EU Compliance for the Tyre Industry

Following attendance at the 2010 Brityrex Exhibition in Manchester this month, CIRS would like to outline how the tyre Industry is impacted by the EU REACH regulation and summarise the obligations of the tyre industry under EC 1222/2009, which is due to come in to force on 1st July 2012.

REACH –PAHs and SVHCs

Under the REACH regulation (Annex XVII), the amount of PAHs (Polycyclic aromatic hydrocarbons) that can be used in the rubber production process is limited. PAHs are persistent organic pollutants made up of two or more carbon rings and hydrogen atoms and are contained in oil, coal and tar deposits. The restriction of PAHs under REACH covers 8 specific PAHs as follows:

Name	Abbre.	CAS	REACH Limits
Benzo[a]pyrene	BaP	50-32-8	<1mg/kg
Benzo[e]pyrene	BeP	192-97-2	The sum of 8 PAHs shall not be greater than 10mg/kg
Benzo[a]anthracene	BaA	56-55-3	
Chrysene	CHR	218-01-9	
Benzo[b]fluoranthene	BbF	205-99-2	
Benzo[k]fluoranthene	BkF	207-08-9	
Benzo[j]fluorant	BjFA	205-82-3	
Indeno[c,d]pyrene	DBA	53-70-3	

These eight PAHs are proven carcinogens, mutagens and have shown to be toxic to reproduction. As such, there is a restriction on the amount that can be present in tyres. Some PAHs can be extremely toxic upon exposure and these compounds can be present in 'extender oils' used in tyre manufacture. According to the Environment agency (responsible for monitoring and enforcing chemical compliance), 'the onus will be on European Manufactures to comply' while 'distributors found to be selling tyres containing excessive levels of PAH could be faced with enforcement proceedings.'

There is no visual test to determine the presence of PAHs so it is necessary to evaluate the level of PAHs using the standard test procedure (IP346 for extender oil or ISO 21461 for tyres). Ms. Claire Cox of the EA's Chemical Compliance Team

explained in a recent press release that 'although this is primarily European legislation, manufacturers from other countries around the world need to comply with it in order to sell their products legally in the European market.'

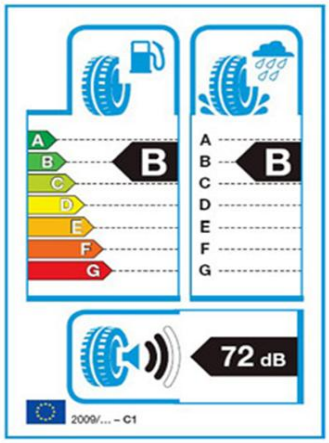
In order to ensure compliance with this legislation, it is necessary to analyze the product (extender oil or tyre) to determine the PAH concentration. This analysis can be commissioned by any company in the supply chain; however, the UK Environmental Agency has warned that 'manufacturers and importers of extender oils must conduct analysis of the extender oil every six months or after each major operational change.' Once the analysis has been carried out, a company should keep records as evidence of compliance.

In addition to testing for PAHs, tyres should also be screened for the Substance of Very High Concern（SVHC）'s that they are most likely to contain. Under the reach regulation there are 38 SVHCs on the candidate list declared by ECHA. Suppliers of tyres which contain any substance on the Candidate List in a concentration above 0.1% (w/w) have to provide sufficient information (such as SDS, substance declaration) to allow safe use of the article to their customers or upon request, to a consumer within 45 days of the receipt of the request. The SVHC candidate list can be accessed via **here**.

Labelling – Noise Pollution, Wet Grip, Fuel Efficiency

In accordance with Regulation (EC) No 1222/2009, tyres for sale in Europe shall display a label outlining their specification in terms of three parameters:

- The fuel efficiency class
- The wet grip class
- The external rolling noise measured value (in decibels)



The provision of the information on the standard label aims to ensure that safer, quieter and more fuel efficient tyres are placed on the EU market and encourages tyre manufactures to optimize those parameters. Currently, tyres cannot easily

be compared in the absence of labeling and a harmonized testing regime. Under this regulation, it is necessary to measure the parameters of the tyre in accordance with UNECE Regulation no. 117 and then communicate these results in the form of a label on tyres (visible at the point of sale) and via technical promotion material.

For more information about our upcoming events and services for the tyre industry, please go to: http://www.cirs-reach.com/tyre

About Us

Headquartered in Hangzhou, China, CIRS provides comprehensive independent services covering testing, certification and chemical regulatory consulting services. CIRS is one of the largest REACH compliance service providers in the world and its subsidiary company in Ireland is the largest REACH only representative.

CIRS has established branches in Ireland, Ningbo, Donguan and Wenzhou and set up representative offices in USA, Israel and Turkey, providing toxic and hazardous substances testing and certification services to a wide range of industries such as electrical and electronics, toys, textiles, car, furniture, food contact materials and chemical industry

CIRS has the qualifications of CNAS and CMA. CIRS is also a member of Japan Joint Article Management Promotion Consortium (JAMP) and Helsinki REACH Centre (HRC). With its reports recognized all over the world, CIRS gains trusts from renowned companies worldwide.

CIRS is the first and also the only third party testing agency in mainland China that offers PAHs testing services according to both ISO 21461 designated by REACH and the German ZEK method. CIRS has offered SVHC and PAHs testing services and labelling services to dozens of leading tyre manufacturers in the world with its reports and testing method widely accepted.

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