

Product Texts

30% Glass Reinforced, PA4T, Electro-friendly, Halogen free and free of red phosphorous, Certified V-0 at 0.35mm

ISO 1043 PPA-GF30 FR(40)

ForTii® TX1 has robust mechanical & JEDEC Level 2 performance, enabling SMT process without deformation and low risk on blistering. TX1 has stable processing behavior and is suitable for typical consumer electronics connector manufacturing such as I/O, FPC and WTB connectors.

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	150 / 140	MPa	ISO 527
^[C] Strain at break	2 / 1.9	%	ISO 527
^[C] Charpy impact strength, +23°C	47 / 47	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	7 / 7	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] Oxygen index	39 / *	%	ISO 4589-1/-2

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

[C]: CAMPUS

ForTii® TX1

PPA-GF30 FR(40)

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Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	86 / *	cm ³ /g	ISO 307, 1157, 1628

[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](#)