

VECTRA® S625

Liquid Crystal Polymer

Low friction and wear resistance.

Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant.

Product information

Resin Identification	LCP-CD25	ISO 1043
Part Marking Code	>LCP-CD25<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.8 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	8300 MPa	ISO 527-1/-2
Tensile stress at break, 50mm/min	120 MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	3 %	ISO 527-1/-2
Flexural modulus	9500 MPa	ISO 178
Flexural strength	150 MPa	ISO 178
Izod notched impact strength, 23 °C	4 kJ/m ²	ISO 180/1A
Izod impact strength, 23 °C	25 kJ/m ²	ISO 180/1U
Poisson's ratio	0.34 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10 °C/min	350 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	271 °C	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	129 °C	ISO 75-1/-2
Vicat softening temperature, 50 °C/h 50N	227 °C	ISO 306
Thermal conductivity, flow	3.49 W/(m K)	ISO 22007-2
Thermal conductivity, crossflow	2.11 W/(m K)	ISO 22007-2
Thermal conductivity, through plane	0.63 W/(m K)	ISO 22007-2
Effective thermal diffusivity, flow	0.000002 m ² /s	ISO 22007-4
Effective thermal diffusivity, crossflow	0.000001 m ² /s	ISO 22007-4
Effective thermal diffusivity, through plane	3.2E-7 m ² /s	ISO 22007-4
Specific heat capacity of melt	1270 J/(kg K)	ISO 22007-4

Physical/Other properties

Density	1530 kg/m ³	ISO 1183
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Injection

Drying Recommended	yes
Drying Temperature	150 °C
Drying Time, Dehumidified Dryer	4 - 6 h
Processing Moisture Content	≤0.01 %
Melt Temperature Optimum	370 °C
Min. melt temperature	365 °C
Max. melt temperature	375 °C
Screw tangential speed	0.2 - 0.3 m/s

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Mold Temperature Optimum	100 °C
Min. mould temperature	80 °C
Max. mould temperature	140 °C
Back pressure	3 MPa

Characteristics

Processing	Injection Moulding
Special characteristics	Flame retardant, Heat stabilised or stable to heat, Low wear / Low friction, High Flow, Lead-free soldering resistant

Additional information

Processing Notes

Pre-Drying

VECTRA should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be $\leq -40^{\circ}\text{C}$. The time between drying and processing should be as short as possible.