VECTRA® A440 - LCP

Description

All the characteristics of A130 with some added lubricity and flexibility. Suitable for applications requiring snap fit. Glass/PTFE filled. Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant

Physical properties	Value	Unit	Test Standard
Density	**1650**	kg/m³	ISO 1183

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	**16000**	MPa	ISO 527-2/1A
Tensile stress at break, 5mm/min	**180**	MPa	ISO 527-2/1A
Tensile strain at break, 5mm/min	**2,6**	%	ISO 527-2/1A
Flexural modulus, 23°C	**15000**	MPa	ISO 178
Flexural strength, 23°C	**245**	MPa	ISO 178
Charpy impact strength, 23°C	**37**	kJ/m²	ISO 179/1eU
Izod impact notched, 23°C	**22**	kJ/m²	ISO 180/1A

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	**280**	°C	ISO 11357-1/-3
DTUL at 1.8 MPa	**230**	°C	ISO 75-1, -2
Flammability @1.6mm nom. thickn.	**V-0**	class	UL 94
thickness tested (1.6)	**1,5**	mm	UL 94
UL recognition (1.6)	**UL**	-	UL 94
Flammability at thickness h	**V-0**	class	UL 94
thickness tested (h)	**0,90**	mm	UL 94
UL recognition (h)	**UL**	-	UL 94

Electrical properties	Value	Unit	Test Standard
Relative permittivity, 1MHz	**2,8**	-	IEC 60250
Dissipation factor, 1MHz	**70**	E-4	IEC 60250
Volume resistivity	**1E12**	Ohm*m	IEC 60093
Surface resistivity	**>1E15**	Ohm	IEC 60093
Electric strength	**29**	kV/mm	IEC 60243-1
Comparative tracking index	**175**	-	IEC 60112
Arc resistance	**180**	s	Internal

Typical injection moulding processing conditions

Pre Drying	Value	Unit	Test Standard
Necessary low maximum residual moisture content	**0,01**	%	-
Drying time	**4 - 6**	h	-
Drying temperature	**150**	°C	-
Temperature	**Value**	**Unit**	**Test Standard**
Hopper temperature	**20 - 30**	°C	-
Feeding zone temperature	**60 - 80**	°C	-
Zone1 temperature	**270 - 280**	°C	-
Zone2 temperature	**275 - 285**	°C	-
Zone3 temperature	**280 - 290**	°C	-
Zone4 temperature	**285 - 295**	°C	-
Nozzle temperature	**290 - 300**	°C	-
Melt temperature	**285 - 295**	°C	-
Mold temperature	**80 - 120**	°C	-
Hot runner temperature	**285 - 295**	°C	-
Pressure	**Value**	**Unit**	**Test Standard**
Injection pressure	**500 - 1500**	bar	-
Hold pressure	**500 - 1500**	bar	-
Back pressure max.	**30**	bar	-
Speed	**Value**	**Unit**	**Test Standard**
Injection speed	**very fast**	-	-
Screw Speed	**Value**	**Unit**	**Test Standard**
Screw speed diameter, 16mm	**200**	RPM	-
Screw speed diameter, 25mm	**140**	RPM	-

Screw speed diameter, 40mm	**80**	RPM	-

Other text information

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).

Characteristics

Special Characteristics	Processing
Flame retardant, Light stabilized	Injection molding
Product Categories	**Delivery Form**
Specialty	Pellets

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