

**Product Texts**

50% Glass Reinforced, PA4T, Suitable for NMT, Suitable for PVD

ISO 1043 PPA-GF50

ForTii® NMX33 offers excellent adhesion to NMT treated metals and high mechanical performance in metal/plastics bonding. NMX33 also has a high HDT resulting in a good thermal resistance, supporting high temperature secondary processes such as high temperature PVD.

<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>0.2 / *</b>	%	ISO 294-4, 2577
<sup>[C]</sup> Molding shrinkage, normal	<b>0.7 / *</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>17500 / 18500</b>	MPa	ISO 527
<sup>[C]</sup> Stress at break	<b>280 / 240</b>	MPa	ISO 527
<sup>[C]</sup> Strain at break	<b>2.4 / 2.3</b>	%	ISO 527
<sup>[C]</sup> Charpy impact strength, +23°C	<b>90 / 75</b>	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy notched impact strength, +23°C	<b>14.5 / 12.5</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>315 / *</b>	°C	ISO 11357-1/-3
<sup>[C]</sup> Temp. of deflection under load, 1.80 MPa	<b>245 / *</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>50 / *</b>	E-6/K	ISO 11359-1/-2
<sup>[C]</sup> Burning Behav. at thickness h	<b>HB / *</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> Electric strength	<b>28 / 27</b>	kV/mm	IEC 60243-1

[C]: CAMPUS

<b>Other properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<sup>[C]</sup> Water absorption	<b>4.2 / *</b>	%	Sim. to ISO 62
<sup>[C]</sup> Humidity absorption	<b>1.6 / *</b>	%	Sim. to ISO 62
<sup>[C]</sup> Density	<b>1640 / -</b>	kg/m <sup>3</sup>	ISO 1183

[C]: CAMPUS

**Characteristics****Processing**

Injection Molding

**Regional Availability**

North America, Europe, Asia Pacific

**Delivery form**

Pellets

**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](#)