

VECTRA® E463i

Liquid Crystal Polymer
Celanese Corporation

Message:

40% glass/mineral filled excellent flow, low warpage, high heat resistance.
Chemical abbreviation according to ISO 1043-1 : LCP
Inherently flame retardant
UL-Listing V-0 all colors at 1.5mm 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	E83005-100686568		
Filler / Reinforcement	Glass \mineral, 40% filler by weight		
Features	Low warpage		
	Heat resistance, high		
	Flame retardancy		
RoHS Compliance	Contact manufacturer		
Resin ID (ISO 1043)	LCP		
Physical	Nominal Value	Unit	Test Method
Density	1.72	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.38	%	ISO 294-4
Flow direction	0.050	%	ISO 294-4
Water Absorption (Saturation, 23°C)	0.020	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	44		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	10000	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	110	MPa	ISO 527-2/1A/50
Tensile Strain (Break)	3.0	%	ISO 527-2/1A/50
Flexural Modulus (23°C)	10600	MPa	ISO 178
Flexural Stress (23°C)	130	MPa	ISO 178
Compressive Modulus	7700	MPa	ISO 604
Compressive Stress (1% Strain)	53.0	MPa	ISO 604
Flexural Strain at Break	3.1	%	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	5.0	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	30	kJ/m²	ISO 179/1eU
Notched Izod Impact (23°C)	5.0	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	30	kJ/m²	ISO 180/1U

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	270	°C	ISO 75-2/B
1.8 MPa, not annealed	235	°C	ISO 75-2/A
Vicat Softening Temperature	185	°C	ISO 306/B50
Melting Temperature ¹	335	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	1.0E-5	cm/cm/°C	ISO 11359-2
Lateral	4.3E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Dielectric Strength	59	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	3.90		IEC 60250
Dissipation Factor (1 MHz)	3.5E-3		IEC 60250
Comparative Tracking Index	150	V	IEC 60112
Injection	Nominal Value	Unit	
Drying Temperature	150 - 170	°C	
Drying Time	6.0	hr	
Suggested Max Moisture	0.010	%	
Rear Temperature	315 - 325	°C	
Middle Temperature	325 - 335	°C	
Front Temperature	330 - 350	°C	
Nozzle Temperature	335 - 345	°C	
Processing (Melt) Temp	335 - 345	°C	
Mold Temperature	80.0 - 130	°C	
Injection Pressure	50.0 - 150	MPa	
Injection Rate	Moderate-Fast		
Holding Pressure	50.0 - 150	MPa	
Injection instructions			
Zone 4 Temperature: 335 to 355°C			
NOTE			
1.	10°C/min		

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