Stat-Tech™ ST9620-0020 ES Red

Liquid Crystal Polymer + PPS

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 • Latin America	• North America
Filler / Reinforcement	• Nickel-Coated Carbon Fiber		
Features	• Electromagnetic Shielding (EMI)		
Uses	• Aerospace Applications • Automotive Electronics	• Computer Components • Connectors	• Electrical Housing • Electrical/Electronic Applications
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.80	1.80	ASTM D792
Molding Shrinkage - Flow	1.0E-3 to 2.0E-3 in/in	0.10 to 0.20 %	ASTM D955
Molding Shrinkage - Across Flow	0.014 to 0.015 in/in	1.4 to 1.5 %	ASTM D955
Mechanical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Strength (Break)	11800 psi	81.4 MPa	ASTM D638
Tensile Elongation [2] (Break)	0.75 %	0.75 %	ASTM D638
Flexural Modulus	1.80E+6 psi	12400 MPa	ASTM D790
Flexural Strength	16800 psi	116 MPa	ASTM D790
Impact	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Notched Izod Impact			ASTM D256A
73°F (23°C), 0.125 in (3.18 mm), Injection Molded	0.42 ft·lb/in	22 J/m	
Thermal	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	> 473 °F	> 245 °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	10 to 1.0E+3 ohms·cm	10 to 1.0E+3 ohms·cm	ASTM D257
Charge Decay Time - (Mil-B-81705C), 12% RH, 5000kV to 50kV	2 msec	2 msec	
Shielding Effectiveness			
10GHz, 1/8" thickness	61 dB	61 dB	
1GHz, 1/8" thickness	40 dB	40 dB	
5GHz, 1/8" thickness	55 dB	55 dB	

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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