

VECTRA® V400P | LCP | Specialty

Description

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

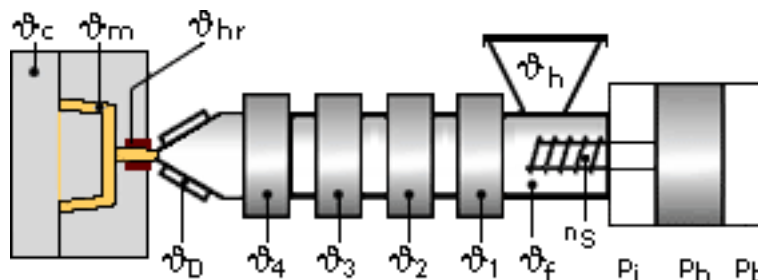
Physical properties	Value	Unit	Test Standard
Density	1400	kg/m ³	ISO 1183
Humidity absorption (23°C/50%RH)	0.04	%	ISO 62
Melt index (I2 @ 230°C, nominal)	14	dg/min	Internal

Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	14400	MPa	ISO 527-2/1A
Tensile stress at break (5mm/min)	151	MPa	ISO 527-2/1A
Tensile strain at break (5mm/min)	1.62	%	ISO 527-2/1A

Thermal properties	Value	Unit	Test Standard
Glass transition (onset)	110	°C	ISO 3146
DTUL @ 1.8 MPa	111	°C	ISO 75-1/-2

Barrier Prop (Film) properties	Value	Unit	Test Standard
Water vapor permeability @38°C	0.4	g-25µm/(m ² day-atm)	DIN 53122
Oxygen permeability @ 23°C, 0% RH	1.35	cc-25µm/m ² -day-atm	DIN 53380 part 3
Oxygen permeability @23°C, 100% RH	1.27	cc-25µm/m ² -day-atm	DIN 53380 part 3

Typical injection moulding processing conditions



Pre Drying:

Necessary low maximum residual moisture content: 0.01%

Drying time: 8 - 24 h

Drying temperature: 90 - 90 °C

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Temperature:

	°Melt	°Nozzle	°Zone4	°Zone3	°Zone2	°Zone1
min (°C)	225	200	205	205	205	185
max (°C)	235	210	215	215	215	195

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Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use.

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