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VECTRA® V400P

Liquid Crystal Polymer

Co-extrudable LCP for Barrier Applications. Vectra V400P Liquid Crystal Polymer is characterized by its excellent barrier properties independent of relative humidity, chemical resistance and contact clarity in thin film applications. This material is not suitable for medical or dental implants.
Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant

Product information

Resin Identification	LCP	ISO 1043
Part Marking Code	>LCP<	ISO 11469

Typical mechanical properties

Tensile modulus	14400	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	151	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.6	%	ISO 527-1/-2
Poisson's ratio	0.33[C]		

[C]: Calculated

Thermal properties

Glass transition temperature, 10°C/min	110	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	111	°C	ISO 75-1/-2

Physical/Other properties

Humidity absorption, 2mm	0.04	%	Sim. to ISO 62
Density	1400	kg/m³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	90	°C
Drying Time, Dehumidified Dryer	8 - 10	h
Processing Moisture Content	≤0.01	%
Melt Temperature Optimum	230	°C
Min. melt temperature	225	°C
Max. melt temperature	235	°C
Screw tangential speed	0.2 - 0.3	m/s
Mold Temperature Optimum	100	°C
Min. mould temperature	80	°C
Max. mould temperature	120	°C

Characteristics

Processing	Injection Moulding, Film Extrusion, Extrusion, Sheet Extrusion
Special characteristics	Flame retardant

Additional information

Film extrusion

Preprocessing

Vectra resins are well known for their excellent thermal and hydrolytic stability. In order to ensure these properties are optimum, the resin should be dried correctly

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prior to processing. Vectra V400P should be dried at 90 °C for a minimum of 8 hours in a desiccant dryer.

Processing