

TECHNICAL DATA SHEET

ForTii® K12

Envalior
PPA-GF40

Processing

Injection molding

Granules

Additives

Lubricants, Release agent

Delivery Form

Product Text

Product Information

40% Glass Reinforced, PA4T, Electro-friendly

ISO 1043 PPA-GF40

ForTii® K12 combines high mechanical strength and good flowability, ideal for designs requiring dimensional stability and impact resistance. K12 is suitable for applications such as sensor housing or camera bracket.

Processing/Physical Characteristics	Value	Unit	Standard
Molding shrinkage, parallel	0.35	%	ISO 294-4, 2577
Molding shrinkage, normal	1	%	ISO 294-4, 2577
Mechanical Properties	Value	Unit	Standard
Tensile modulus	13500	MPa	ISO 527
Stress at break	210	MPa	ISO 527
Strain at break	2	%	ISO 527
Poisson's ratio	0.35		ISO 527
Charpy impact strength, +23°C	65	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	11	kJ/m ²	ISO 179/1eA
Thermal Properties	Value	Unit	Standard
Melting temperature, 10°C/min	325	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	125	°C	ISO 11357-1/-2
Temp. of deflection under load, 1.80 MPa	305	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	320	°C	ISO 75-1/-2

ForTii® K12

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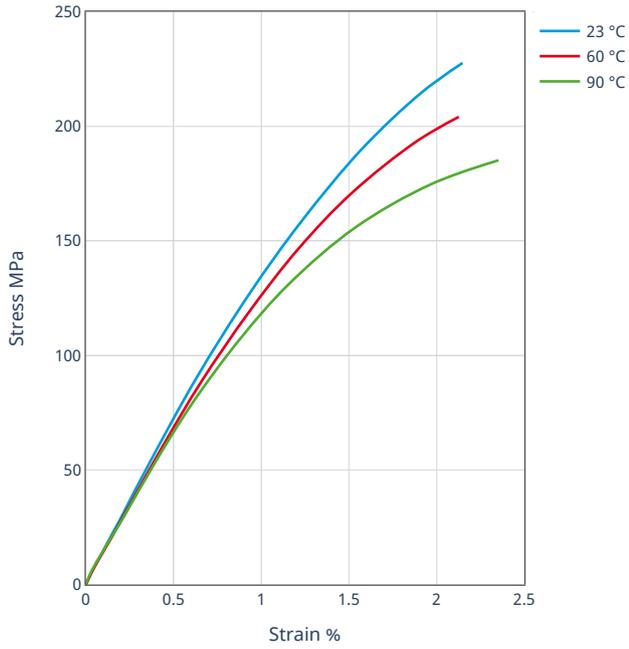
Thermal Properties	Value	Unit	Standard
Burning behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	3	mm	
Yellow card available	yes		
Electrical Properties	Value	Unit	Standard
Relative permittivity, 100Hz	5		IEC 62631-2-1
Relative permittivity, 1MHz	4.5		IEC 62631-2-1
Dissipation factor, 100Hz	120	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	250	E-4	IEC 62631-2-1
Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2
Electric strength	33	kV/mm	IEC 60243-1
Comparative tracking index	600		IEC 60112
Other Properties	Value	Unit	Standard
Water absorption	4.4	%	Sim. to ISO 62
Humidity absorption	1.7	%	Sim. to ISO 62
Density	1530	kg/m ³	ISO 1183

Diagrams

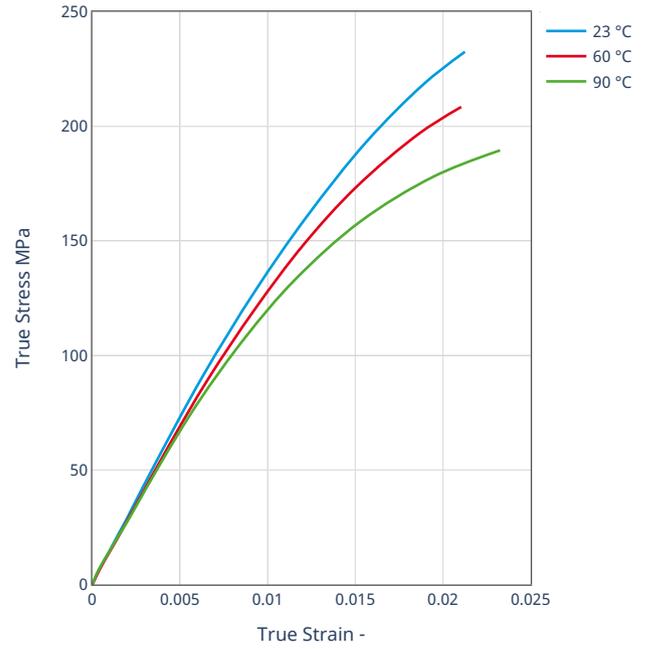
ForTii® K12

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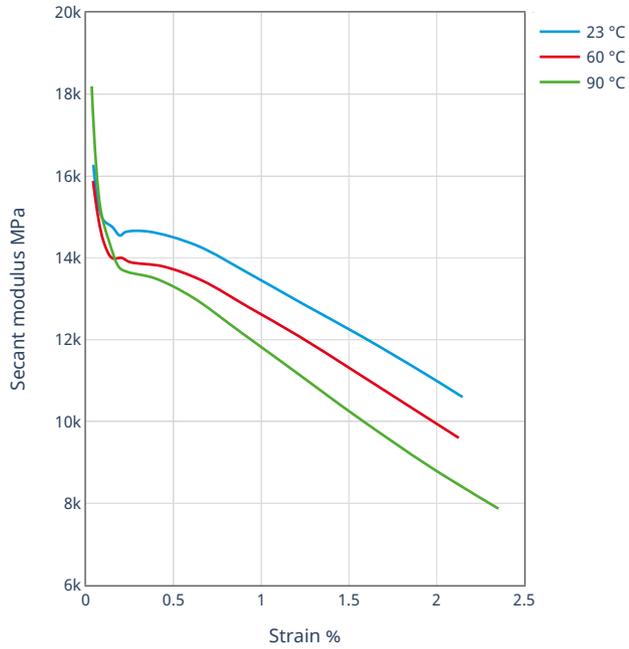
Stress-strain



True stress-true strain



Secant modulus-strain



Processing Information

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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