

VECTRA® A430

Liquid Crystal Polymer
Celanese Corporation

Message:

Provides many of the characteristics of A130 with added lubricity. Suitable for applications requiring excellent wear characteristics. Excellent electrical properties at high frequencies. LCP/PTFE blend.
Chemical abbreviation according to ISO 1043-1 : LCP
Inherently flame retardant
FDA compliant version available
UL-Listing V-0 in natural and black at 0.43mm thickness per UL 94 flame testing.
Relative-Temperature-Index (RTI) according to UL 746B: electrical 130°C, mechanical 130°C.
UL = Underwriters Laboratories (USA)

General Information			
UL YellowCard	E83005-251001		
Additive	PTFE lubricant		
Features	Good electrical performance		
	Good wear resistance		
	Lubrication		
	Halogen-free		
	Flame retardancy		
Agency Ratings	EU 2002/96/EC (WEEE)		
RoHS Compliance	Contact manufacturer		
Processing Method	Injection molding		
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)		
	Shear Modulus vs. Temperature (ISO 11403-1)		
Resin ID (ISO 1043)	LCP		
Physical	Nominal Value	Unit	Test Method
Density	1.50	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.70	%	ISO 294-4
Flow direction	0.0	%	ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	55		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	7000	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	156	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	6.2	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	7100	MPa	ISO 178
Flexural Stress (23°C)	125	MPa	ISO 178

Compressive Modulus	6000	MPa	ISO 604
Compressive Stress (1% Strain)	38.0	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	28	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	86	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	34	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	67	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	227	°C	ISO 75-2/B
1.8 MPa, not annealed	165	°C	ISO 75-2/A
8.0 MPa, not annealed	89.0	°C	ISO 75-2/C
Vicat Softening Temperature	138	°C	ISO 306/B50
Melting Temperature ¹	280	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	1.0E-6	cm/cm/°C	ISO 11359-2
Lateral	4.6E-5	cm/cm/°C	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
Dielectric Strength	36	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	3.30		IEC 60250
1 MHz	2.70		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	0.030		IEC 60250
1 MHz	0.016		IEC 60250
Arc Resistance	130	sec	Internal method
Comparative Tracking Index	225	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	150	°C	
Drying Time	4.0 - 6.0	hr	
Suggested Max Moisture	0.010	%	
Hopper Temperature	20.0 - 30.0	°C	
Rear Temperature	270 - 280	°C	
Middle Temperature	275 - 285	°C	
Front Temperature	280 - 290	°C	
Nozzle Temperature	290 - 300	°C	
Processing (Melt) Temp	285 - 295	°C	
Mold Temperature	80.0 - 120	°C	

Injection Pressure	50.0 - 150	MPa
Injection Rate	Fast	
Holding Pressure	50.0 - 150	MPa
Back Pressure	0.00 - 3.00	MPa

Injection instructions

Manifold Temperature: 285 to 295°CZone 4 Temperature: 285 to 295°CFeed Temperature: 60 to 80°C

NOTE

1. 10°C/min

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519
Phone: +86 13424755533
Email: sales@su-jiao.com
No. 215, Lianhe North Road, Fengxian District, Shanghai, China

