agro-alimentary matrices etc. Currently, more than one hundred kinds of PAHs have been identified while only sixteen are regulated by US Environmental Protection Agency⁵ (Table 1). Among these substances some have been identified with high toxicity, mutagenity, carcinogenity and/or reprotoxicity. These substances have been subject of a vast number of scientific studies⁴ and legal regulations. Only recently the PAH have been included as the first chemical parameter for the German GS mark^{6,7}.

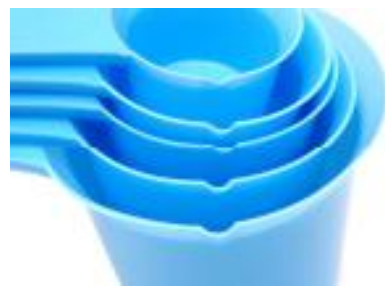


Table 1

Name	CAS No.	Structure	Name	CAS No.	Structure
Acenaphthene	000083-32-9		Chrysene	000218-01-9	
Acenaphthylene	000208-96-8		Dibenzo[a,h]anthracene	000053-70-3	
Anthracene	000120-12-7		Fluoranthene	000206-44-0	
Benzo[a]anthracene	000056-55-3		Fluorene	000086-73-7	
Benzo[a]pyrene	000050-32-8		Indeno[1,2,3-c,d]pyrene	000193-39-5	
Benzo[b]fluoranthene	000205-99-2		Naphthalene	000091-20-3	
Benzo[g,h,i]perylene	000191-24-2		Phenanthrene	000085-01-8	
Benzo[k]fluoranthene	000207-08-9		Pyrene	000129-00-0	

The table 1 shows sixteen compounds of PAHs regulated by US Environmental Protection Agency.

⁵ US EPA Method 8100 page 2. and US EPA Method 8310 page 1

⁶ §§ 30 & 31 of LFBG [Click Here](#)

⁷ § 4 of GPSG [Click Here](#)

In regards to REACH and impact on EU & EEA suppliers, the inclusion of pitch coal tar and related oil distillates on the candidate list would lead to immediate requirement for communication down the supply chain for articles >0.1% w/w and a safety data sheet for non gaseous preparations >0.1%. Later inclusion on Annex XIV will mean, importers will need to apply for authorization.

SGS will follow up and inform you about developments on PAHs in E&E products as a complementary service. We can help you to control the risks.

Through our global network of laboratories, we enable to provide a range of services, including analytical testing and consultancy work for technical and non-technical parameters in a comprehensive range of E&E products and consumer products in chemical field for the worldwide. Please do not hesitate to contact us for further information. Visit [our website](#) or contact us at reach@sgs.com



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