

## Overview of materials for Liquid Crystal Polymer (LCP), Carbon Fiber Filled

Category : Polymer , Thermoplastic , Liquid Crystal Polymer (LCP) , Liquid Crystal Polymer (LCP), Carbon Fiber Filled

### Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Liquid Crystal Polymer (LCP), Carbon Fiber Filled". Each property range of values reported is minimum and maximum values of appropriate MatWeb entries. The comments report the average value, and number of data points used to calculate the average. The values are not necessarily typical of any specific grade, especially less common values and those that can be most affected by additives or processing methods.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Overview-of-materials-for-Liquid-Crystal-Polymer-LCP-Carbon-Fiber-Filled.php](http://www.lookpolymers.com/polymer_Overview-of-materials-for-Liquid-Crystal-Polymer-LCP-Carbon-Fiber-Filled.php)

Physical Properties	Metric	English	Comments
Density	1.39 - 1.61 g/cc	0.0502 - 0.0582 lb/in <sup>3</sup>	Average value: 1.50 g/cc Grade Count:17
Filler Content	10.0 - 40.0 %	10.0 - 40.0 %	Average value: 27.7 % Grade Count:13
Water Absorption	0.0350 - 0.100 %	0.0350 - 0.100 %	Average value: 0.0783 % Grade Count:3
Linear Mold Shrinkage	0.000100 - 0.00200 cm/cm	0.000100 - 0.00200 in/in	Average value: 0.000593 cm/cm Grade Count:15

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	102 - 200 MPa	14800 - 29000 psi	Average value: 148 MPa Grade Count:17
Elongation at Break	0.250 - 4.00 %	0.250 - 4.00 %	Average value: 1.36 % Grade Count:15
Modulus of Elasticity	13.8 - 36.2 GPa	2000 - 5250 ksi	Average value: 27.5 GPa Grade Count:15
Flexural Yield Strength	155 - 290 MPa	22500 - 42000 psi	Average value: 214 MPa Grade Count:15
Flexural Modulus	11.7 - 31.0 GPa	1700 - 4500 ksi	Average value: 22.6 GPa Grade Count:17
Izod Impact, Notched	0.427 - 3.20 J/cm	0.800 - 6.00 ft-lb/in	Average value: 0.931 J/cm Grade Count:15
Izod Impact, Unnotched	2.14 - 8.54 J/cm	4.00 - 16.0 ft-lb/in	Average value: 4.14 J/cm Grade Count:14

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	216 - 318 °C	420 - 605 °F	Average value: 266 °C Grade Count:16
Flammability, UL94	V-0	V-0	Grade Count:9

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00 - 1.00e+8 ohm-cm	1.00 - 1.00e+8 ohm-cm	Average value: 2.00e+7 ohm-cm Grade Count:8

Processing Properties	Metric	English	Comments
Melt Temperature	271 - 399 °C	520 - 750 °F	Average value: 337 °C Grade Count:13
Mold Temperature	37.8 - 121 °C	100 - 250 °F	Average value: 83.1 °C Grade Count:15
Drying Temperature	149 - 163 °C	300 - 325 °F	Average value: 149 °C Grade Count:13
Dew Point	-28.9 °C	-20.0 °F	Average value: -28.9 °C Grade Count:8
Injection Pressure	34.5 - 124 MPa	5000 - 18000 psi	Average value: 88.2 MPa Grade Count:14

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