

TECHNICAL DATA SHEET

Witcom PA6-2004/39, based on Polyamide 6 (PA6)

reinforced, conductive

Properties	Test methods	Units	PA6-2004/39
Physical properties			
Specific gravity	ISO 1183	g/cm ³	1,31
Water absorption at saturation, 23 °C	ISO 62	%	6,0
Humidity absorption, 23 °C/50 % r.h.	ISO 62	%	2,0
Mould shrinkage (flow direction, 3 mm)	ISO 2577	%	0,2 - 0,4
Mechanical properties			
Tensile strength (max.) @ -40 °C	ISO 527	MPa	155
Tensile strength (max.) @ 23 °C	ISO 527	MPa	110
Tensile strength (max.) @ 80 °C	ISO 527	MPa	65
Elongation at break @ -40 °C	ISO 527	%	1 - 3
Elongation at break @ 23 °C	ISO 527	%	2 - 4
Elongation at break @ 80 °C	ISO 527	%	5 - 7
Tensile modulus @ -40 °C	ISO 527	GPa	7,6
Tensile modulus @ 23 °C	ISO 527	GPa	7,0
Tensile modulus @ 80 °C	ISO 527	GPa	3,6
Flexural strength @ 23 °C	ISO 178	MPa	155
Flexural modulus @ 23 °C	ISO 178	GPa	6,2
IZOD impact strength, notched @ -40 °C	ISO 180/1eA	kJ/m ²	8,0
IZOD impact strength, notched @ 23 °C	ISO 180/1eA	kJ/m ²	11,0
IZOD impact strength, unnotched @ -40 °C	ISO 180/1eU	kJ/m ²	50
IZOD impact strength, unnotched @ 23 °C	ISO 180/1eU	kJ/m ²	60
Thermal properties			
Heat distortion temperature (1,81 MPa)	ISO 75	°C	195
Relative temperature index, 3 mm, with impact	UL 746B	°C	95
Coefficient of linear thermal expansion	ISO 11359	K-1·10 ⁻⁵	3,7
Flammability			
Burning behaviour	ISO 1210	-	HB @ 3,0 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	750

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This information is based on our experience to date and we believe it to be reliable. It is intended as a guide for use at your discretion and risk. We cannot guarantee favourable results and assume no liability in connection with the use of the product described. None of this information is to be taken as a license to operate under, or a recommendation to infringe, any patents.

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Processing conditions (injection moulding)

Drying conditions (dehumidifying drier)	: 3 - 5 Hours @ 80 °C
Maximum allowable moisture content	: 0,10 %
Melt temperature	: 250 - 270 °C
Mould temperature	: 40 - 80 °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