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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