

# ForTii® Eco E11

## PA4T-GF30 FR(40)

30% Glass Reinforced, Good Flow, for E&E applications, Halogen free and free of red phosphorous

Print Date: 2018-03-29

Properties	Typical Data	Unit	Test Method
<b>Rheological properties</b> dry / cond			
Molding shrinkage (parallel)	0.3 / *	%	ISO 294-4
Molding shrinkage (normal)	1.2 / *	%	ISO 294-4
<b>Mechanical properties</b> dry / cond			
Tensile modulus	11500 / 11000	MPa	ISO 527-1/-2
Tensile modulus (120°C)	5500	MPa	ISO 527-1/-2
Tensile modulus (160°C)	4200	MPa	ISO 527-1/-2
Stress at break	155 / 145	MPa	ISO 527-1/-2
Stress at break (120°C)	70	MPa	ISO 527-1/-2
Stress at break (160°C)	55	MPa	ISO 527-1/-2
Strain at break	2.3 / 2.4	%	ISO 527-1/-2
Strain at break (120°C)	4.5	%	ISO 527-1/-2
Strain at break (160°C)	4.5	%	ISO 527-1/-2
Flexural modulus	10000 / -	MPa	ISO 178
Flexural strength	230 / -	MPa	ISO 178
Charpy impact strength (+23°C)	55 / -	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	8 / 8	kJ/m <sup>2</sup>	ISO 179/1eA
<b>Thermal properties</b> dry / cond			
Melting temperature (10°C/min)	325 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	275 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.2 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.7 / *	E-4/°C	ISO 11359-1/-2

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## Property Data

# ForTii<sup>®</sup> Eco E11

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Properties	Typical Data	Unit	Test Method
Burning Behav. at 1.5 mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
UL recognition	Yes / *	-	-
Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.2 / *	mm	IEC 60695-11-10
UL recognition	Yes / *	-	-
Relative Temperature Index - electrical	150	°C	UL746B
RTI electrical (Thickness (1) tested)	0.75	mm	UL746B

### Electrical properties

dry / cond

Volume resistivity	>1E13 / >1E13	Ohm*m	IEC 60093
Electric strength	33 / -	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	V	IEC 60112
Relative permittivity (1GHz)	3.7 / 3.9	-	IEC 60250
Relative permittivity (10GHz)	3.6 / 3.75	-	IEC 60250

### Other properties

dry / cond

Humidity absorption	1.4 / *	%	Sim. to ISO 62
Density	1450 / -	kg/m <sup>3</sup>	ISO 1183

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