

Nanocyl PLASTICYL™ PC1501 Polycarbonate with 3 wt% Multi-Wall Carbon Nanotubes

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Conductive

Material Notes:

PLASTICYL™ is a family of Multi-Wall Carbon Nanotube (MWNT) thermoplastic concentrates for applications requiring superior electrical conductivity and electrostatic discharge (ESD) properties. PLASTICYL™ PC1501 is a conductive masterbatch based on polycarbonate. Because of its low viscosity and high flow formulation, PLASTICYL™ PC1501 is ideal for standard injection molding and extrusion processes. Key Applications: E&E, automotive and packaging industries HDD (hard disk drive) internal components HDD and IC handling trays Benefits: Excellent electrical conductivity at low loading Excellent surface cleanliness Retention of key mechanical properties Ease of processing

Order this product through the following link:

http://www.lookpolymers.com/polymer_Nanocyl-PLASTICYL-PC1501-Polycarbonate-with-3-wt-Multi-Wall-Carbon-Nanotubes.php

Physical Properties	Metric	English	Comments
Filler Content	3 %	3 %	Carbon Nanotube Loading
Melt Flow	0.90 g/10 min	0.90 g/10 min	ISO 1133:1997
	@Load 1.20 kg, Temperature 300 °C	@Load 2.65 lb, Temperature 572 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	16.0 MPa	2320 psi	ISO 527-1,2
Tensile Modulus	2.683 GPa	389.1 ksi	ISO 527-1,2
Charpy Impact, Notched	0.600 J/cm²	2.86 ft-lb/in²	ISO 180

Electrical Properties	Metric	English	Comments
Volume Resistivity	54 ohm-cm	54 ohm-cm	3.0 wt% carbon nanotubes in PC; CTM E043
	100 ohm-cm	100 ohm-cm	2.5 wt% carbon nanotubes in PC; CTM E043
	1200 ohm-cm	1200 ohm-cm	2.0 wt% carbon nanotubes in PC; CTM E043
	30000 ohm-cm	30000 ohm-cm	1.5 wt% carbon nanotubes in PC; CTM E043
Surface Resistivity per Square	1200 ohm	1200 ohm	3.0 wt% carbon nanotubes in PC; CTM E042
	4000 ohm	4000 ohm	2.5 wt% carbon nanotubes in PC; CTM E042
	17000 ohm	17000 ohm	2.0 wt% carbon nanotubes in PC; CTM

Electrical Properties	Metric	English	E042 Comments
	800000 ohm	800000 ohm	1.5 wt% carbon nanotubes in PC; CTM E042

Processing Properties	Metric	English	Comments
Processing Temperature	300 °C	572 °F	Material Temperature
Mold Temperature	120 °C	248 °F	
Hold Pressure	45.0 MPa	6530 psi	
Back Pressure	4.00 MPa	580 psi	

Descriptive Properties	Value	Comments
Processing: Holding Time	8 s	
Processing: Injection Speed	30 cm ³ /s	
Processing: Plasticizing Speed	0.4 m/s	

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