

PolyOne Therma-Tech™ LC-5000C TC LCP (discontinued **)

Category : Polymer , Thermoplastic , Liquid Crystal Polymer (LCP) , Liquid Crystal Polymer (LCP), Unfilled

Material Notes:

Therma-Tech™ Thermal Management Compounds have been engineered to combine the heat transfer and cooling capabilities of metals with the design freedom, weight reduction and cost advantages of thermoplastics. These materials provide the benefits of proprietary conductive additive technologies and the performance of select engineering thermoplastic resins. Therma-Tech compounds have been shown to improve thermal conductivity up to 100-times that of conventional plastics and can be used in a wide range of thermal management applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_PolyOne-Therma-Tech-LC-5000C-TC-LCP-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.77 g/cc	1.77 g/cc	ASTM D792
Water Absorption	0.010 %	0.010 %	ASTM D570
	@Thickness 3.18 mm, Time 86400 sec	@Thickness 0.125 in, Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0030 - 0.0040 cm/cm	0.0030 - 0.0040 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	55.2 MPa	8010 psi	Type I, 5.1 mm/min; ASTM D638
Elongation at Break	0.60 %	0.60 %	Type I, 5.1 mm/min; ASTM D638
Tensile Modulus	17.9 GPa	2600 ksi	Type I, 5.1 mm/min; ASTM D638
Flexural Strength	75.8 MPa	11000 psi	ASTM D790
Flexural Modulus	10.3 GPa	1490 ksi	ASTM D790
Izod Impact, Notched	0.320 J/cm	0.599 ft-lb/in	Injection Molded; ASTM D256A
	@Thickness 6.35 mm, Temperature 23.0 °C	@Thickness 0.250 in, Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
Thermal Conductivity	2.50 W/m-K	17.4 BTU-in/hr-ft ² -°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	266 °C	511 °F	Unannealed; ASTM D648
	@Thickness 6.35 mm	@Thickness 0.250 in	
Deflection Temperature at 1.8 MPa (264 psi)	260 °C	500 °F	Unannealed; ASTM D648
	@Thickness 6.35 mm	@Thickness 0.250 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 - 1.00e+16 ohm-cm	1.00e+15 - 1.00e+16 ohm-cm	ASTM D257
Surface Resistance	1.00e+13 - 1.00e+14 ohm	1.00e+13 - 1.00e+14 ohm	ASTM D257

Processing Properties	Metric	English	Comments
Melt Temperature	316 - 341 °C	601 - 646 °F	
Mold Temperature	93.3 - 121 °C	200 - 250 °F	

Descriptive Properties	Value	Comments
Features	Electrically Insulating	
	Thermally Conductive	
Forms	Pellets	
Generic Name	Liquid Crystal Polymer (LCP)	
Processing Method	Injection Molding	
Regional Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Uses	Automotive Applications	
	Automotive Under the Hood	
	Consumer Applications	
	Electrical/Electronic Applications	
	Housings	
	Industrial Applications	

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