



Vectra® V143XL

Celanese Corporation - Liquid Crystal Polymer

Sunday, November 3, 2019

General Information

Product Description

LCP/PPS blend. Maintains most of the characteristics of E130i with improved weldline strength and flatness in certain geometries. 40% glass reinforced. Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant.

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • Asia Pacific • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 40% Filler by Weight
Features	• Flame Retardant
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	0.60	%	
Flow	0.30	%	
Water Absorption (Saturation, 73°F)	0.044	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.015	%	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)	1.3	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	2.28E+6	psi	ISO 178
Flexural Stress (73°F)	32600	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength (73°F)	4.3	ft-lb/in ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	500	°F	ISO 75-2/A
Melting Temperature ²	635	°F	ISO 11357-3
CLTE - Flow	4.4E-6	in/in/°F	ISO 11359-2
CLTE - Transverse	1.7E-5	in/in/°F	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+17	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Electric Strength	840	V/mil	IEC 60243-1
Relative Permittivity (1 MHz)	3.50		IEC 60250
Dissipation Factor (1 MHz)	0.016		IEC 60250

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	302	°F

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Injection	Nominal Value	Unit
Drying Time	4.0 to 24	hr
Suggested Max Moisture	0.010	%
Hopper Temperature	68 to 86	°F
Rear Temperature	599 to 617	°F
Middle Temperature	608 to 626	°F
Front Temperature	617 to 635	°F
Nozzle Temperature	635 to 653	°F
Processing (Melt) Temp	635 to 653	°F
Mold Temperature	176 to 248	°F
Injection Rate	Fast	
Back Pressure	< 435	psi

Injection Notes

Feeding zone temperature: 60 to 80°C
Zone4 temperature: 330 to 340°C
Hot runner temperature: 335 to 345°C

Notes

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

² 10°C/min