

VECTRA® E471i

Liquid Crystal Polymer
Celanese Corporation

Message:

Low warp with excellent properties
Chemical abbreviation according to ISO 1043-1 : LCP
Inherently flame retardant
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 (Japan)

General Information			
UL YellowCard	E83005-251024		
Features	Low warpage		
	Flame retardancy		
RoHS Compliance	Contact manufacturer		
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)		
Resin ID (ISO 1043)	LCP		
Physical	Nominal Value	Unit	Test Method
Density	1.67	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.50	%	ISO 294-4
Flow direction	0.10	%	ISO 294-4
Water Absorption			ISO 62
Saturated, 23°C	0.015	%	ISO 62
Equilibrium, 23°C, 50% RH	2.0E-3	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	55		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	13800	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	130	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	2.5	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	13500	MPa	ISO 178
Flexural Stress (23°C)	180	MPa	ISO 178
Compressive Modulus	11000	MPa	ISO 604
Compressive Stress (1% Strain)	82.0	MPa	ISO 604
Flexural Strain at Break	2.5	%	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	30	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	55	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	14	kJ/m ²	ISO 180/1A

Unnotched Izod Impact Strength (23°C)	60	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, not annealed	265	°C	ISO 75-2/A
8.0 MPa, not annealed	220	°C	ISO 75-2/C
Vicat Softening Temperature	200	°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	1.8E-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	53	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	3.80		IEC 60250
Dissipation Factor (1 MHz)	0.031		IEC 60250
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	170	°C	
Drying Time	4.0 - 6.0	hr	
Suggested Max Moisture	0.010	%	
Hopper Temperature	20.0 - 30.0	°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	
Back Pressure	0.00 - 3.00	MPa	
Injection instructions			
Manifold Temperature: 335 to 345°CZone 4 Temperature: 330 to 340°CFeed Temperature: 60 to 80°C			
NOTE			
1.	10°C/min		

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