

# TECHNICAL DATA SHEET

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

reinforced, conductive

Properties	Test methods	Units	PA6-2004/39
<b>Physical properties</b>			
Specific gravity	ISO 1183	g/cm <sup>3</sup>	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
<b>Mechanical properties</b>			
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 <sup>2</sup>	8,0
IZOD impact strength, notched @ 23 °C	ISO 180/1eA	kJ/m <sup>2</sup>	11,0
IZOD impact strength, unnotched @ -40 °C	ISO 180/1eU	kJ/m <sup>2</sup>	50
IZOD impact strength, unnotched @ 23 °C	ISO 180/1eU	kJ/m <sup>2</sup>	60
<b>Thermal properties</b>			
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 <sup>-1</sup> ·10 <sup>-5</sup>	3,7
<b>Flammability</b>			
Burning behaviour	ISO 1210	-	HB @ 3,0 mm
UL recognition	UL94	-	-
<b>Electrical properties</b>			
Surface resistivity	ASTM D257	Ω/sq	10 <sup>4</sup> - 10 <sup>6</sup>
Comparative tracking index	IEC 60112	V	-
Glow wire rating, 1,6 mm	IEC 695-2-1	°C	750



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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