



255 Fountain Street Akron, Ohio 44304-1991  
 330-535-2100 ♦ 800-321-2260 ♦ Fax 330-535-8947

**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>
<b>N990</b>	9-11	30-40	1120*	Engine/body mounts, dynamic, high duro parts
<b>N774</b>	25-33	68-76	NS	Gaskets, seals, wiper blades, hose, extruded profiles
<b>N762</b>	23-31	61-69	NS-1	Wiper blades/o-rings, hose, thin-wall, dynamic parts
<b>N700 type</b>	16-26	29-39	1120	Engine/body mounts, dynamic, high duro parts
<b>N660</b>	31-41	85-95	V	Engine mounts, seals, gaskets, hose, tubes
<b>N650</b>	31-41	117-127	VH	Weather stripping, channeling, roofing membranes
<b>N550</b>	38-48	116-126	SO / 6630	Seals, stripping, hose, belts, extruded profiles
<b>N293</b>	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.

© *STERLING, SPHERON, VULCAN and REGAL are registered trade names of Cabot Corporation*

wol 4/07, t-sterling

Included with its product literature and upon the request of its customers, Akrochem provides product specifications and evaluations, suggested formulations and recommendations and other technical assistance, both orally and in writing (collectively the "Technical Information"). Although Akrochem believes all Technical Information to be true and correct, it makes no warranty, either express or implied, as to the accuracy, completeness, or fitness of the Technical Information for any intended use, or the results which may be obtained by any person using the Technical Information. Akrochem will not be liable for any cost, loss or damage, in tort, contract or otherwise, arising from customer's use of Akrochem products or Technical Information. It is the customer's sole responsibility to test the products and any Technical Information provided to determine whether they are suitable for the customer's needs. Before working with any product, the

customer must read and become familiar with available information concerning its hazards, proper use, storage and handling, including all health, safety, and hygiene precautions recommended by the manufacturer. Nothing in the Technical Information is intended to be a recommendation to use any product, method, or process in violation of any intellectual property rights governing such product, method, or process. No license is implied or granted by Akrochem as to any such product, method, or process. AKROCHEM CORPORATION DISCLAIMS ANY AND ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE, RELATED TO ANY PRODUCTS OR TECHNICAL INFORMATION PROVIDED BY AKROCHEM.