



Vectra® E130i

Celanese Corporation - Liquid Crystal Polymer

Thursday, January 23, 2025

General Information

Product Description

30% glass fiber, excellent flow, high temperature capability

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Additive	• Flame Retardant	• Heat Stabilizer	• UV Stabilizer
Features	• Flame Retardant • Heat Stabilized	• High Flow • UV Stabilized	
Automotive Specifications	• BOSCH N28 BN35-X001 Color: Natural & Black	• HYUNDAI MS941-03 Type P-2 FRV0	
Forms	• Pellets		
Processing Method	• Injection Molding	• Lead Free Soldering	
Part Marking Code (ISO 11469)	• >LCP-GF30<		
Resin ID (ISO 1043)	• LCP-GF30		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.61	g/cm ³	ISO 1183
Apparent (Bulk) Density	0.71	g/cm ³	ISO 60
Molding Shrinkage			ISO 294-4
Across Flow	0.40	%	
Flow	0.10	%	
Water Absorption			ISO 62
Equilibrium, 73°F, 0.0787 in, 50% RH	0.030	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2.32E+6	psi	ISO 527-1
Tensile Stress (Break)	23200	psi	ISO 527-2/5
Tensile Strain (Break)	1.6	%	ISO 527-2/5
Flexural Modulus	2.18E+6	psi	ISO 178
Flexural Stress	31900	psi	ISO 178
Flexural Strain - at failure	2.2	%	ISO 178
Compressive Modulus	2.03E+6	psi	ISO 604
Compressive Stress (1% Strain)	13500	psi	ISO 604
Poisson's Ratio ²	0.33		
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	18	ft-lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	20	ft-lb/in ²	ISO 179/1eU
Notched Izod Impact Strength (73°F)	13	ft-lb/in ²	ISO 180/1A
Unnotched Izod Impact Strength (73°F)	15	ft-lb/in ²	ISO 180/1U
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	71		ISO 2039-2

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 264 psi, Unannealed	518	°F	ISO 75-2/A
Deflection Temperature Under Load 1160 psi, Unannealed	421	°F	ISO 75-2/C
Vicat Softening Temperature	383	°F	ISO 306/B50
Melting Temperature ³	635	°F	ISO 11357-3
CLTE - Flow	3.9E-6	in/in/°F	ISO 11359-2
CLTE - Transverse	1.1E-5	in/in/°F	ISO 11359-2
Thermal Conductivity ⁴	2.4	Btu·in/hr/ft ² /°F	ISO 22007-2
Specific Heat Capacity ⁵	0.433	Btu/lb/°F	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+14	ohms	IEC 62631-3-2
Volume Resistivity	1.0E+13	ohms·m	IEC 62631-3-1
Electric Strength	810	V/mil	IEC 60243-1
Relative Permittivity 2.50 GHz ⁶ 0.0197 in, 10.0 GHz ⁷	3.90 3.80		IEC 61189-2-721
Relative Permittivity 100 Hz 1 kHz ⁵ 1 MHz ⁵	4.00 4.30 3.90		IEC 62631-2-1
Dissipation Factor 2.50 GHz ⁶ 0.0197 in, 10.0 GHz ⁷	6.0E-3 5.2E-3		IEC 61189-2-721
Dissipation Factor 100 Hz 1 kHz 1 MHz ⁵ 1.00 GHz	0.010 0.0 0.036 6.0E-3		IEC 62631-2-1
Arc Resistance	140	sec	UL 746B
Comparative Tracking Index	175	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flammability Classification	V-0		IEC 60695-11-10, -20
Oxygen Index	45	%	ISO 4589-2
Fill Analysis	Nominal Value	Unit	
Ejection Temperature	491	°F	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	302	°F
Drying Time - Desiccant Dryer	4.0 to 6.0	hr
Suggested Max Moisture	< 0.010	%
Processing (Melt) Temp	635 to 689	°F
Melt Temperature, Optimum	662	°F
Mold Temperature	176 to 248	°F
Mold Temperature, Optimum	203	°F
Back Pressure	435	psi
Drying Recommended	yes	

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Injection	Nominal Value	Unit
Screw Tangential Speed	425 to 472	in/min

Notes

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

² Calculated

³ 10°C/min

⁴ Flow; One time tested

⁵ One time tested

⁶ One time tested; Shifted data from 1.9GHz to 2.0GHz for harmonization purpose, only use whole numbers.

⁷ SR00077966, Vectra E130i VF3001 Natural sample