

VECTRA® E135i

Liquid Crystal Polymer
Celanese Corporation

Message:

35% glass fiber filled /Higher weldline strength.
Chemical abbreviation according to ISO 1043-1 : LCP
Inherently flame retardant.
FDA compliant.
UL-Listing V-0 in all colors at .15mm thickness per UL 94 flame testing.
UL = Underwriters Laboratories (USA)

General Information			
UL YellowCard	E83005-100728519		
Filler / Reinforcement	Glass fiber reinforced material, 35% filler by weight		
Features	Flame retardancy		
RoHS Compliance	Contact manufacturer		
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	0.29	%	ISO 294-4
Flow direction	0.0	%	ISO 294-4
Water Absorption (Saturation, 23°C)	0.070	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	62		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	16000	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	150	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	1.5	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	17000	MPa	ISO 178
Flexural Stress (23°C)	225	MPa	ISO 178
Compressive Modulus	13500	MPa	ISO 604
Compressive Stress (1% Strain)	100	MPa	ISO 604
Flexural Strain at Break	2.1	%	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	27	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	40	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	30	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	40	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	275	°C	ISO 75-2/A

Vicat Softening Temperature	200	°C	ISO 306/B50
Melting Temperature ¹	335	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	5.0E-6	cm/cm/°C	ISO 11359-2
Lateral	5.9E-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	28	kV/mm	IEC 60243-1
Relative Permittivity			
1 MHz	4.10		IEC 60250
2.05 GHz	4.37		Internal method
Dissipation Factor			
1 MHz	3.0E-3		IEC 60250
2.05 GHz	6.0E-3		Internal method
Comparative Tracking Index	175	V	IEC 60112
Injection	Nominal Value	Unit	
Drying Temperature	150	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.010	%	
Rear Temperature	315 - 335	°C	
Middle Temperature	320 - 345	°C	
Front Temperature	325 - 355	°C	
Nozzle Temperature	335 - 350	°C	
Processing (Melt) Temp	335 - 355	°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 360°C			
NOTE			
1.	10°C/min		

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