



Vectra® S471

Celanese Corporation - Liquid Crystal Polymer

Sunday, November 3, 2019

General Information

Product Description

High flow, High Heat resistance, Low Warpage, for Thick Walled (>0.2mm) or thin (<0.2mm) & Thick Walled combination parts. Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant UL-Listing V-0 in natural and black at 0.4mm 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 • Asia Pacific	• Europe • Latin America	• North America
Features	• Flame Retardant • High Flow	• High Heat Resistance • Low Warpage	
Uses	• Thick-walled Parts		
RoHS Compliance	• Contact Manufacturer		
Resin ID (ISO 1043)	• LCP		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.76	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.50	%	
Flow	0.20	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1.74E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	17400	psi	ISO 527-2/1A/5
Tensile Strain (Break)	1.4	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	1.74E+6	psi	ISO 178
Flexural Stress (73°F)	26800	psi	ISO 178
Flexural Strain at Break	2.0	%	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	2.9	ft-lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	4.8	ft-lb/in ²	ISO 179/1eU
Notched Izod Impact Strength			ISO 180/1A
-40°F	2.4	ft-lb/in ²	
73°F	3.8	ft-lb/in ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	599	°F	ISO 75-2/A
Heat Deflection Temperature (1160 psi, Unannealed)	520	°F	ISO 75-2/C
Melting Temperature ²	662	°F	ISO 11357-3
CLTE - Flow	4.4E-6	in/in/°F	ISO 11359-2
CLTE - Transverse	9.4E-6	in/in/°F	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+11	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Relative Permittivity (1 MHz)	4.00		IEC 60250

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Electrical		Nominal Value	Unit	Test Method
Dissipation Factor (1 MHz)		7.0E-3		IEC 60250
Comparative Tracking Index	• •	200 200 (200)	V	IEC 60112
Flammability		Nominal Value	Unit	Test Method
Flame Rating		V-0		UL 94

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	302 to 338	°F
Drying Time	6.0	hr
Hopper Temperature	68 to 104	°F
Rear Temperature	626 to 662	°F
Middle Temperature	644 to 680	°F
Front Temperature	653 to 689	°F
Nozzle Temperature	671 to 698	°F
Processing (Melt) Temp	680 to 707	°F
Mold Temperature	176 to 248	°F
Injection Rate	Moderate	
Back Pressure	< 435	psi

Injection Notes

Feeding zone temperature: 60 to 80°C
 Zone4 temperature: 355 to 370°C
 Hot runner temperature: 355 to 370°C

Notes

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

² 10°C/min