

VECTRA® E440i

Liquid Crystal Polymer
Celanese Corporation

Message:

Mineral and glass filled grade with low warp, easy flow and smooth surface apperance.
Chemical abbreviation according to ISO 1043-1 : LCP
Inherently flame retardant.
FDA compliant

General Information			
Filler / Reinforcement	Glass \Mineral		
Features	Low warpage		
	Good liquidity		
	Excellent appearance		
	Flame retardancy		
Agency Ratings	FDA not rated		
RoHS Compliance	Contact manufacturer		
Resin ID (ISO 1043)	LCP		
Physical	Nominal Value	Unit	Test Method
Density	1.77	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.50	%	ISO 294-4
Flow direction	0.0	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	11600	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	118	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	2.0	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	12000	MPa	ISO 178
Flexural Stress (23°C)	165	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	6.0	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	24	kJ/m²	ISO 179/1eU
Notched Izod Impact (23°C)	9.0	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	25	kJ/m²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, not annealed	260	°C	ISO 75-2/A
8.0 MPa, not annealed	177	°C	ISO 75-2/C
Melting Temperature ¹	335	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2

Flow	1.1E-5	cm/cm/°C	ISO 11359-2
Lateral	2.0E-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
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	150 - 170	°C	
Drying Time	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	330 - 340	°C	
Nozzle Temperature	335 - 345	°C	
Processing (Melt) Temp	340 - 350	°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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