

VECTRA® E473i

Liquid Crystal Polymer
Celanese Corporation

Message:

Vectra E473i is a low warp LCP ith easy flow and high temperature capability.
Chemical abbreviation according to ISO 1043-1 : LCP
Inherently flame retardant
FDA compliant
UL-Listing V-0 in natural and black at 0.75mm thickness per UL 94 flame testing.
Relative-Temperature-Index (RTI) according to UL 746B: electricals 130°C, mechanicals 130°C.
UL = Underwriters Laboratories (USA)

General Information			
UL YellowCard	E83005-251025		
Features	Low warpage		
	Good liquidity		
	Heat resistance, high		
Agency Ratings	FDA not rated		
RoHS Compliance	Contact manufacturer		
Resin ID (ISO 1043)	LCP		
Physical	Nominal Value	Unit	Test Method
Density	1.63	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.32	%	ISO 294-4
Flow direction	-0.070	%	ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	40		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	10900	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	115	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	2.2	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	10900	MPa	ISO 178
Flexural Stress (23°C)	150	MPa	ISO 178
Compressive Stress (1% Strain)	59.0	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	20	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	33	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	30	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			

1.8 MPa, not annealed	250	°C	ISO 75-2/A
8.0 MPa, not annealed	159	°C	ISO 75-2/C
Vicat Softening Temperature	190	°C	ISO 306/B50
Melting Temperature ¹	335	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	6.0E-6	cm/cm/°C	ISO 11359-2
Lateral	1.1E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Dielectric Strength	49	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	4.00		IEC 60250
Dissipation Factor (1 MHz)	0.34		IEC 60250
Comparative Tracking Index	175	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	150	°C	
Drying Time	6.0	hr	
Suggested Max Moisture	0.010	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	315 - 325	°C	
Middle Temperature	320 - 330	°C	
Front Temperature	325 - 335	°C	
Nozzle Temperature	335 - 345	°C	
Processing (Melt) Temp	335 - 345	°C	
Mold Temperature	80.0 - 120	°C	
Injection Pressure	50.0 - 150	MPa	
Injection Rate	Fast		
Holding Pressure	50.0 - 150	MPa	
Injection instructions			
Zone 4 Temperature: 330 to 340°C Feed Temperature: 60 to 80°C			
NOTE			
1.	10°C/min		

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