

ForTii® K11

PPA-GF30

30% Glass Reinforced, PA4T, Good Flow, Electro-friendly

ForTii® K11 combines excellent mechanical properties with low warpage for miniature applications such as Audio Jack and Camera Holder.

Properties	Typical Data	Unit	Test Method
Rheological properties			
	dry / cond		
Molding shrinkage (parallel)	0.4 / *	%	ISO 294-4
Molding shrinkage (normal)	1.3 / *	%	ISO 294-4
Mechanical properties			
	dry / cond		
Tensile modulus	11300 / 11500	MPa	ISO 527-1/-2
Tensile modulus (120°C)	8000 / -	MPa	ISO 527-1/-2
Tensile modulus (160°C)	4500	MPa	ISO 527-1/-2
Tensile modulus (200°C)	4000	MPa	ISO 527-1/-2
Stress at break	190 / 170	MPa	ISO 527-1/-2
Stress at break (120°C)	125 / -	MPa	ISO 527-1/-2
Stress at break (160°C)	85	MPa	ISO 527-1/-2
Stress at break (200°C)	70	MPa	ISO 527-1/-2
Strain at break	2 / 1.9	%	ISO 527-1/-2
Strain at break (120°C)	3.5 / -	%	ISO 527-1/-2
Strain at break (160°C)	5	%	ISO 527-1/-2
Strain at break (200°C)	5.5	%	ISO 527-1/-2
Flexural modulus	10500 / 11000	MPa	ISO 178
Flexural strength	290 / 260	MPa	ISO 178
Flexural modulus (120°C)	7500	MPa	ISO 178



Properties	Typical Data	Unit	Test Method
Flexural modulus (160°C)	4500	MPa	ISO 178
Flexural modulus (200°C)	4000	MPa	ISO 178
Charpy impact strength (+23°C)	60 / 50	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	10 / 9	kJ/m ²	ISO 179/1eA

Thermal properties

dry / cond

Melting temperature (10°C/min)	325 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	305 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.3	E-4/°C	ASTM D696
Coeff. of linear therm. expansion (normal)	0.5	E-4/°C	ASTM D696
Burning Behav. at 3.0 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	3 / *	mm	IEC 60695-11-10
UL recognition	Yes / *	-	-
Thermal Index 5000 hrs	174	°C	IEC 60216/ISO 527-1/-2

Electrical properties

dry / cond

Volume resistivity	>1E13 / >1E13	Ohm*m	IEC 62631-3-1
Electric strength	33 / 33	kV/mm	IEC 60243-1
Comparative tracking index	600 / 600	V	IEC 60112
Relative permittivity (100Hz)	5 / 5	-	IEC 62631-2-1
Relative permittivity (1 MHz)	4.5 / 4.5	-	IEC 62631-2-1
Relative permittivity (1GHz)	3.9 / 4	-	IEC 60250
Relative permittivity (10GHz)	3.8 / 3.9	-	IEC 60250

Other properties

dry / cond

Humidity absorption	2 / *	%	Sim. to ISO 62
Density	1430 / -	kg/m ³	ISO 1183

