

## Solvay Specialty Polymers Xydar® MG-850 Liquid Crystal Polymer (LCP), 50% GlassMineral

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

### Material Notes:

Xydar® MG-850 liquid crystal polymer (LCP) is a 50% glass/mineral reinforced injection molding grade developed for electrical/electronic applications utilizing surface mount technology. The material can fill very thin walls over long flow lengths. In addition to low warpage, it exhibits high strength and stiffness (even at elevated temperatures), low coefficient of thermal expansion, high heat deflection temperature, inherent flame resistance and good chemical and weathering resistance. Features: Flame Retardant; Good Chemical Resistance; Good Moldability; Good Weather Resistance; High Stiffness; High Strength; Low Warpage. Additional Properties: Ash Content - ASTM D5630 50 %; Flexural Strain at Break - ASTM D790 1.40 %; Mold Shrinkage - ASTM D955 0.41 %; Mold Shrinkage - ASTM D955 0.058 %; Notched Izod Impact - ASTM D256 5.50 kJ/m<sup>2</sup>; Unnotched Izod Impact - ASTM D256 25.2 kJ/m<sup>2</sup>; Water Absorption - ASTM D570 4.0E-3 % Information provided by Solvay Specialty Polymers.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Solvay-Specialty-Polymers-Xydar-MG-850-Liquid-Crystal-Polymer-LCP-50-GlassMineral.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Xydar-MG-850-Liquid-Crystal-Polymer-LCP-50-GlassMineral.php)

Physical Properties	Metric	English	Comments
Density	1.86 g/cc	0.0672 lb/in <sup>3</sup>	ASTM D792
Filler Content	50 %	50 %	GlassMineral

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	122 MPa	17700 psi	ASTM D638
Elongation at Break	1.2 %	1.2 %	ISO 527-2
Tensile Modulus	17.9 GPa	2600 ksi	ASTM D638
Flexural Strength	168 MPa	24400 psi	ASTM D790
Flexural Modulus	15.2 GPa	2200 ksi	ASTM D790
Charpy Impact Unnotched	2.10 J/cm <sup>2</sup>	9.99 ft-lb/in <sup>2</sup>	Complete Break; ISO 179
Charpy Impact, Notched	0.680 J/cm <sup>2</sup>	3.24 ft-lb/in <sup>2</sup>	Complete Break; ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	58.0 Åµm/m-Å°C	32.2 Åµin/in-Å°F	
CTE, linear, Transverse to Flow	66.0 Åµm/m-Å°C	36.7 Åµin/in-Å°F	TMA; ASTM E831
	@Temperature 0.000 - 200 Å°C	@Temperature 32.0 - 392 Å°F	
Deflection Temperature at 0.46 MPa (66 psi)	287 Å°C	549 Å°F	HDT B; Unannealed; ISO 75-2/B

Thermal Properties	Metric	English	Comments
Heat Deflection Temperature at 1.8 MPa (264 psi)	248 Â°C	478 Â°F	Unannealed; ISO 75-2/A
Flammability, UL94	V-0 @Thickness 0.200 mm	V-0 @Thickness 0.00787 in	

Processing Properties	Metric	English	Comments
Melt Temperature	330 - 360 Â°C	626 - 680 Â°F	
Mold Temperature	70.0 - 160 Â°C	158 - 320 Â°F	
Drying Temperature	150 Â°C @Time 21600 - 28800 sec	302 Â°F @Time 6.00 - 8.00 hour	

Descriptive Properties	Value	Comments
Availability	Asia Pacific	
	Europe	
	North America	
Clamp Tonnage	2.8 to 5.5 kN/cmÂ²	
Color	Black; Natural	
Form	Pellets	
Processing Technique	Injection Molding	
Screw Compression Ratio	2.5:1.0 to 3.0:1.0	
Screw L/D Ratio	20.0:1.0 to 24.0:1.0	

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