

Xydar® M-345

Liquid Crystal Polymer
Solvay Specialty Polymers

Message:

Xydar® M-345 liquid crystal polymer (LCP) is a 45% 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 good 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.

Natural: M-345 NT
Black: M-345 BK

General Information			
Filler / Reinforcement	Mineral,45% Filler by Weight		
Features	Flame Retardant		
	Good Chemical Resistance		
	Good Moldability		
	Good Stiffness		
	Good Strength		
	Good Weather Resistance		
	Low Warpage		
RoHS Compliance	Contact Manufacturer		
Appearance	Black		
	Natural Color		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.80	g/cm ³	ISO 1183
Ash Content	45	%	
Flexural Strain at Break	3.0	%	ISO 178
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - Chord ¹	8200	MPa	ISO 527-2
Tensile Stress (Break)	80.0	MPa	ISO 527-2
Tensile Strain (Break)	2.5	%	ISO 527-2
Flexural Modulus - Chord ²	9700	MPa	ISO 178
Flexural Strength (Break)	87.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (Complete Break)	5.8	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (Complete Break)	36	kJ/m ²	ISO 179

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	281	°C	ISO 75-2/B
1.8 MPa, Unannealed	237	°C	ISO 75-2/A
Injection	Nominal Value	Unit	
Drying Temperature	150	°C	
Drying Time	6.0 to 8.0	hr	
Processing (Melt) Temp	340 to 370	°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		
NOTE			
1.	0.05% to 0.25%		
2.	0.05% to 0.25%		

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