

## Marktek Inc.

Your One-Stop Shop for EMI-shielding, Conductive, Resistive, & Microwave-Absorptive Materials

### General Technical Data Sheet for Nickel-coated Carbon Fiber

**Description:** Carbon/graphite fiber tow (flat roving) electrolessly plated with nickel  
(other metals, e.g., copper, available)

**Appearance:** silvery gray fiber

**Forms:** continuous filament (~7 um) tow bundles of 3K, 6K, 12K, 24K, and 48/50K  
or chopped to specified lengths, minimum 1 mm

**Percentage of Metal:** up to 65% by wt.

**Thickness of Metal Layer:** tenths of microns

**Absolute Density:** < 3.5 g/cc for highest Ni level

**Linear Resistance:** e.g., 24  $\Omega$ /ft (79  $\Omega$ /m) for 15% Ni on 3K down to 0.1  $\Omega$ /ft (0.33  $\Omega$ /m) for 50% Ni on 50K

**Mechanicals of 50% Ni on 45K C tow:** Tensile Strength – 300 Kpsi, Modulus - 30 Mpsi  
Strain – 1.2%, Yield – 152 m/kg

**Availability:** Continuous filament on 1-2 lb spools (cardboard tubes)

**Advantages:** Custom specifications catered to  
Extended surface life (slower oxidation rates)  
Very low coefficient of thermal resistance (CTR), 20% or less through a 100 degree temperature change

The information provided here is for illustrative purposes only and should not be considered a product specification. All statements and data given herein are believed to be accurate and reliable but are presented without guarantee, warranty, or responsibility of any kind, expressed or implied. As always, it is up to the user of this product to make the final determination as to whether the said product is suitable for the user's intended application.

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