

VECTRA® E540i

Liquid Crystal Polymer
Celanese Corporation

Message:

Mineral filled grade with low warp, easy flow and smooth surface appearance.
Chemical abbreviation according to ISO 1043-1 : LCP
Inherently flame retardant
FDA compliant.
UL-Listing V-0 in natural and black at 1.5mm thickness per UL 94 flame testing.
Relative-Temperature-Index (RTI) according to UL 746B: electrical 130°C, mechanical 130°C.
UL = Underwriters Laboratories (USA)

General Information			
UL YellowCard	E83005-251027		
Filler / Reinforcement	Mineral filler, 40% filler by weight		
Features	Low warpage		
	Good liquidity		
	Excellent appearance		
	Flame retardancy		
RoHS Compliance	Contact manufacturer		
Resin ID (ISO 1043)	LCP		
Physical	Nominal Value	Unit	Test Method
Density	1.74	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.50	%	ISO 294-4
Flow direction	0.0	%	ISO 294-4
Water Absorption			ISO 62
Saturated, 23°C	8.0E-3	%	ISO 62
Equilibrium, 23°C, 50% RH	5.0E-3	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	9800	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	105	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	3.2	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	10000	MPa	ISO 178
Flexural Stress (23°C)	125	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	5.2	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	35	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	230	°C	ISO 75-2/A

Vicat Softening Temperature	195	°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	3.6E-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	46	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	3.60		IEC 60250
Dissipation Factor (1 MHz)	0.031		IEC 60250
Comparative Tracking Index	200	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	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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