

TECHNICAL DATA SHEET

Witcom PEEK/3C/3L1-EM, based on Polyetheretherketone (PEEK)

15% carbon fibres, 15% PTFE, easy moulding, conductive

Properties	Test methods	Units	PEEK/3C/3L1-EM
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Physical properties

Specific gravity	ISO 1183	g/cm ³	1,44
Water absorption at saturation, 23 °C	ISO 62	%	0,4
Humidity absorption, 23 °C/50 % r.h.	ISO 62	%	0,2
Mould shrinkage (flow direction, 3 mm)	ISO 2577	%	0,3 - 0,5

Mechanical properties

Tensile strength (max.)	ISO 527	MPa	150
Elongation at break	ISO 527	%	1 - 3
Flexural strength	ISO 178	MPa	220
Flexural modulus	ISO 178	GPa	11,5
IZOD impact strength, notched	ISO 180/1eA	kJ/m ²	7,0
IZOD impact strength, unnotched	ISO 180/1eU	kJ/m ²	35

Thermal properties

Heat distortion temperature (1,81 MPa)	ISO 75	°C	315
Relative temperature index, 3 mm, with impact	UL 746B	°C	220
Coefficient of linear thermal expansion	ISO 11359	K ⁻¹ ·10 ⁻⁵	2,3

Flammability

Burning behaviour	ISO 1210	-	V0 @ 0,8 mm
UL recognition	UL94	-	-

Electrical properties

Surface resistivity	ASTM D257	Ω/sq	10 ⁴ - 10 ⁶
Comparative tracking index	IEC 60112	V	-
Glow wire rating, 1,6 mm	IEC 695-2-1	°C	960

Processing conditions (injection moulding)

Drying conditions (dehumidifying drier)	: 4 Hours @ 150 - 180 °C
Maximum allowable moisture content	: 0,05 %
Melt temperature	: 380 - 410 °C
Mould temperature	: 160 - 200 °C
Screw speed	: 0,1 - 0,2 m/s
Back pressure	: 0,25 - 1,0 MPa
Injection pressure	: Keep to a minimum
Injection speed	: Fast ram speed
Hold pressure	: Keep to a minimum

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