



PRELIMINARY DATA SHEET

Witcom PA12-2010/039, based on Polyamide 12 (PA12)

50% carbon fibres, conductive

Properties	Test methods	Units	PA12-2010/039
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Physical properties

Specific gravity	ISO 1183	g/cm ³	1,47
Water absorption at saturation, 23 °C	ISO 62	%	0,75
Humidity absorption, 23 °C/50 % r.h.	ISO 62	%	0,35
Mould shrinkage (flow direction, 3 mm)	ISO 2577	%	0,1 - 0,3

Mechanical properties

Tensile strength (max.)	ISO 527	MPa	145
Elongation at break	ISO 527	%	1 - 3
Flexural strength	ISO 178	MPa	180
Flexural modulus	ISO 178	GPa	18,0
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	165
Relative temperature index, 3 mm, with impact	UL 746B	°C	85
Coefficient of linear thermal expansion	ISO 11359	K-1·10 ⁻⁵	3,0

Flammability

Burning behaviour	ISO 1210	-	HB @ 3,0 mm
UL recognition	UL94	-	-

Electrical properties

Surface resistivity	ASTM D257	Ω/sq	< 10
Comparative tracking index	IEC 60112	V	-
Glow wire rating, 1,6 mm	IEC 695-2-1	°C	750

Processing conditions (injection moulding)

Drying conditions (dehumidifying drier)	: 3 - 5 Hours @ 80 °C
Maximum allowable moisture content	: 0,10 %
Melt temperature	: 240 - 270 °C
Mould temperature	: 50 - 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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