Celanese
The chemistry inside innovation™

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/m²	ISO 180/1A
Izod impact strength, 23°C	25	kJ/m²	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	m²/s	ISO 22007-4
Effective thermal diffusivity, crossflow	0.000001	m²/s	ISO 22007-4
Effective thermal diffusivity, through plane	3.2E-7	m²/s	ISO 22007-4
Specific heat capacity of melt	1270	J/(kg K)	ISO 22007-4

Physical/Other properties

Density	1530	kg/m³	ISO 1183

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

Celanese
The chemistry inside innovation™

VECTRA® S625

Liquid Crystal Polymer

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 =< - 40° C. The time between drying and processing should be as short as possible.