

Applied Nanostructured Solutions Carbon NanoStructure Encapsulated Flakes

Category : Carbon , Carbon Fiber , Other Engineering Material , Additive/Filler for Polymer , Polymer , Thermoplastic , ABS Polymer , Polycarbonate/ABS Alloy, Carbon Fiber Filled

Material Notes:

Carbon NanoStructure (CNS) Encapsulated Flakes are a unique form of carbon nanotubes, produced using a proprietary ANS process. The ANS process creates cross-linked multiwall carbon nanotube-based net-works of CNS with a distinctive morphology that, when added to polymers, elastomers and thermoplastics, enhance the resulting products with multifunctional properties, such as increased conductivity and dramatically improved strength and modulus. These properties allow for the replacement of metal parts with CNS-infused thermoplastics containing a very small amount of CNS, which result in significant cost savings.*Properties are for PC/ABS w/ added 3% CNS by weight Information provided by Applied Nanostructured Solutions (ANS)

Order this product through the following link:

http://www.lookpolymers.com/polymer_Applied-Nanostructured-Solutions-Carbon-NanoStructure-Encapsulated-Flakes.php

Physical Properties	Metric	English	Comments
Bulk Density	0.135 g/cc	0.00488 lb/in ³	
Thickness	10.0 microns	0.394 mil	

Mechanical Properties	Metric	English	Comments
Tensile Strength	87.0 MPa	12600 psi	
Tensile Modulus	4.61 GPa	669 ksi	
Flexural Strength	125 MPa	18100 psi	
Flexural Modulus	3.51 GPa	509 ksi	

Component Elements Properties	Metric	English	Comments
Loss on Ignition(%)	>= 93 %	>= 93 %	

Electrical Properties	Metric	English	Comments
Shielding Effectiveness	40 dB	40 dB	3% CNS; ASTM D4935
	@Thickness 3.00 mm, Frequency 3.00e+7 Hz	@Thickness 0.118 in, Frequency 3.00e+7 Hz	
	50 dB	50 dB	3% CNS; ASTM D4935
	@Thickness 3.00 mm, Frequency 2.03e+9 Hz	@Thickness 0.118 in, Frequency 2.03e+9 Hz	
	51 dB	51 dB	5% CNS; ASTM D4935
	@Thickness 3.00 mm, Frequency 3.00e+7 Hz	@Thickness 0.118 in, Frequency 3.00e+7 Hz	

Electrical Properties	50 dB Metric	50 dB English	Comments
	@Thickness 3.00 mm, Frequency 2.03e+9 Hz	@Thickness 0.118 in, Frequency 2.03e+9 Hz	5% CNS, ASTM D4935

Processing Properties	Metric	English	Comments
Moisture Content	<= 2.0 %	<= 2.0 %	

Descriptive Properties	Value	Comments
% Sizing, type	~4%	Polyurethane, Polyimide, Polyamide
Chop Length	70µm	

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