

BC1003, BC1004,
BC1083, BC1034,
BC1051

ADITYA BIRLA



BIRLA CARBON

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CARBON BLACKS FOR LOW
PERMEABILITY APPLICATIONS



In addition to its reinforcing capabilities, inclusion of carbon black aggregates in a rubber compound increases tortuosity, thereby decreasing air permeability. Air retention is critical in maintaining the shape of a tire, which impact both tire lifetime and tire rolling resistance. Birla Carbon offers products aimed at decreasing air permeability while balancing rolling resistance and compound cost.

CARBON BLACKS FOR INNER LINER APPLICATIONS

The inner liner compound of a tire has an important role in maintaining the structural integrity and rolling resistance of the tire by maintaining inflation pressure. To help tire designers, Birla Carbon offers solutions to improve the performance of these compounds as well as inner tubes and other applications requiring low gas permeability.

All grades offer lower grit than conventional ASTM options. This allows for thinner barrier layers to be produced due to a reduced risk of pin holes. This will reduce compound and scrap costs, component weight and tire rolling resistance.

Property	Hardness	tan δ max	Oxygen Permeance	Compound Cost
N660 (60 phr)	100	100	100	-
BC1004 (60 phr)	98.1	93.7	98.8	↔
BC1004 (65 phr)	101.9	100.4	78.7	↘
BC1003 (90 phr)	107.4	110.8	78.0	↓

TARGET APPLICATION: INNER LINER FOR PCR, TBR, OTR

GRADE	FEATURE	PRODUCT BENEFIT
BC1004	Low surface area and medium structure	Balance of lower oxygen permeance and rolling resistance.
BC1003	Low surface area and structure	High loadings can be achieved to meet hardness specs to give reduced compound cost and very low permeability.
BC1083	Very coarse particle size and medium-low structure	Very high loadings can be achieved to meet hardness specs to give reduced compound cost and very low permeability.
BC1034 BC1051	Very low grit, but colloiddally equivalent to currently used grades	Thinner innerliners can be produced with no formulation change required.

ABOUT BIRLA CARBON

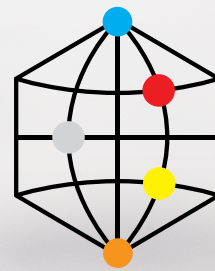
Birla Carbon is a leading global supplier of carbon black. As one of the flagship businesses of the leading Indian multinational conglomerate, the **Aditya Birla Group**, Birla Carbon provides innovative sustainable carbon black solutions that enhance the performance of paints and coatings, inks and toners, plastics, adhesives, sealants, textile fibers, mechanical rubber goods, tires, Energy Systems, and Sustainable Carbonaceous Materials.

As an ardent practitioner of sustainable development, Birla Carbon's Sustainable Operational Excellence (SOE) strategy focuses on employee safety, environmental stewardship, efficient use of carbon sources, product circularity and sustainability, and

a key focus on conducting operations in a socially and ethically responsible manner. Birla Carbon has been recognized by EcoVadis since 2016 as an advanced practitioner of sustainability. Our current rating is available on the **Birla Carbon Sustainability webpage**.

Birla Carbon's Purpose, 'Share the Strength', is about balanced and shared leadership, working at the product level to innovate cutting edge solutions through collaboration with its people, customers, and communities and backed by knowledge built over a century.

For more information, visit [birlacarbon.com](https://www.birlacarbon.com), or follow us [@BirlaCarbon](#) on [Twitter](#), [LinkedIn](#), [Facebook](#), or [Instagram](#).



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