SYENSQO

Xydar® M-345
liquid crystal polymer

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

Material Status	• Commercial: Active	
Availability	• Asia Pacific • Europe	• North America
Filler / Reinforcement	• Mineral, 45% Filler by Weight	
Features	• Chemical Resistant • Flame Retardant • 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

Physical	Typical Value	Unit	Test method
Density	1.80	g/cm³	ISO 1183
Ash Content	45	%	

Mechanical

Mechanical	Typical Value	Unit	Test method
Tensile Modulus - Chord [1]	8200	MPa	ISO 527-1
Tensile Stress (Break)	80.0	MPa	ISO 527-2
Tensile Strain (Break)	2.5	%	ISO 527-2
Flexural Modulus - Chord [1]	9700	MPa	ISO 178
Flexural Strain at Break	3.0	%	ISO 178
Flexural Strength (Break)	87.0	MPa	ISO 178

Impact

Impact	Typical Value	Unit	Test method
Charpy Notched Impact Strength			ISO 179
Complete Break	5.8	kJ/m²	
Charpy Unnotched Impact Strength			ISO 179
Complete Break	36	kJ/m²	

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Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	281	°C	ISO 75-2/B
1.8 MPa, Unannealed	237	°C	ISO 75-2/A

Injection	Typical Value	Unit
Drying Temperature	150	°C
Drying Time	6.0 to 8.0	hr
Processing (Melt) Temp	340 to 370	°C
Mold Temperature	70 to 160	°C
Clamp Tonnage	2.8 to 5.5	kN/cm²
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	

Notes

Typical properties: these are not to be construed as specifications.
[1] 0.05% to 0.25%