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CARBON BLACKS
-SEMI-REINFORCING-

STERLING® BLACKS

PRODUCT DESCRIPTION:

This line of Sterling carbon blacks manufactured by Cabot Corporation are the cleanest version of standard grade carbon blacks. Sterling grade carbon blacks are classified as semi-reinforcing with the exception of Sterling C which is a conductive black. During careful manufacturing techniques, the impurities of the standard grade blacks are reduced. Impurities like hard particle carbon grit, metallic rust, stainless steel, aluminum salts, sulfur, etc. do affect physical and surface properties of elastomeric vulcanizates. Compounders have seen physical improvements especially in dynamic properties (flex fatigue), ECD (electrochemical degradation), tensile strength, elongation, tan delta, surface appearance, hot tear resistance, etc. utilizing these carbon blacks. Also, due to their cleaner nature, these blacks have contributed to smoother injection, extruded and compression molded stocks, lower scrap rates, improved dispersion, fewer screen changes and less wear on production equipment.

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.

The chart below lists typical values and applications for various standard ASTM grade carbon blacks cross-referenced with Sterling products available from Akrochem.

Sterling Series Products:

<i>ASTM</i>	<i>Iodine</i>	<i>DBP</i>	<i>Sterling Product</i>	<i>Applications</i>
N990	9-11	30-40	1120*	Engine/body mounts, dynamic, high duro parts
N774	25-33	68-76	NS	Gaskets, seals, wiper blades, hose, extruded profiles
N762	23-31	61-69	NS-1	Wiper blades/o-rings, hose, thin-wall, dynamic parts
N700 type	16-26	29-39	1120	Engine/body mounts, dynamic, high duro parts
N660	31-41	85-95	V	Engine mounts, seals, gaskets, hose, tubes
N650	31-41	117-127	VH	Weather stripping, channeling, roofing membranes
N550	38-48	116-126	SO	Seals, stripping, hose, belts, extruded profiles
N293	140-150	95-105	C	Conductive, ESD, wire & cable, insulators, shoe soles

* Sterling 1120 is not an exact match for N990.

For critical applications that simply cannot tolerate surface imperfections (Class A finishes), need extreme dynamic properties, superior dispersion, smoothness of molded parts (gloss) or extrudates or just very demanding compound specifications, see the Spheron® Technical Data Sheet.

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