



VECTRA® B230

Liquid Crystal Polymer

Exceptional strength and stiffness. Suitable for metal replacement applications. Electrically conductive. 30% carbon fiber reinforced.

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

UL-Listing V-0 at 0.46mm thickness per UL 94 flame testing. Relative-Temperature-Index (RTI) according to UL 746B: electrical 130°C, mechanical 130°C. UL = Underwriters Laboratories (USA)

Product information

Flammability

Burning Behav. at thickness h

Product information			
Resin Identification	LCP-CF30		ISO 1043
Part Marking Code	>LCP-CF30<		ISO 11469
Rheological properties			
Moulding shrinkage, parallel	0	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.1	%	ISO 294-4, 2577
Typical mechanical properties			
Tensile modulus	31800	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	200	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	0.7	%	ISO 527-1/-2
Flexural modulus	25500	MPa	ISO 178
Flexural strength	300	MPa	ISO 178
Compressive modulus	33000	MPa	ISO 604
Compressive stress at 1% strain		MPa	ISO 604
Charpy impact strength, 23°C		kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C		kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C		kJ/m²	ISO 180/1A
Izod impact strength, 23°C		kJ/m²	ISO 180/1U
Hardness, Rockwell, M-scale	99		ISO 2039-2
Poisson's ratio	0.33 ^[C]		
[C]: Calculated			
Thermal properties			
Melting temperature, 10°C/min	280	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	235	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	250	°C	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	186	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	167	°C	ISO 306
Coefficient of linear thermal expansion	1	E-6/K	ISO 11359-1/-2
(CLTE), parallel			
Coefficient of linear thermal expansion (CLTE), normal	9	E-6/K	ISO 11359-1/-2

V-0 class

IEC 60695-11-10

(+) 18816996168 Ponciplastics.com



VECTRA® B230

Liquid Crystal Polymer

Electrical properties

Relative permittivity, 1MHz	32	IEC 62631-2-1
Volume resistivity	1000 Ohm.m	IEC 62631-3-1
Surface resistivity	100 Ohm	IEC 62631-3-2

Physical/Other properties

Density 1490 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	290	°C
Min. melt temperature	285	°C
Max. melt temperature	300	°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
Back pressure	3	MPa

Characteristics

Processing Injection Moulding

Delivery form Pellets

Special characteristics Increased electrical conductivity, Static dissipative, Flame retardant, Light stabilised

or stable to light, High Flow

Additional information

Injection molding

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 prior to processing. Vectra B-grades should be dried at 150 C for a minimum of 6 hours in a desiccant dryer.

Processing

A three-zone screw evenly divided into feed, compression, and metering zones is preferred. A higher percentage of feed flights may be needed for smaller machines: 1/2 feed, 1/4 compression, 1/4 metering.

Vectra LCPs are shear thinning, their melt viscosity decreases quickly as shear rate increases. For parts that are difficult to fill, the molder can increase the injection velocity to improve melt flow.

(+) **18816996168**Ponciplastics. com



VECTRA® B230

Liquid Crystal Polymer

Processing Notes

(+) 18816996168 Ponciplastics.com



VECTRA® B230

Liquid Crystal Polymer

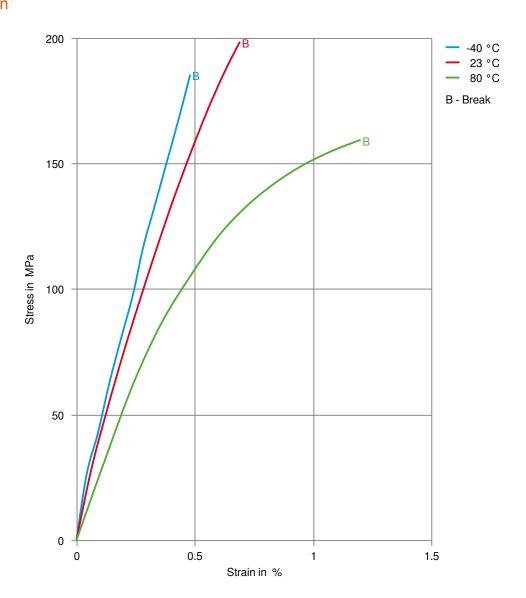
Pre-Drying

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.

Storage

For subsequent storage of the material in the dryer until processed the temperature does not need to be lowered for grades A, B, C, D and V (<= 24 h).

Stress-strain



(+) 18816996168 Ponciplastics.com



VECTRA® B230

Liquid Crystal Polymer

Secant modulus-strain

