

MarkeTech Carbon Nanofoam

Category : Carbon , Ceramic , Aerogel

Material Notes:

Electrically conductive carbon nanofoams possess many of the properties of traditional aerogel material. These materials are available in the form of monoliths, granules, powders and papers. They are synthetic, lightweight foams in which the solid matrix and pore spaces have nanometer-scale dimensions. Prepared by sol-gel methods, nanofoams typically have low density, continuous porosity, high surface area, and fine cell/pore sizes. The foams are also electrically conductive and have a high capacitance. Carbon nanofoams are being used as lightweight, high temperature insulation, absorbents and coatings, specialty optics, and electrodes for water deionization cells, fuel cells, and other devices. Morphology examination by scanning electron microscope shows an open cell structure and continuous porosity. The particle size and pore spacing is a function of density and the polymerization chemistry used during the sol-gel process. Low density carbon nanofoams (~0.25 g/cm³) have the largest cell/pore size with particle diameters of up to 100 nm and pores at least 500 nm. High density carbon foams (abt. 0.8 g/cm³) have ultra fine particles and pores of less than 1000Å....Data provided by the supplier, MarkeTech International.

Order this product through the following link:

http://www.lookpolymers.com/polymer_MarkeTech-Carbon-Nanofoam.php

Physical Properties	Metric	English	Comments
Density	0.250 - 1.00 g/cc	0.00903 - 0.0361 lb/in ³	available range
Specific Surface Area	400 m ² /g	400 m ² /g	BET; at density = 0.8 g/cc

Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.0890 W/m-K	0.618 BTU-in/hr-ft ² - °F	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.010 - 0.040 ohm-cm	0.010 - 0.040 ohm-cm	

Descriptive Properties	Value	Comments
Average Pore Size	0.7 nm	at density = 0.8 g/cc
Capacitance	30 F/g	at density = 0.8 g/cc
Color	Black	
Gas Permeability	1.47 x 10 ⁻¹⁰	

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