

Solvay Specialty Polymers Xydar® G-430 Glass Filled Liquid Crystal Polymer (discontinued **)

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

Material Notes:

XYDAR G-430 Liquid Crystal Polymer (LCP) is a glass reinforced injection molding grade developed specifically for electronic applications utilizing surface mount technology at lead-free solder temperatures. The heat deflection temperature of this resin is 568°F (298°C) and the moldability is exceptional. XYDAR G-430 resin can fill very thin walls over long flow lengths with little or no flash, even at mold temperatures below 200°F (93°C). In addition, it has low warpage in molded products and exceptional weld line strength. Like other XYDAR Liquid Crystal Polymers, this material exhibits high strength and stiffness (even at elevated temperatures), low coefficient of thermal expansion, high deflection temperature, inherent flame resistance, and outstanding resistance to most chemicals, weathering, and radiation. This resin is particularly well suited for many applications that have difficult-to-fill geometries, and require resistance to warp, strong weld lines, and compatibility with IR reflow environments. Potential applications for this resin include electronic connectors, surface mount interconnection devices, sockets, and PCMCIA card frames. Information provided by Solvay Advanced Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Xydar-G-430-Glass-Filled-Liquid-Crystal-Polymer-nbspdiscontinued.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.63 g/cc	1.63 g/cc	ASTM D792
Water Absorption	<= 0.010 %	<= 0.010 %	24 hours; ASTM D570
Linear Mold Shrinkage, Flow	0.00070 cm/cm	0.00070 in/in	ASTM D955
Linear Mold Shrinkage, Transverse	0.0038 cm/cm	0.0038 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	135 MPa	19600 psi	ASTM D638
Elongation at Break	1.3 %	1.3 %	ASTM D638
Tensile Modulus	15.9 GPa	2300 ksi	ASTM D638
Flexural Strength	184 MPa	26700 psi	ASTM D570
Flexural Modulus	16.2 GPa	2350 ksi	ASTM D570
Izod Impact, Notched	0.747 J/cm	1.40 ft-lb/in	ASTM D256
Izod Impact Unnotched	8.13 J	6.00 ft-lb	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	-0.900 µm/m-°C	-0.500 µin/in-°F	ASTM E831

Thermal Properties	@Temperature 20.0 °C Metric	@Temperature 68.0 °F English	Comments
CTE, linear, Transverse to Flow	54.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 20.0 °C	30.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 68.0 °F	ASTM E831
Deflection Temperature at 1.8 MPa (264 psi)	298 °C	568 °F	ASTM D648
Flammability, UL94	V-0 @Thickness 3.17 mm	V-0 @Thickness 0.125 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+17 ohm-cm	2.00e+17 ohm-cm	ASTM D257
Surface Resistance	1.00e+16 ohm	1.00e+16 ohm	ASTM D257
Dielectric Constant	4.2 @Frequency 100 Hz	4.2 @Frequency 100 Hz	ASTM D150
Dielectric Strength	35.4 kV/mm @Thickness 1.60 mm	900 kV/in @Thickness 0.0630 in	ASTM D149
Dissipation Factor	0.0106 @Frequency 100 Hz	0.0106 @Frequency 100 Hz	ASTM D150

Processing Properties	Metric	English	Comments
Melt Temperature	321 - 360 °C	610 - 680 °F	
Mold Temperature	65.6 - 93.3 °C	150 - 200 °F	
Drying Temperature	149 °C	300 °F	
Dry Time	6 - 8 hour	6 - 8 hour	
Dew Point	-28.9 °C	-20.0 °F	

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