



Vectra® E135i

Celanese Corporation - Liquid Crystal Polymer

Sunday, November 3, 2019

General Information

Product Description

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

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • Asia Pacific • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 35% Filler by Weight
Features	• Flame Retardant
Agency Ratings	• FDA Unspecified Rating
RoHS Compliance	• Contact Manufacturer
Resin ID (ISO 1043)	• LCP

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.67	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.30	%	
Flow	0.0	%	
Water Absorption (Saturation, 73°F)	0.070	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2.32E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	21800	psi	ISO 527-2/1A/5
Tensile Strain (Break)	1.5	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	2.47E+6	psi	ISO 178
Flexural Stress (73°F)	32600	psi	ISO 178
Flexural Strain at Break	2.1	%	ISO 178
Compressive Modulus	1.96E+6	psi	ISO 604
Compressive Stress (1% Strain)	14500	psi	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	13	ft-lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	19	ft-lb/in ²	ISO 179/1eU
Notched Izod Impact Strength (73°F)	14	ft-lb/in ²	ISO 180/1A
Unnotched Izod Impact Strength (73°F)	19	ft-lb/in ²	ISO 180/1U
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	62		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	527	°F	ISO 75-2/A
Vicat Softening Temperature	392	°F	ISO 306/B50
Melting Temperature ²	635	°F	ISO 11357-3
CLTE - Flow	2.8E-6	in/in/°F	ISO 11359-2
CLTE - Transverse	3.3E-5	in/in/°F	ISO 11359-2

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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Electric Strength	710	V/mil	IEC 60243-1
Relative Permittivity (1 MHz)	4.10		IEC 60250
Dissipation Factor (1 MHz)	0.032		IEC 60250
Comparative Tracking Index	175	V	IEC 60112

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	302	°F
Drying Time	4.0	hr
Suggested Max Moisture	0.010	%
Rear Temperature	599 to 635	°F
Middle Temperature	608 to 653	°F
Front Temperature	617 to 671	°F
Nozzle Temperature	635 to 662	°F
Processing (Melt) Temp	635 to 671	°F
Mold Temperature	176 to 248	°F
Injection Rate	Fast	

Injection Notes

Zone4 temperature: 330 to 360°C

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min