

VECTRA® E130i

Liquid Crystal Polymer
Celanese Corporation

Message:

High temperature capability, easiest flow. Suitable where very thin walls are required. Used for broad range of SMT applications, with minimal dimensional change. 30% glass filled.
Chemical abbreviation according to ISO 1043-1 : LCP
Inherently flame retardant
FDA compliant
UL-Listing V-0 in natural and black at .2mm thickness per UL 94 flame testing.
Relative-Temperature-Index (RTI) according to UL 746B: electrical 240°C, mechanical 240°C at 0.75mm.
UL = Underwriters Laboratories (USA)

General Information			
UL YellowCard	E83005-251021	E83005-102296306	
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	Good dimensional stability		
	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	1.61	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.40	%	ISO 294-4
Flow direction	0.10	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.030	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	71		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	15000	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	150	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	1.6	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	13500	MPa	ISO 178
Flexural Stress (23°C)	220	MPa	ISO 178
Compressive Modulus	14000	MPa	ISO 604
Compressive Stress (1% Strain)	93.0	MPa	ISO 604
Flexural Strain at Break	2.2	%	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	22	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	43	kJ/m²	ISO 179/1eU

Notched Izod Impact (23°C)	20	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	31	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, not annealed	276	°C	ISO 75-2/A
8.0 MPa, not annealed	216	°C	ISO 75-2/C
Vicat Softening Temperature	195	°C	ISO 306/B50
Melting Temperature ¹	335	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	7.0E-6	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+14	ohms	IEC 60093
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Dielectric Strength	32	kV/mm	IEC 60243-1
Relative Permittivity			
100 Hz	4.00		IEC 60250
1 MHz	3.30		IEC 60250
2.05 GHz	4.23		Internal method
Dissipation Factor			
100 Hz	0.010		IEC 60250
1 MHz	0.025		IEC 60250
2.05 GHz	6.0E-3		Internal method
Arc Resistance	140	sec	Internal method
Comparative Tracking Index	175	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		UL 94
Oxygen Index	45	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	150 - 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	

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

