



Birla Carbon Carbon Black Regulatory Information Sheet – Low PAH Rubber Products

This regulatory information sheet applies to the following products:

Birla Carbon
BC3031
BC3034
BC3035
BC3041
BC3051
BC3066
BC3104
BC3106

Chemical Name: Carbon Black

CAS #: 1333-86-4

Hazard Classifications

International Agency for Research on Cancer (IARC)

With regard to carcinogenic, mutagenic or toxic for reproduction (CMR) Category 1 and Category 2 chemicals, it is noted that the International Agency for Research on Cancer (IARC) concluded that there is “sufficient evidence” in experimental animal studies for the carcinogenicity of carbon black. IARC’s overall evaluation is that carbon black is “possibly carcinogenic to humans (Group 2B)”. However, it has been demonstrated that the specific mechanism of tumor induction by carbon black in animals (specifically, rats) is not relevant to humans. Therefore, the International Carbon Black Association (ICBA) (of which Birla Carbon is a member) has not classified carbon black as carcinogenic. This conclusion is also based on technical guidance from the European Chemicals Agency (ECHA) that good quality human data should always take precedence over experimental animal data. We continue to believe that carbon black does not present a health hazard when handled in accordance with good housekeeping and safe workplace practices. See Section 11 of the Safety Data Sheet for additional information.

United Nations Globally Harmonized System of Classification and Labeling (GHS)

According to the principles of the UN GHS, carbon black is not classified as hazardous for any endpoints.

European Union

Carbon black is not classified as a hazardous substance according to Regulation (EC) No. 1272/2008 on Classification, Labeling, and Packaging of Hazardous Substances (CLP).

United States

Carbon black is classified as hazardous, as a combustible dust, by the United States 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Food Contact Information

European Union

Regulation EU 10/2011 has harmonized the purity criteria applicable to carbon blacks used in plastics coming into contact with food. The following requirements apply:

Carbon black (Ref. No. 42080)

- Primary particles of 10 – 300 nm which are aggregated to a size of 100 –1200nm which may form agglomerates within the size distribution of 300nm – mm.
- Toluene extractable: maximum 0.1 %, determined according to ISO 6209 method.
- UV absorption of cyclohexane extract at 386 nm: < 0.02 AU for a 1 cm cell or < 0.1 AU for a 5 cm cell, determined according to a generally recognized method of analysis.



- Benzo(a)pyrene content: max 0.25 mg/kg carbon black.
 - Maximum use level of carbon black in the polymer: 2.5% w/w.

Please contact your Birla Carbon representative for more information on specific products listed on this information sheet.

Resolution AP (89) 1 permits the use of carbon black as a coloring additive in plastic consumer articles coming into contact with food. The following requirements apply:

- Toluene extractable: maximum 0.15 %,
- Metals shall not exceed certain limits (Sb: 0.05%, As: 0.01%, Ba: 0.01%, Cd: 0.01%, Cr: 0.1%, Pb: 0.01%, Hg: 0.005%, and Se: 0.01%)
- Aromatic amines shall not exceed 500 ppm

The products listed on this regulatory information meet the requirements specified by Resolution AP (89) 1.

There are no EU harmonized regulations for other food contact applications such as rubber, inks, or coatings. Therefore, the applicable laws of each member state should be consulted. Please contact your Birla Carbon representative for more information on specific products.

Germany

BfR IX permits the use of carbon black as a coloring additive in plastics for consumer articles production. The following requirements apply:

- Carbon black meets the requirements of EU 10/2011
- Metals shall not exceed certain limits (Sb: 0.05%, As: 0.01%, Ba: 0.01%, Cd: 0.01%, Cr: 0.1%, Pb: 0.01%, Hg: 0.005%, Se: 0.01%)

Please contact your Birla Carbon representative for more information on specific products listed on this information sheet.

BfR XIV permits the use of carbon black as an additive in plastic dispersions that are used in the production of coatings for food contact articles. The following requirements apply:

- Carbon black meets the requirements of EU 10/2011

Please contact your Birla Carbon representative for more information on specific products listed on this information sheet.

BfR XXI permits the use of carbon black as filler in linings provided it meets the purity requirements specified in 82nd Communication of the Bundesgesundheitsbl. 15 (1972) 268 and does not exceed 30%. Please contact your Birla Carbon representative for more information on specific products listed on this information sheet.

Switzerland

SR 817.023.21 permits the use of carbon black as an additive in the manufacture of food contact plastic articles, provided it meets the following:

- use level of carbon black in the polymer: 2.5% w/w) (Annex 2) and printing inks (Annex 10)
- Primary particles of 10 – 300 nm, aggregates of 100 –1200nm, agglomerates of 300nm.
- Toluene extractable: maximum 0.1 %
- UV absorption of cyclohexane extract at 386 nm: < 0.02 AU for a 1 cm cell or < 0.1 AU for a 5 cm cell
- Benzo(a)pyrene content: max 0.25 mg/kg carbon black

Please contact your Birla Carbon representative for more information on specific products listed on this information sheet.

China

GB9685-2016 permits the use of carbon black in food contact materials, including plastics, coatings, inks, paper, and rubber applications (max use is 50% by weight). The following requirements apply:

- Toluene extractable: maximum 1.0 %
- Benzo(a)pyrene content: max 0.25 mg/kg carbon black



- Metals shall not exceed certain limits (Sb: 0.05%, As: 0.01%, Ba: 0.01%, Cd: 0.01%, Cr: 0.1%, Pb: 0.01%, Hg: 0.005%, Se: 0.01%)

Please contact your Birla Carbon representative for more information on specific products listed on this information sheet.

United States

The products listed on this page are permitted for use in certain FDA applications identified specifically by the following:

- 21 CFR 177.2400(b)(4) - Perfluorocarbon cured elastomers (Restrictions: Not to exceed 15 parts per 100 parts of the terpolymer)
- 21 CFR 177.2600(c)(4)(v) - Rubber articles intended for repeated use – Fillers (Restrictions: Total carbon black not to exceed 50 percent by weight of rubber product; furnace combustion black content not to exceed 10 percent by weight of rubber products intended for use in contact with milk or edible oils.)

Please contact your Birla Carbon representative for more information on specific products listed on this information sheet.

EU REACH and SVHC

In December 2006, the EU Parliament adopted the regulatory framework for Registration, Evaluation and Authorisation of Chemicals, Regulation (EC) No 1907/2006. REACH entered into force on the 1st of June 2007 and requires manufacturers and/or importers of chemicals to pre-register and then to register these substances in accordance with the procedures and timelines prescribed within the regulation. Carbon black (CAS# 1333-86-4, EINECS# 215-609-9) meets the definition of “substance” under Chapter 2, Article 3 of the REACH Regulation. The products listed on this page have been registered under REACH.

Under the REACH Regulation, Substances of Very High Concern (SVHC) should be documented if present at a concentration exceeding 0.1% in a substance such as carbon black (CAS#1333-86-4, EINECS# 215-609-9). As of the date of this communication, there are currently 174 substances on the REACH Candidate List. The Candidate List was last updated on 07 July 2017. To the best of our knowledge, Birla Carbon’s carbon black products and packaging do not contain any SVHCs above the threshold concentration, based on ECHA’s Candidate list, published 07 July 2017. These chemicals are not used as feedstock in the production of carbon black and are not used as additives in our processes.

EU and US Heavy Metals Regulations

Many of these directives, regulations, and standards apply to finished consumer products or production facilities rather than raw materials such as carbon black.

- Packaging and Packaging Waste:
 - EU Directive 94/62/EC
 - US Coalition of North-Eastern Governors (CONEG)
- End of Life Vehicles
 - EU Directive 2000/53/EC, modified by Commission Decision 2002/52/EC
- Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment
 - EU Directive 2011/65/EU
- US Consumer Product Safety Improvement Act of 2008
- Toy Norms
 - European Toy Standard EN 71-3
 - European Toy Standard EN 71-9
 - EU 2009/48/EC
 - ASTM F 963 - Standard Consumer Safety Specification for Toy Safety.
 - Mercosur Standard NM 300-2:2002 – Safety of Toys, Part 3: Migration of Certain Elements
- Global Automotive Declarable Substances List (GADSL)



The heavy metals and other compounds specified by these regulations and standards are not intentionally added to Birla Carbon's carbon black products during the manufacturing or handling processes. As a result, Birla Carbon does not routinely analyze for these substances; however, based on process knowledge and analytical data of several carbon black products, Birla Carbon can confirm that its carbon black products do not contain the below listed substances at concentrations greater than the threshold levels:

- 0.1% by weight – lead, mercury, hexavalent chromium, polybrominated biphenyls (PBBs), and polybrominated diphenyl ethers (PDBEs including Decabromodiphenyl ether Deca-BDE)
- 0.01% by weight – cadmium
- 0.1% by weight in homogenous materials for each of the following phthalates: bis(2-ethylhexyl)phthalate (DEHP), butyl benzyl phthalate (BBP), dibutyl phthalate (DBP) and diisobutyl phthalate (DIBP)

Other Substances of Concern

These compounds and substances are not used as feedstock in the production of carbon black and are not used as additives in our process. They are not expected to be contained in our products; therefore, analyses for these compounds and substances have not been performed.

- Acrylamide
- Asbestos
- Azo compounds, aromatic amines and dyes, melamine
- BADGE, BFDGE, and NOGE
- Benzophenone
- BHT and BHA
- Bisphenol A
- Chlorofluorocarbons, halogenated aromatic and aliphatic compounds, including PCBs, PCTs, PFOS, PFOA, PBBs, PBDs
- Endocrine disrupters
- Formaldehyde
- Furans and dioxins
- Glycol ethers
- Latex
- Pesticides and biocides
- Persistent organic pollutants (POPs)
- Phenols
- Phthalates and phthalate compounds
- Organotin and its derivatives
- Ozone depleting substances (ODS)
- Radioactive substances
- Volatile organic compounds (VOCs)

Origin of Birla Carbon's Products

Birla Carbon products are made from feedstocks of mineral origin and are not made from feedstocks of plant or animal origin or from any animal or plant byproducts. Birla Carbon's carbon black products do not contain nor do they come in contact with any of the following:

- Allergens
- Endangered species listed in the CITES Appendices (I, II, and III) - (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) - or the IUCN Red List of Threatened Species.
- Genetically modified (GMO) products or materials

Cosmetics

Birla Carbon's carbon black products are not approved for use in cosmetics.

Medical Use

Birla Carbon's carbon black products are not approved for medical applications. Birla Carbon's carbon black products are not suitable for use in pharmaceuticals or pharmaceutical packaging.

Conflict Minerals

Birla Carbon confirms that neither its products nor its feedstocks contain conflict minerals as defined in Title XV of the Dodd–Frank Wall Street Reform and Consumer Protection Act (Law H.R. 4173).

California Proposition 65

Birla Carbon's Carbon Black products contain the following Proposition 65 Chemicals:



- “Carbon black (airborne, unbound particles of respirable size)”
Note: All three listing qualifiers (airborne, unbound (not bound within a matrix), and respirable size (10 micrometers or less in diameter)) must be met for this substance to be considered a Proposition 65 substance
- Certain polycyclic aromatic hydrocarbons (PAHs)* that may be found adsorbed onto the surface of carbon black
- “Carbon-black extracts*”
- Metal impurities*: arsenic, cadmium, lead, mercury, and nickel

*These chemical elements, by themselves, are not used as feedstock in the production of carbon black and are not used as additives in our process. They may be present in trace amounts in carbon black.

International Chemical Inventories

Carbon black (CAS # 1333-86-4) is listed on the following inventories:

Australia – Australian Inventory of Chemical Substances (AICS)

Canada – Canadian Domestic Substances List (DSL)

China – Chinese Inventory (IECSC)

Europe – European Inventory of Existing Commercial Chemical Substances (EINECS) (215-609-9)

Japan – Japanese Existing and New Chemical Substances (ENCS) (METI No. 5-3328)

Japan – Inventory of Substances Notified under the Industrial Safety and Health Law

Korea – Korean Existing Chemicals List (KECL) (KE-04682)

New Zealand – New Zealand Hazardous Substances and New Organisms Act (HSNO – HSR002801)

Philippine – Philippine Inventory of Chemicals and Chemical Substances (PICCS)

Taiwan – Taiwan National Existing Chemical Substances Inventory (NECSI)

United States – United States Toxic Substances Control Act (TSCA) Inventory

For additional information or for updates to this information, please email bc.hse@adityabirla.com or visit www.birlacarbon.com

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