

**Product Texts**

30% Glass Reinforced, PA4T, Good Flow, Halogen free and free of red phosphorous, Certified V-0 at 0.15mm

ISO 1043 PPA-GF30 FR(40)

ForTii® Eco E11 has an excellent balance in flow, toughness and stiffness with superior processing performance for injection molding. It has improved toughness and is suitable for SMT processes. Eco E11 has a high electrical RTI rating of 150°C at 0.75 mm and has CTI 600V. Eco E11 is Eco-friendly due to its partly bio-based content.

<b>Processing/Physical Characteristics</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Molding shrinkage, parallel	<b>0.3 / *</b>	%	ISO 294-4, 2577
<sup>[C]</sup> Molding shrinkage, normal	<b>1.2 / *</b>	%	ISO 294-4, 2577

[C]: CAMPUS

<b>Mechanical properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Tensile Modulus	<b>11500 / 11000</b>	MPa	ISO 527
<sup>[C]</sup> Stress at break	<b>155 / 145</b>	MPa	ISO 527
<sup>[C]</sup> Strain at break	<b>2.3 / 2.4</b>	%	ISO 527
<sup>[C]</sup> Charpy impact strength, +23°C	<b>55 / -</b>	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy notched impact strength, +23°C	<b>8 / 8</b>	kJ/m <sup>2</sup>	ISO 179/1eA

[C]: CAMPUS

<b>Thermal properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Melting temperature, 10°C/min	<b>325 / *</b>	°C	ISO 11357-1/-3
<sup>[C]</sup> Temp. of deflection under load, 1.80 MPa	<b>275 / *</b>	°C	ISO 75-1/-2
<sup>[C]</sup> Temp. of deflection under load, 0.45 MPa	<b>300 / *</b>	°C	ISO 75-1/-2
<sup>[C]</sup> Coeff. of linear therm. expansion, parallel	<b>20 / *</b>	E-6/K	ISO 11359-1/-2
<sup>[C]</sup> Coeff. of linear therm. expansion, normal	<b>70 / *</b>	E-6/K	ISO 11359-1/-2
<sup>[C]</sup> Burning Behav. at 1.5 mm nom. thickn.	<b>V-0 / *</b>	class	IEC 60695-11-10
Thickness tested	<b>1.5 / *</b>	mm	-
Yellow Card available	<b>yes / *</b>	-	-
<sup>[C]</sup> Burning Behav. at thickness h	<b>V-0 / *</b>	class	IEC 60695-11-10
Thickness tested	<b>3.0 / *</b>	mm	-
Yellow Card available	<b>yes / *</b>	-	-

[C]: CAMPUS

<b>Electrical properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Volume resistivity	<b>&gt;1E13 / &gt;1E13</b>	Ohm*m	IEC 62631-3-1
<sup>[C]</sup> Surface resistivity	<b>* / &gt;1E15</b>	Ohm	IEC 62631-3-2
<sup>[C]</sup> Electric strength	<b>33 / -</b>	kV/mm	IEC 60243-1
<sup>[C]</sup> Comparative tracking index	<b>600 / -</b>	-	IEC 60112

[C]: CAMPUS

<b>Other properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<sup>[C]</sup> Water absorption	<b>3.9 / *</b>	%	Sim. to ISO 62
<sup>[C]</sup> Humidity absorption	<b>1.4 / *</b>	%	Sim. to ISO 62
<sup>[C]</sup> Density	<b>1450 / -</b>	kg/m <sup>3</sup>	ISO 1183

[C]: CAMPUS

**Characteristics****Processing**

Injection Molding

**Special Characteristics**

Flame retardant, Halogen-free, Phosphorus-free

**Delivery form**

Pellets

**Certifications**

Contains renewable resources

**Additives**

Lubricants, Release agent

**Regional Availability**

North America, Europe, Asia Pacific

**Other text information****Injection molding**[Injection Molding Recommendations](#)[Hot runner recommendations for molding high heat performance Engineering Materials](#)[Steel recommendations for molds screws and barrels](#)[Trouble shooting guideline for injection molding](#)