

STERLING® NS-1



Description

STERLING® NS-1 and STERLING NS carbon blacks are pelleted furnace blacks in the class known as "Semi-Reinforcing Furnace black" (SRF). The ASTM D1765 reference code for STERLING NS-1 is N762, the code for STERLING NS is ASTM N774. STERLING NS-1 carbon black has a similar very low surface area per unit as STERLING NS carbon black, but with a lower structure reflected by the lower DBPA and C-DBPA.

STERLING NS-1 carbon black has good dispersibility in natural and synthetic rubbers, with easy mixing even at high black loading. Uncured compounds have low viscosity and generate relatively little heat in processing, but show, at a given loading, higher die swell and extrusion shrinkage than other ASTM semi-reinforcing blacks including STERLING NS carbon black. Vulcanised compounds have lower modulus and tensile strength, but higher resilience, lower compression set and higher electrical resistivity than those containing other ASTM furnace blacks at the same loading.

The low surface area and low structure allow higher loading to be used in many rubber compounds, so contributing to reduced swelling in adverse environments, reduced permeability and reduced cost. When used in combination with mineral fillers, STERLING NS-1 carbon black offers a very good compounding alternative to Thermal Black.

Applications

STERLING NS-1 carbon black finds application in tire compounding in areas where good dynamic performance is needed, with minimal heat generation in flexing, and in areas where high black loading are desirable. Applications include carcass, tube and inner-liner compounds. There is a very wide range of applications for SRF type carbon black in industrial rubber products, particularly in circumstances requiring low viscosity, low modulus, low compression set and good resilience, or in those requiring high black loading.

Examples include gaskets, seals, windscreen wiper blades, engine mountings, hose linings and extruded articles.

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