Stat-Tech™ PC-20CF/000

Polycarbonate

Key Characteristics

Product Description			
Stat-Tech™ Electrically Conductive Compounds are specifically engineered to provide anti-static, ESD and RFI/EMI shielding performance for critical electronic equipment applications. These compounds combine the performance of select engineering resins with reinforcing additives such as carbon powder, carbon fiber, nickel-coated carbon fiber and stainless steel fiber, for low-to-high levels of conductivity depending upon application requirements.			
General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • North America	• South America
Filler / Reinforcement	• Carbon Fiber Reinforcement, 20 % Filler by Weight		
Additive	• Antistatic		
Features	• Antistatic • Electromagnetic Shielding (EMI)	• ESD Protection • Radio Frequency Shielding (RFI)	
Uses	• Aerospace Applications • Business Equipment	• Electrical/Electronic Applications • Housings	• Printer Parts
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.28	1.28	ASTM D792
Molding Shrinkage (Flow)	0.0010 to 0.0020 in/in	0.10 to 0.20 %	ASTM D955
Water Absorption (24 hr, 0.125 in (3.18 mm))	0.20 %	0.20 %	ASTM D570
Mechanical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Modulus [2]	1.30E+6 psi	8960 MPa	ASTM D638
Tensile Strength [2] (Yield)	19000 psi	131 MPa	ASTM D638
Tensile Elongation [2] (Break)	2.0 to 5.0 %	2.0 to 5.0 %	ASTM D638
Flexural Modulus	1.30E+6 psi	8960 MPa	ASTM D790
Flexural Strength	25000 psi	172 MPa	ASTM D790
Impact	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Notched Izod Impact			ASTM D256A
73 °F (23 °C), 0.250 in (6.35 mm), Injection Molded	3.00 ft·lb/in	160 J/m	
Thermal	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed, 0.250 in (6.35 mm)	335 °F	168 °C	
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed, 0.250 in (6.35 mm)	320 °F	160 °C	
Electrical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Surface Resistivity	1.0E+2 to 1.0E+4 ohms	1.0E+2 to 1.0E+4 ohms	ASTM D257
Volume Resistivity	1.0E+2 to 1.0E+4 ohm·cm	1.0E+2 to 1.0E+4 ohm·cm	ASTM D257

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Processing (Melt) Temp	570 to 620 °F	299 to 327 °C

Notes

[1] Typical values are not to be construed as specifications.

[2] Type I, 0.20 in/min (5.1 mm/min)

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