



3770 EMBASSY PARKWAY AKRON, OHIO 44333
 330-535-2100 ♦ 800-321-2260 ♦ Fax 330-535-8947

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>
1416	56	129	N550/N351	Outstanding dispersion with excellent physicals
SOA*	43	121	N550	Surface defects, improved processing, and cleanliness
VHA*	36	122	N650	Higher cleanliness, better dispersion, and loadability
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
6400A*	16	95	N550/N650	Surface defects, dispersion, ECD, high loading ability

* Ultraclean Carbon Black

APPLICATIONS:

Spheron 1416 - industrial product applications, ranging from brake, TDI hoses to building profile and automotive door seal application.

Spheron SOA – seals, weather stripping, hoses, belts, and extruded profiles. Improved processing safety, reduced scrap due to cured lumps, longer extruder screen life or less frequent screen changes.

Spheron VHA – automotive weather stripping, window channeling, roofing membranes, hoses and belts. Higher cleanliness, superior surface appearance, better dispersion and improved loadability.

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.

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.

Spheron 6400A – class A automotive weather stripping in contact with aluminum and magnesium metal, automotive coolant and industrial/consumer hoses and automotive weather stripping, door seals and extruded profiles.

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.

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

tee - 2/19/21, t-Spheron

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.