CABOT

PRODUCT DATA SHEET

STERLING® V carbon black







GENERAL DESCRIPTION

STERLING® V carbon black is a pelleted semi-reinforcing material introduced by Cabot Corporation in the late 1960's. It conforms to ASTM N660 carbon black target values, and is of the class previously known as General Purpose Furnace or "GPF". The surface area and structure of STERLING V carbon black is in-between that of carbon black grades ASTM N762/N772/N774 and ASTM N550.

PROPERTIES	TEST METHOD (ASTM)	UNITS	TYPICAL VALUE
Iodine adsorption number	D1510	mg/kg	36
Oil absorption number (OAN)	D2414	ml/100g	90
OAN after crushing (COAN)	D3493	ml/100g	73
STSA surface area	D6556	m^2/g	36

PERFORMANCE FEATURES

STERLING V carbon black has colloidal properties that lead to moderate rubber reinforcement and low hysteretic properties. The product has low impact on compound viscosity and the phr loading capability is one of the highest for the standard ASTM carbon black series. These characteristics make STERLING V carbon black particularly suited for rubber applications which do not require very high reinforcement, but will benefit from good dynamic properties, low heat build-up, good elasticity and good processing.

STERLING V carbon black is used in a wide range of rubber applications and is one of the most commonly used semi-reinforcing products in tire applications.

TYPICAL APPLICATIONS

- Industrial Rubber Products
  - Engine mounts
  - Seals and gaskets
  - Hose linings
- Tires
  - Inner liners
  - Sidewalls and ply compounds in passenger car tire
  - Under-treads and tubes

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TECHNICAL DATA

The table shows the balance in basic rubber properties between STERLING® V carbon black and two semi-reinforcing ASTM N550 and ASTM N772 carbon blacks in ASTM SBR test formulation at equal, 60 Shore A, phr loadings.

Test Formulation: ASTM D3191 (SBR)

	STERLNG® V	ASTM N550	ASTM N772
Loading (phr)	50	40	62
PROCESSING PROPERTIES			
Extrusion Shrinkage, %			
ASTM D2230 Method B	60	58	61
PHYSICAL PROPERTIES			
Hardness			
Shore A	60	60	60
Tensile Properties			
Tensile Strength, MPa	21.3	22.2	20.5
300% Modulus, MPa	9.5	10.8	9.9
Elongation at Break, %	550	525	550
Resilience, ASTM D1054			
% relative to STERLING V	100	101	98

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