

## ForTii® K11

## PPA-GF30

30% Glass Reinforced, PA4T, for E&amp;E applications, Good Flow

Print Date: 2019-08-09

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
<b>Rheological properties</b>	<b>dry / cond</b>		
Molding shrinkage (parallel)	0.4 / *	%	ISO 294-4
Molding shrinkage (normal)	1.3 / *	%	ISO 294-4
<b>Mechanical properties</b>	<b>dry / cond</b>		
Tensile modulus	11000 / -	MPa	ISO 527-1/-2
Tensile modulus (120°C)	8000 / -	MPa	ISO 527-1/-2
Tensile modulus (160°C)	5000	MPa	ISO 527-1/-2
Tensile modulus (200°C)	5000	MPa	ISO 527-1/-2
Stress at break	180 / -	MPa	ISO 527-1/-2
Stress at break (120°C)	130 / -	MPa	ISO 527-1/-2
Stress at break (160°C)	90	MPa	ISO 527-1/-2
Stress at break (200°C)	75	MPa	ISO 527-1/-2
Strain at break	2 / -	%	ISO 527-1/-2
Strain at break (120°C)	2.8 / -	%	ISO 527-1/-2
Strain at break (160°C)	4.6	%	ISO 527-1/-2
Strain at break (200°C)	5.8	%	ISO 527-1/-2
Flexural modulus	10000 / -	MPa	ISO 178
Flexural strength	290 / -	MPa	ISO 178
Flexural modulus (160°C)	5000	MPa	ISO 178
Flexural modulus (200°C)	4000	MPa	ISO 178

## Property Data

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Properties	Typical Data	Unit	Test Method
Charpy impact strength (+23°C)	55 / -	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	10 / -	kJ/m <sup>2</sup>	ISO 179/1eA
<b>Thermal properties</b>		<b>dry / cond</b>	
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 1.5 mm nom. thicken.	HB / *	class	IEC 60695-11-10
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.8 / *	mm	IEC 60695-11-10
UL recognition	Yes / *	-	-
Thermal Index 5000 hrs	174	°C	IEC 60216/ISO 527-1/-2
<b>Electrical properties</b>		<b>dry / cond</b>	
Volume resistivity	>1E13 / >1E13	Ohm*m	IEC 60093
Electric strength	33 / 33	kV/mm	IEC 60243-1
Comparative tracking index	600 / 600	V	IEC 60112
Relative permittivity (100Hz)	5 / 5	-	IEC 60250
Relative permittivity (1 MHz)	4.5 / 4.5	-	IEC 60250
Relative permittivity (1GHz)	3.9 / 4	-	IEC 60250
Relative permittivity (10GHz)	3.8 / 3.9	-	IEC 60250
<b>Other properties</b>		<b>dry / cond</b>	
Humidity absorption	2.1 / *	%	Sim. to ISO 62
Density	1430 / -	kg/m <sup>3</sup>	ISO 1183