

VULCAN[®] 6-LP carbon black



GENERAL DESCRIPTION

Specific regulations and certifications are in place in the European Union (EU) and China that limits the content of polycyclic aromatic hydrocarbons (PAH) in certain rubber articles. Examples of such are:

- ◆ Regulation EU 1272/2013 amending REACH Annex XVII, effective on 27 December 2015
- ◆ Geprüfte Sicherheit ("GS Mark"), a voluntary safety certification mark in Germany
- ◆ Dutch (NL) Regulation Materials and Chemicals for Drinking Water Supplies
- ◆ Chinese (CN) Regulation GB 9685/2016 for Food Contact, effective on 19 October 2017

As part of Cabot's ongoing commitment to address changing marketplace needs and deliver solutions to meet our customers' future product design and processing challenges, Cabot has developed a series of low PAH carbon blacks, identified by the suffix "LP." The Cabot LP carbon black series is manufactured via a special process resulting in a controlled, very low level of PAH. The Cabot LP carbon black series complies with the above mentioned European, Chinese and Dutch regulations and can be used to achieve GS Mark certification under certain loading conditions.

VULCAN[®] 6-LP carbon black is a member of the Cabot LP carbon black series. It is a patented pelletized reinforcing carbon black and is characterized by a controlled, very low PAH content.

PERFORMANCE FEATURES

VULCAN[®] 6-LP carbon black is suitable for rubber articles that require a very low PAH and higher reinforcement, strength, abrasion and tearing resistance level than is offered by semi-reinforcing carbon blacks. It can be used in rubber applications currently based on ASTM N300 and N200 carbon blacks that require very low PAH content.

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TYPICAL APPLICATIONS

1) Rubber products to be placed in the EU and categorized under Regulation EU 1272/2013 amending REACH Annex XVII may include:

- ♦ Toys and childcare articles
- ♦ Sport equipment such as bicycles, golf clubs and racquets
- ♦ Household utensils, trolleys and walking frames
- ♦ Tools for domestic use
- ♦ Clothing, footwear, gloves and sport wear
- ♦ Watch straps, wrist bands, masks, and head bands

2) GS Mark certification includes rubber products intended to be taken in the mouth or with foreseeable long or repeated short-term skin contact such as those mentioned in the above EU regulation

3) Rubber products in contact with food in China such as:

- ♦ O-rings, seals, gaskets
- ♦ Belts in food transportation systems
- ♦ Milk inflation liners
- ♦ Hoses

4) Rubber products in contact with drinking water supplies in the Netherlands such as:

- ♦ Hoses, membranes, liners in drinking water system (pipes, tanks)

VULCAN® 6-LP carbon black is used in rubber articles which require high reinforcement, strength, abrasion and tearing resistance. It is the product of choice to substitute for ASTM N200 and N300 type carbon black products in very low PAH content rubber applications.

TECHNICAL DATA

VULCAN® 6-LP carbon black is a reinforcing carbon black and is characterized by a controlled, very low PAH content.

PROPERTY	TEST METHOD	UNITS	TYPICAL VALUE
Iodine adsorption number	ASTM D1510	mg/g	121
STSA surface area	ASTM D6556	m ² /g	104
Oil absorption number (OAN)	ASTM D2414	ml/100g	114
OAN after crushing (COAN)	ASTM D3493	ml/100g	98

PAH CONTENT*:	TEST METHOD	UNITS	MAXIMUM VALUE
Benzo(a)pyrene	Cabot internal test	ppm	0.25
For each of 8 PAH included in EU list	Cabot internal test	ppm	1
For sum of 18 PAH included in GS Mark list	Cabot internal test	ppm	20

* Cabot internal test method requires 48 hours toluene extraction (Soxhlet)

* Please contact your Cabot Technical Service representative to learn more about the usage of our LP series of low PAH carbon blacks to achieve CN Regulation for Food Contact, NL Regulation for Drinking Water, GS Mark certification or other industry specifications/requirements

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One or more of these Cabot carbon black products may be covered by one or more of the following patents and pending patent applications.

PATENTS: AR063605B1, CA2668893, CN101573417B, EG26887, IN276762, IDP0031241, JP6096399, KR101403171, MX305870, MY160001A, RU2450039, SA2916, TW1414564, US8034316B2, US8710136B2 **APPLICATIONS:** BRPI0718823-4, EP2087046A, TH100036A, UAEMP421/2009



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