Celanese
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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

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

Typical mechanical properties

Tensile modulus	1.2E6	psi	ISO 527-1/-2
Tensile stress at break, 50mm/min	17500	psi	ISO 527-1/-2
Tensile strain at break, 50mm/min	3	%	ISO 527-1/-2
Flexural modulus	1.38E6	psi	ISO 178
Flexural strength	22000	psi	ISO 178
Izod notched impact strength, 23°C	1.9	ftlb/in²	ISO 180/1A
Izod impact strength, 23°C	11.9	ftlb/in²	ISO 180/1U

Thermal properties

Melting temperature, 10°C/min	662	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	520	°F	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	264	°F	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	441	°F	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	0.0552	lb/in³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	302	°F
Drying Time, Dehumidified Dryer	4 - 6	h
Processing Moisture Content	≤0.01	%
Melt Temperature Optimum	698	°F
Min. melt temperature	689	°F
Max. melt temperature	707	°F
Max. screw tangential speed	0.2 - 0.3	m/s
Mold Temperature Optimum	212	°F
Min. mold temperature	176	°F

Revised: 2025-03-20 Source: Celanese Materials Database

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Max. mold temperature	284 °F
Back pressure	435 psi

Characteristics

Processing	Injection Molding
Special characteristics	Flame retardant, Heat stabilized 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.

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