Stat-Tech™ LC-20NCF/000 V3 Natural

Liquid Crystal Polymer

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	
Filler / Reinforcement	• Carbon Fiber, 20% Filler by Weight		
Features	• Antistatic • Conductive	• Electrically Conductive • Electromagnetic Shielding (EMI)	• Radio Frequency Shielding (RFI) • Statically Conductive
Uses	• Aerospace Applications • Automotive Electronics • Business Equipment	• Computer Components • Connectors • Electrical Housing	• Electrical/Electronic Applications • Housings
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.52	1.52	ASTM D792
Molding Shrinkage - Flow	5.0E-4 to 1.0E-3 in/in	0.050 to 0.10 %	ASTM D955
Molding Shrinkage - Across Flow	7.0E-3 to 0.010 in/in	0.70 to 1.0 %	ASTM D955
Mechanical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Modulus [2]	2.29E+6 psi	15800 MPa	ASTM D638
Tensile Strength (Break)	13600 psi	93.8 MPa	ASTM D638
Tensile Elongation [2] (Break)	1.0 %	1.0 %	ASTM D638
Flexural Modulus	1.77E+6 psi	12200 MPa	ASTM D790
Flexural Strength	21000 psi	145 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	0.50 ft·lb/in	27 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)	500 °F	260 °C	
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed, 0.250 in (6.35 mm)	403 °F	206 °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 ohms·cm	1.0E+2 to 1.0E+4 ohms·cm	ASTM D257

Electrical	Typical Value (English)	Typical Value (SI)	Test Method
Shielding Effectiveness - 20MHz to 18GHz, 1/8" thickness	30-80 dB	30-80 dB	
Static Decay - (Mil-B-81705C), 12% RH, 500 kV to 50 kV	0.002 sec	0.002 sec	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Processing (Melt) Temp	570 to 600 °F	299 to 316 °C

Notes

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

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

CONTACT INFORMATION

Americas

United States - Avon Lake
+1 440 930 1000

United States - McHenry
+1 815 385 8500

Asia

China - Guangzhou
+86 20 8732 7260

China - Shenzhen
+86 755 2969 2888

China - Suzhou
+86 512 6823 24 38

China - Suzhou
+86 512 6265 2600

Hong Kong -
+852 2690 5332

Taiwan - Yonghe City,
+886 9396 99740, +886 2929 1849

Europe

Germany - Gaggenau
+49 7225 6802 0

Spain - Barbastro (Huesca)
+34 974 310 314

PolyOne™

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www.polyone.com

PolyOne Americas
33587 Walker Road
Avon Lake, Ohio 44012
United States
+1 440 930 1000
+1 866 POLYONE

PolyOne Asia
No. 88 Guoshoujing Road
Z.J Hi-tech Park, Pudong
Shanghai, 201203, China
+86 21 5080 1188

PolyOne Europe
6 Giällewee
+352 269 050 35