

Product Texts

30% Glass Reinforced, PA4T, Electro-friendly, Halogen free and free of red phosphorous, Certified V-0 at 0.2mm

ISO 1043 PPA-GF30 FR(40)

ForTii® T11 has optimal toughness and is the best solution for (automotive) electrical components in harsh environments to minimize the risk of cracking and to provide design freedom and product reliability in terms of thermal shock ageing >1000 cycles. T11 passes JEDEC MSL 1 reflow performance (for specified thickness), reaches CTI ≥800V for heavy duty components, is all-color VDE approved and has electrical RTI rating of 140°C at 0,75 mm.

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

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	11500 / 12000	MPa	ISO 527
^[C] Stress at break	160 / 150	MPa	ISO 527
^[C] Strain at break	2.2 / 2.1	%	ISO 527
^[C] Charpy impact strength, +23°C	60 / -	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	8 / -	kJ/m ²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	325 / *	°C	ISO 11357-1/-3
^[C] Glass transition temperature, 10°C/min	125 / *	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	305 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	323 / *	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	20 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	65 / *	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	-
Yellow Card available	yes / *	-	-
^[C] Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	3.0 / *	mm	-
Yellow Card available	yes / *	-	-

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	4.2 / 4.2	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	3.9 / 3.9	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	64 / 64	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	176 / 176	E-4	IEC 62631-2-1
^[C] Volume resistivity	>1E13 / >1E13	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	* / >1E15	Ohm	IEC 62631-3-2
^[C] Electric strength	33 / 33	kV/mm	IEC 60243-1
^[C] Comparative tracking index	600 / -	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Water absorption	4.1 / *	%	Sim. to ISO 62

ForTii® T11

PPA-GF30 FR(40)

Envalior

[C] Humidity absorption	1.6 / *	%	Sim. to ISO 62
[C] Density	1460 / -	kg/m ³	ISO 1183

[C]: CAMPUS

Characteristics**Processing**

Injection Molding

Special Characteristics

Flame retardant, Halogen-free, Phosphorus-free

Delivery form

Granules

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](#)