

Xydar® MG-850

Liquid Crystal Polymer
Solvay Specialty Polymers

Message:

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.

Black: MG-850 BK197
Natural: MG-850 NT

General Information			
Filler / Reinforcement	Glass\Mineral,50% Filler by Weight		
Features	Flame Retardant		
	Good Chemical Resistance		
	Good Moldability		
	Good Weather Resistance		
	High Stiffness		
	High Strength		
	Low Warpage		
RoHS Compliance	Contact Manufacturer		
Appearance	Black		
	Natural Color		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.86	g/cm ³	ASTM D792
Water Absorption - 48 hrs	4.0E-3	%	ASTM D570
Ash Content	49	%	ASTM D5630
Mold Shrinkage			ASTM D955
Across Flow	0.41	%	
Flow	0.058	%	
Flexural Strain at Break	1.40	%	ASTM D790
Notched Izod Impact - Complete Break	5.50	kJ/m ²	ASTM D256
Unnotched Izod Impact - Complete Break	25.2	kJ/m ²	ASTM D256
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	15500	MPa	ASTM D638
Tensile Strength (Break)	110	MPa	ASTM D638
Tensile Strain (Break)	1.0	%	ASTM D638
Flexural Modulus	16500	MPa	ASTM D790

Flexural Strength (Break)	168	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (Complete Break)	6.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (Complete Break)	19	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	288	°C	ISO 75-2/B
1.8 MPa, Unannealed	245	°C	ISO 75-2/A
CLTE			ASTM E831
Flow : 0 to 200°C	5.8E-5	cm/cm/°C	
Transverse : 0 to 200°C	6.6E-4	cm/cm/°C	
Flammability	Nominal Value		Test Method
Flame Rating (0.200 mm)	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	150	°C	
Drying Time	6.0 to 8.0	hr	
Processing (Melt) Temp	330 to 360	°C	
Mold Temperature	70.0 to 160	°C	
Clamp Tonnage	2.8 to 5.5	kN/cm ²	
Screw L/D Ratio	20.0:1.0 to 24.0:1.0		
Screw Compression Ratio	2.5:1.0 to 3.0:1.0		

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