Celanese
The chemistry inside innovation™

VECTRA® E463i

40% glass/mineral filled excellent flow, low warpage, high heat resistance.
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Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant UL-Listing V-0 all colors at 1.5mm thickness per UL 94 flame testing. Relative-Temperature-Index (RTI) according to UL 746B: electricals 130°C, mechanicals 130°C. UL = Underwriters Laboratories (USA)

Rheological properties

Moulding shrinkage range, parallel	0.1	%	ISO 294-4, 2577
Moulding shrinkage range, normal	0.4	%	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	10000	MPa	ISO 527-1/-2
Stress at break, 50mm/min	100	MPa	ISO 527-1/-2
Strain at break, 50mm/min	2	%	ISO 527-1/-2
Flexural Modulus	11000	MPa	ISO 178
Flexural Strength	120	MPa	ISO 178
Compressive modulus	7700	MPa	ISO 604
Compressive stress at 1% strain	53	MPa	ISO 604
Charpy impact strength, 23°C	30	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	3	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	4	kJ/m²	ISO 180/1A
Izod impact strength, 23°C	30	kJ/m²	ISO 180/1U
Hardness, Rockwell, M-scale	44		ISO 2039-2

Thermal properties

Melting temperature, 10°C/min	335	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	235	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	270	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	10	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	43	E-6/K	ISO 11359-1/-2

Electrical properties

Relative permittivity, 1MHz	3.9		IEC 62631-2-1
Dissipation factor, 1MHz	35	E-4	IEC 62631-2-1
Volume resistivity	1E14	Ohm.m	IEC 62631-3-1
Surface resistivity	1E16	Ohm	IEC 62631-3-2
Electric strength	59	kV/mm	IEC 60243-1
Comparative tracking index	PLC 4	PLC	UL 746A

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Other properties

Water absorption, 2mm	0.02	%	Sim. to ISO 62
Density	1720	kg/m³	ISO 1183

Injection

Drying Temperature	150 - 170	°C	
Drying Time, Dehumidified Dryer	6	h	
Processing Moisture Content	0.01	%	
Melt Temperature Optimum	340	°C	Internal
Screw tangential speed	0.17 - 0.21	m/s	
Max. mould temperature	80 - 130	°C	
Injection speed	medium-fast		

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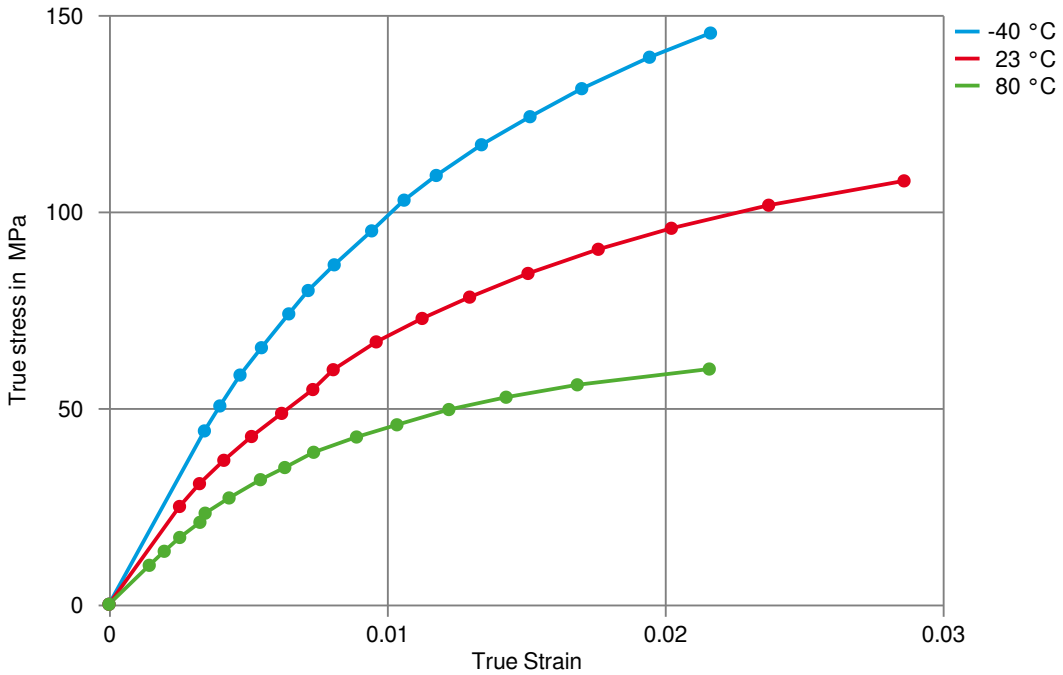
True stress-strain



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Processing Texts

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.
Longer pre-drying times/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).