

VECTRA® E820iPd

Liquid Crystal Polymer
Celanese Corporation

Message:

Catalytically modified E820i
Chemical abbreviation according to ISO 1043-1 : LCP
Inherently flame retardant
UL-Listing V-0 in natural at 1.5mm thickness per UL 94 flame testing.
Relative-Temperature-Index (RTI) according to UL 746B: electrical 130°C, mechanical 130°C at 1.5mm.
UL = Underwriters Laboratories (USA)

General Information			
UL YellowCard	E83005-251029		
Filler / Reinforcement	Mineral filler, 40% filler by weight		
Features	Flame retardancy		
RoHS Compliance	Contact manufacturer		
Resin ID (ISO 1043)	LCP		
Physical	Nominal Value	Unit	Test Method
Density	1.79	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	1.2	%	ISO 294-4
Flow direction	0.40	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	8000	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	89.0	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	3.6	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	8800	MPa	ISO 178
Flexural Stress (23°C)	120	MPa	ISO 178
Flexural Strain at Flexural Strength	3.2	%	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	4.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	30	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	4.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	28	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	255	°C	ISO 75-2/B
1.8 MPa, not annealed	215	°C	ISO 75-2/A
8.0 MPa, not annealed	119	°C	ISO 75-2/C
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.3E-5	cm/cm/°C	ISO 11359-2
Lateral	4.9E-5	cm/cm/°C	ISO 11359-2

Electrical	Nominal Value	Unit	Test Method
Dissipation Factor (1 MHz)	0.016		IEC 60250
Comparative Tracking Index	175	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	170	°C	
Drying Time	4.0 - 6.0	hr	
Suggested Max Moisture	0.010	%	
Hopper Temperature	20.0 - 30.0	°C	
Rear Temperature	315 - 325	°C	
Middle Temperature	320 - 330	°C	
Front Temperature	325 - 335	°C	
Nozzle Temperature	335 - 345	°C	
Processing (Melt) Temp	335 - 345	°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: 335 to 345°C Zone 4 Temperature: 330 to 340°C Feed Temperature: 60 to 80°C

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