



Vectra® C130

Celanese Corporation - Liquid Crystal Polymer

Sunday, November 3, 2019

General Information

Product Description

Has the same excellent balance of properties as A130 with higher temperature capability and easier flow. Slightly more dimensional stability in vapor phase soldering than A130. Suitable for some infrared SMT applications. 30% glass reinforced. Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant FDA compliant UL-Listing V-0 in natural and black at 0.38mm thickness per UL 94 flame testing, and UL-5VA in natural at 1.5mm. Relative-Temperature-Index (RTI) according to UL 746B: electrical 240°C, mechanical 220°C at 0.75mm. UL = Underwriters Laboratories (USA)

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Features	• Flame Retardant	• Good Dimensional Stability	• Good Flow
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	1.62	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.40	%	
Flow	0.20	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2.18E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	23200	psi	ISO 527-2/1A/5
Tensile Strain (Break)	1.9	%	ISO 527-2/1A/5
Tensile Creep Modulus (1 hr)	1.97E+6	psi	ISO 899-1
Tensile Creep Modulus (1000 hr)	1.70E+6	psi	ISO 899-1
Flexural Modulus (73°F)	2.03E+6	psi	ISO 178
Flexural Stress (73°F)	35500	psi	ISO 178
Compressive Modulus	3.19E+6	psi	ISO 604
Compressive Stress (1% Strain)	20200	psi	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	12	ft-lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	13	ft-lb/in ²	ISO 179/1eU
Notched Izod Impact Strength (73°F)	9.5	ft-lb/in ²	ISO 180/1A
Unnotched Izod Impact Strength (73°F)	12	ft-lb/in ²	ISO 180/1U
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	80		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	482	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	491	°F	ISO 75-2/A
Heat Deflection Temperature (1160 psi, Unannealed)	412	°F	ISO 75-2/C
Vicat Softening Temperature	378	°F	ISO 306/B50

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Thermal	Nominal Value	Unit	Test Method
Melting Temperature ²	617	°F	ISO 11357-3
CLTE - Flow	3.3E-6	in/in/°F	ISO 11359-2
CLTE - Transverse	1.0E-5	in/in/°F	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Electric Strength	890	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.20		
1 MHz	3.70		
Dissipation Factor			IEC 60250
100 Hz	0.014		
1 MHz	0.018		
Arc Resistance	182	sec	Internal Method
Comparative Tracking Index	200	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		UL 94
Oxygen Index	45	%	ISO 4589-2

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	302	°F
Drying Time	4.0 to 6.0	hr
Suggested Max Moisture	0.010	%
Hopper Temperature	68 to 86	°F
Rear Temperature	554 to 572	°F
Middle Temperature	572 to 590	°F
Front Temperature	590 to 608	°F
Nozzle Temperature	590 to 626	°F
Processing (Melt) Temp	608 to 644	°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: 320 to 330°C
Hot runner temperature: 320 to 340°C

Notes

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

² 10°C/min