

PA-6.6 GF30, with 30% glass fibre

Mechanical properties	Test method	Test environment	Unit	Value
Tensile strength	ISO 527	break, dry	MPa	100
Tensile strength	ISO 527	break, conditioned	MPa	75
Tensile strain	ISO 527	break, dry	%	5
Tensile strain	ISO 527	break, conditioned	%	12
Tensile modulus	ISO 527	dry	GPa	5,9
Tensile modulus	ISO 527	conditioned	GPa	3,2
Compression strength	ISO 604	1% deformation, dry	MPa	28
Creep strength	- -	$\sigma_{1/1000}$, 1% strain, 1000 h, dry	MPa	26
Creep strength	- -	$\sigma_{1/1000}$, 1% strain, 1000 h, conditioned	MPa	18
Impact strength	ISO 179	Charpy, unnotched, dry	kJ/m ²	>50
Impact strength	ISO 179	Charpy, notched, dry	kJ/m ²	6
Impact strength	ISO 180	Izod, notched, dry	kJ/m ²	6
Impact strength	ISO 180	Izod, notched, conditioned	kJ/m ²	11
Hardness	DIN 53456	30 s, ball pressure H _k	MPa	200-270
Hardness	- -	Rockwell	-	M98
Coefficient of friction	- -	P=0,05 MPa, v=0,6 m/s, steel	-	0,45-0,50

Thermal properties	Test method	Test environment	Unit	Value
Service temperature	- -	continuous 5.000/20.000 h	°C	120/110
Service temperature	- -	short term	°C	240
Service temperature	- -	lower limit	°C	-20
Melting point	ISO 3146	-	°C	255
Glass transition temperature	DIN 53736	dry	°C	50
Glass transition temperature	DIN 53736	conditioned	°C	5
Heat distortion temperature	ISO 75	0,45 MPa	°C	250
Heat distortion temperature	ISO 75	1,82 MPa	°C	150
Coefficient of linear thermal expansion	ASTM D696	23 °C	10 ⁻⁵ K ⁻¹	2,5
Coefficient of linear thermal expansion	- -	23-60 °C	10 ⁻⁵ K ⁻¹	5
Coefficient of linear thermal expansion	- -	23-100 °C	10 ⁻⁵ K ⁻¹	6
Thermal conductivity	ASTM D257	-	W/m,K	0,30
Specific heat	- -	-	kJ/kg,K	1,5

Electrical properties	Test method	Test environment	Unit	Value
Dielectric constant	IEC 60250	ϵ , 50 Hz, dry	-	3,9
Dielectric constant	IEC 60250	ϵ , 50 Hz, conditioned	-	6,9
Dielectric constant	IEC 60250	ϵ , 1 MHz, dry	-	3,6
Dielectric constant	IEC 60250	ϵ , 1 MHz, conditioned	-	3,9
Loss factor	IEC 60250	$\tan \delta$, 50 Hz, dry	-	0,012
Loss factor	IEC 60250	$\tan \delta$, 50 Hz, conditioned	-	0,19
Loss factor	IEC 60250	$\tan \delta$, 1 MHz, dry	-	0,014
Loss factor	IEC 60250	$\tan \delta$, 1 MHz, conditioned	-	0,04
Dielectric strength	IEC 60243	dry	kV/mm	30
Dielectric strength	IEC 60243	conditioned	kV/mm	20
Volume resistivity	IEC 60093	dry	ohm cm	$>10^{14}$
Volume resistivity	IEC 60093	conditioned	ohm cm	$>10^{13}$
Surface resistivity	IEC 60093	dry	ohm	$>10^{13}$
Surface resistivity	IEC 60093	conditioned	ohm	$>10^{12}$

Other properties	Test method	Test environment	Unit	Value
Density	ISO 1183	-	g/cm ³	1,35
Water absorption	- -	equilibrium, 23 °C, RH 50%	%	1,5
Water absorption	- -	saturation, immersion, 23 °C	%	5,5
Water absorption	- -	immersion, 24 h, 23 °C	%	0,39
Flammability	UL 94	-	-	HB

The data presented are taken from our suppliers and represent our best knowledge. The values are given in good faith. They should not constitute the basis for calculations, construction etc. The responsibility for verifying material data rests with the end-user.