



Vectra® E463i

Celanese Corporation - Liquid Crystal Polymer

Sunday, November 3, 2019

General Information

Product Description

40% glass/mineral filled excellent flow, low warpage, high heat resistance. Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant UL-Listing V-0 all colors at 1.5mm thickness per UL 94 flame testing. Relative-Temperature-Index (RTI) according to UL 746B: electricals 130°C, mechanicals 130°C. UL = Underwriters Laboratories (USA)

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • Asia Pacific • Latin America • North America
Filler / Reinforcement	• Glass\Mineral, 40% Filler by Weight
Features	• Flame Retardant • High Heat Resistance • Good Flow • Low Warpage
RoHS Compliance	• Contact Manufacturer
Resin ID (ISO 1043)	• LCP

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.72	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.40	%	
Flow	0.10	%	
Water Absorption (Saturation, 73°F)	0.020	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1.45E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	16000	psi	ISO 527-2/1A/50
Tensile Strain (Break)	3.0	%	ISO 527-2/1A/50
Flexural Modulus (73°F)	1.54E+6	psi	ISO 178
Flexural Stress (73°F)	18900	psi	ISO 178
Flexural Strain at Break	3.1	%	ISO 178
Compressive Modulus	1.12E+6	psi	ISO 604
Compressive Stress (1% Strain)	7690	psi	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	2.4	ft-lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	14	ft-lb/in ²	ISO 179/1eU
Notched Izod Impact Strength (73°F)	2.4	ft-lb/in ²	ISO 180/1A
Unnotched Izod Impact Strength (73°F)	14	ft-lb/in ²	ISO 180/1U
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	44		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	518	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	455	°F	ISO 75-2/A
Vicat Softening Temperature	365	°F	ISO 306/B50
Melting Temperature ²	635	°F	ISO 11357-3
CLTE - Flow	5.6E-6	in/in/°F	ISO 11359-2

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Thermal	Nominal Value	Unit	Test Method
CLTE - Transverse	2.4E-5	in/in/°F	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Electric Strength	1500	V/mil	IEC 60243-1
Relative Permittivity (1 MHz)	3.90		IEC 60250
Dissipation Factor (1 MHz)	3.5E-3		IEC 60250
Comparative Tracking Index	150	V	IEC 60112

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	302 to 338	°F
Drying Time	6.0	hr
Suggested Max Moisture	0.010	%
Rear Temperature	599 to 617	°F
Middle Temperature	617 to 635	°F
Front Temperature	626 to 662	°F
Nozzle Temperature	635 to 653	°F
Processing (Melt) Temp	635 to 653	°F
Mold Temperature	176 to 266	°F
Injection Rate	Moderate-Fast	

Injection Notes

Zone4 temperature: 335 to 355°C

Notes

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

² 10°C/min