

SPHERON[®] 4000-LP carbon black



GENERAL DESCRIPTION

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

- Regulation EU 1272/2013 amending REACH Annex XVII, effective on 27 December 2015
- Geprüfte Sicherheit ("GS Mark"), a voluntary safety certification mark in Germany

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 new EU limits and can be used to achieve GS mark certification under certain loading conditions.

SPHERON[®] 4000-LP carbon black is a member of the Cabot LP carbon black series. It is a pelletized semi-reinforcing carbon black, with a very low surface area and structure, and is characterized by a controlled, very low PAH content.

PERFORMANCE FEATURES

SPHERON[®] 4000-LP carbon black offers excellent rubber compound flowability by imparting low viscosity even at high loadings. Its unique morphology enables higher loading than standard ASTM N500, N600 and N700 series carbon black. After some PHR loading adjustment, SPHERON[®] 4000-LP carbon black can provide similar strength, reinforcement and electrical properties to rubber compounds as ASTM N774, N772 and N762 type carbon blacks. SPHERON[®] 4000-LP carbon black has a controlled, very low PAH content.

SPHERON® 4000-LP carbon black

TYPICAL APPLICATIONS

Rubber products to be placed in the EU market 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

SPHERON® 4000-LP carbon black is the product of choice to substitute for ASTM N774, N772 and N762 type carbon black products in very low PAH content rubber applications.

TECHNICAL DATA

SPHERON® 4000-LP carbon black has a very low surface area and structure (low OAN) and is characterized by a controlled, very low PAH content.

PROPERTY	TEST METHOD	UNITS	Typical VALUE
Iodine adsorption number	ASTM D1510	mg/g	31
STSA surface area	ASTM D6556	m ² /g	29
Oil absorption number (OAN)	ASTM D2414	ml/100g	51
OAN after crushing (COAN)	ASTM D3493	ml/100g	49

PAH content *:	TEST METHOD	UNITS	Maximum VALUE
Benzo(a)pyrene	Cabot internal test	ppm	1
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 using our LP carbon black series to achieve GS Mark certification or other industry specifications/requirements

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