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CARBON BLACKS

SPHERON®

PRODUCT DESCRIPTION:

The Spheron line of carbon blacks is very unique and the cleanest grade of carbon blacks produced. With very meticulous, specialized manufacturing techniques, Cabot Corporation can virtually eliminate hard particle carbon grit, salts, metallic rust, etc. producing extremely clean grades of custom carbon blacks varying in particle size and structure. Spheron carbon blacks were developed to meet very challenging, demanding applications where standard blacks failed. Even less demanding applications have utilized these blacks to improve many products' performance and/or processing properties. Elastomeric parts such as: molded and sheeted articles, hoses, belts and profiles all have gained important advantages using these carbon blacks.

Compounders choose carbon blacks basically by Iodine and DBP values. Iodine number represents the black's surface area. The higher the number, the more surface area is available to reinforce the rubber matrix. This affects failure properties like abrasion, tear, tensile strength, etc. The DBP number represents the structure (bulkiness) of the black. Again, the higher DBP number equates to higher structure. This affects non-failure properties like modulus, die swell, loading capacity, conductivity and especially dispersion.

<i>Spheron</i>	<i>Iodine</i>	<i>DBP</i>	<i>Replacing</i>	<i>Improvements</i>
4000	32	52	N762	flow, loadability, lower viscosity
5000A	27	120	N550 / N650	surface defects, dispersion, ECD, dispersability
6000	20	92	N660 / N774	Surface defects, dispersion, ECD, dimensional stability

APPLICATIONS:

Spheron 4000 - injection and extruded parts, high hardness profiles, O-rings, gaskets, seals, hydraulic hoses, intricately molded dynamic parts, HNBR and NBR articles. Improves flow and mold cleanliness.

Spheron 5000A - extruded parts requiring very smooth surface finish and/or corrosion resistance, radiator hoses (electrostatic cracking resistance), injection or compression parts requiring excellent dispersion and with respectable physical properties.

Spheron 6000 - hoses (coolant, hydraulic, etc.), sponge and low hardness articles, belts and low viscosity extrusions.

For standard ASTM carbon black grades or cleaner-than-standard grades (not as clean as Spheron grades) as well as conductive blacks, see Vulcan®, Sterling® and Conductive Carbon Black technical data sheets.

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