Technical Data Sheet for Precision-chopped, Nickel-coated Carbon Fiber

Product ID: NxxCC-y (xx designates wt.% Ni; y designates fiber length in mm)

Description: Carbon fiber tow (flat roving), plated with pure nickel via a chemical vapor deposition process, then chopped into short, precise, sub-millimeter fiber lengths

Appearance: dark gray fibrous powder

Nominal Weight Percentages of Nickel: 43±5% and 23±5%

Standard Avg. Lengths: 0.25, 0.5, 1 mm

Fiber Aspect Ratios: ~33, 67, 133 (~7.5 um filament diameter)

Typical Absolute Densities: approx. 2.7 and 2.17 g/cc

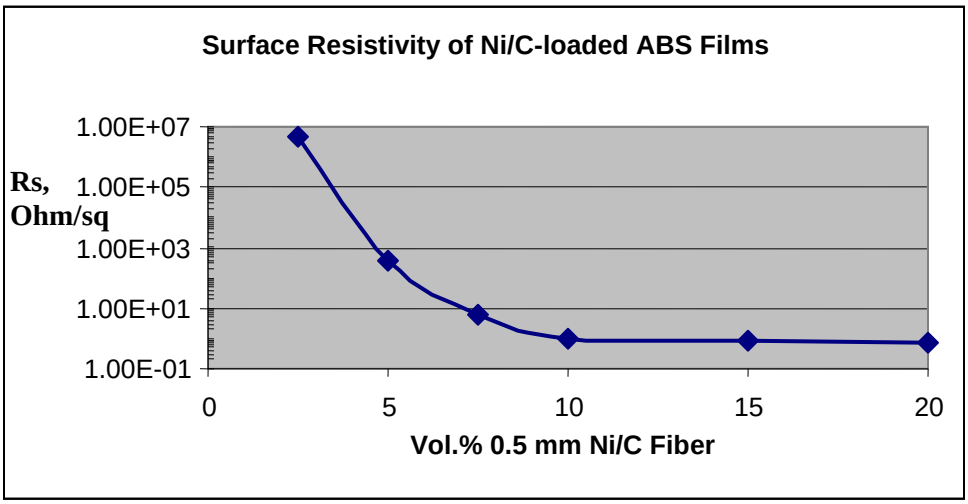
Available by the pound, unsized

Advantages over nickel-coated graphite powder and milled fiber:

Uniform fiber length, uniform coating on fibers
Lighter weight, lower density
Higher strength, higher aspect ratios
Increased conductivity and shielding performance
Readily incorporated into various matrices
Easily dispersed
Allows for lower loadings which leads to improved mechanical properties
Improved corrosion resistance
Easily integrated into high volume manufacturing systems

13621 Riverway Dr.
Suite H
Chesterfield, MO 63017
Tel: 314-878-9190
Fax: 314-878-9558
Email: info@marktek-inc.com
www.Marktek-Inc.com

Application Data for Precision-chopped Ni/C Fiber



Application	Advantage	Typical Fiber Lengths	Typical Loading	Typical Bulk Conductivity
Paints	Easily dispersed, high conductivity at low loadings, paints can be applied by conventional methods	0.1 – 0.5 mm	2 – 20 wt.%	10 – 100 S/cm
Gaskets & Sealants	High conductivity and shielding at lower loading and density, Corrosion resistant, physically robust conductors	0.1 – 1 mm	2 – 40 wt.%	1 – 500 S/cm
Adhesives	High conductivity at low loadings, adhesive system retains strength	0.1 – 0.5 mm	2 – 20 wt.%	1 – 100 S/cm
Injection & Compression Molding	High conductivity with good flow properties, robust pieces offer good detail replication	0.1 – 1 mm	2 – 50 wt.%	1 – 1000 S/cm
Additive Manufacturing	High conductivity at low loadings, Suitable for common additive manufacturing processes and equipment	0.1 – 0.25 mm	2 – 15 wt.%	0.1 – 10 S/cm

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