

TECHNICAL DATA SHEET

Witcom PC/2C-FR-MR, based on Polycarbonate (PC)

10% carbon fibres, flame retardant modified, easy mould release, conductive

Properties	Test methods	Units	PC/2C-FR-MR
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Physical properties

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

Mechanical properties

Tensile strength (max.)	ISO 527	MPa	120
Elongation at break	ISO 527	%	2 - 3
Flexural strength	ISO 178	MPa	180
Flexural modulus	ISO 178	GPa	8,5
IZOD impact strength, notched	ISO 180/1eA	kJ/m ²	7,5
IZOD impact strength, unnotched	ISO 180/1eU	kJ/m ²	45

Thermal properties

Heat distortion temperature (1,81 MPa)	ISO 75	°C	140
Relative temperature index, 3 mm, with impact	UL 746B	°C	130
Coefficient of linear thermal expansion	ISO 11359	K ⁻¹ ·10 ⁻⁵	2,4

Flammability

Burning behaviour	ISO 1210	-	V0 @ 1,6 mm
UL recognition	UL94	-	-

Electrical properties

Surface resistivity	ASTM D257	Ω/sq	10 ³ - 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)	: 3 - 5 Hours @ 120 °C
Maximum allowable moisture content	: 0,02 %
Melt temperature	: 280 - 320 °C
Mould temperature	: 60 - 100 °C
Screw speed	: 0,1 - 0,2 m/s
Back pressure	: 0 - 1,0 MPa
Injection pressure	: Keep to a minimum
Injection speed	: Fast ram speed
Hold pressure	: Keep to a minimum

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