

VULCAN[®] XC-72 carbon black



GENERAL DESCRIPTION

VULCAN[®] XC-72 carbon black is designed to impart electrical conductivity to rubber and plastic compounds. VULCAN XC-72 carbon black has an exceptional purity, demonstrated by an extremely low solvent extract level, sulfur content, ash level and sieve residue.

VULCAN XC-72 carbon black is the industry standard, with proven performance for conductivity for many years in a wide range of anti-static and conductive rubber and plastic applications.



PERFORMANCE FEATURES

VULCAN XC-72 carbon black has better electrical conductivity properties in rubber than VULCAN[®] P and STERLING[®] C conductive carbon blacks. The percolation curve of VULCAN XC-72 carbon black relative to other carbon blacks in rubber can be found below.

Rubber components having electrical resistivity in the range of 10^3 to 10^6 ohm-cm are normally classified as "antistatic" and components below 10^3 ohm-cm are classified as "conductive". VULCAN XC-72 carbon black can meet these conductivity requirements without need for very high carbon black loadings. VULCAN XC-72 carbon black is easier to disperse in rubber than VULCAN P and STERLING C conductive carbon blacks.

The rubber reinforcement properties of VULCAN XC-72 carbon black are comparable to ASTM N330 type carbon black with higher dynamic stiffness and low extension modulus.

VULCAN XC-72 carbon black has better dynamic properties than VULCAN P and STERLING C conductive carbon blacks.

TYPICAL APPLICATIONS

- Antistatic and conductive applications
 - Hospital flooring and sheeting
 - Conveyor and power transmission belts
 - Printing rolls
 - Hoses for mining, petroleum
 - Cable screening

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TECHNICAL DATA

Test Formulation: 100 phr EPDM, 75 phr Paraffinic Oil, 65 phr CaCO₃ with sulfur cure vulcanization system

	VULCAN [®] XC-72	VULCAN [®] P	ASTM N330
Loading (phr)	88	103	96

PROCESSING PROPERTIES

Mooney Viscosity

ML (1+4) at 100°C, (M.U.)	75	66	58
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PHYSICAL PROPERTIES

Hardness

Shore A	66	67	65
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Tensile Properties

Tensile Strength, MPa	14.0	13.3	13.8
100% Modulus, MPa	3.1	2.8	2.9
200% Modulus, MPa	5.6	5.6	6.0
300% Modulus, MPa	7.7	8.3	9.0
Elongation at Break, %	517	510	436

Resilience

Zwick Rebound, %	39	35	39
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Percolation curve in the EPDM test formulation:

