

TECHNICAL DATA SHEET

ForTii® K11

Envalior
PPA-GF30

Processing

Injection molding

Granules

Additives

Lubricants, Release agent

Delivery Form

Product Text

Product Information

30% Glass Reinforced, PA4T, Good Flow, Electro-friendly

ISO 1043 PPA-GF30

ForTii® K11 combines excellent mechanical properties with low warpage for miniature applications such as Audio Jack and Camera Holder.

Processing/Physical Characteristics	Value	Unit	Standard
Molding shrinkage, parallel	0.4	%	ISO 294-4, 2577
Molding shrinkage, normal	1.3	%	ISO 294-4, 2577
Mechanical Properties	Value	Unit	Standard
Tensile modulus	11300	MPa	ISO 527
Stress at break	190	MPa	ISO 527
Strain at break	2	%	ISO 527
Poisson's ratio	0.35		ISO 527
Charpy impact strength, +23°C	60	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	10	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

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Thermal Properties	Value	Unit	Standard
Temp. of deflection under load, 0.45 MPa	320	°C	ISO 75-1/-2
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	150	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	280	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	5.1	%	Sim. to ISO 62
Humidity absorption	2	%	Sim. to ISO 62
Density	1430	kg/m ³	ISO 1183

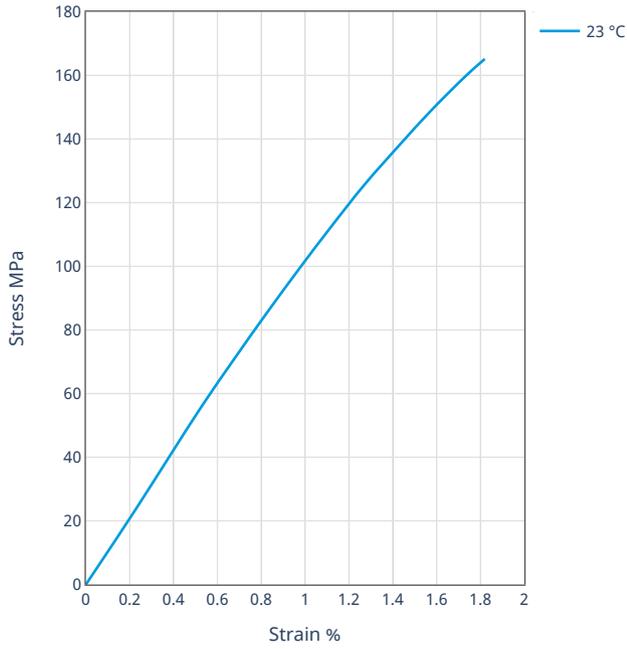
Material Specific Properties	Value	Unit	Standard
Viscosity number	98	cm ³ /g	ISO 307, 1157, 1628

Diagrams

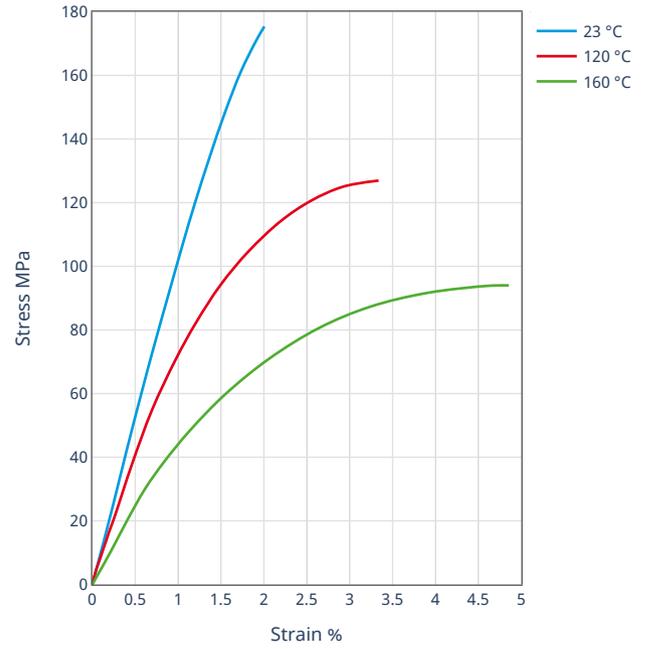
ForTii® K11

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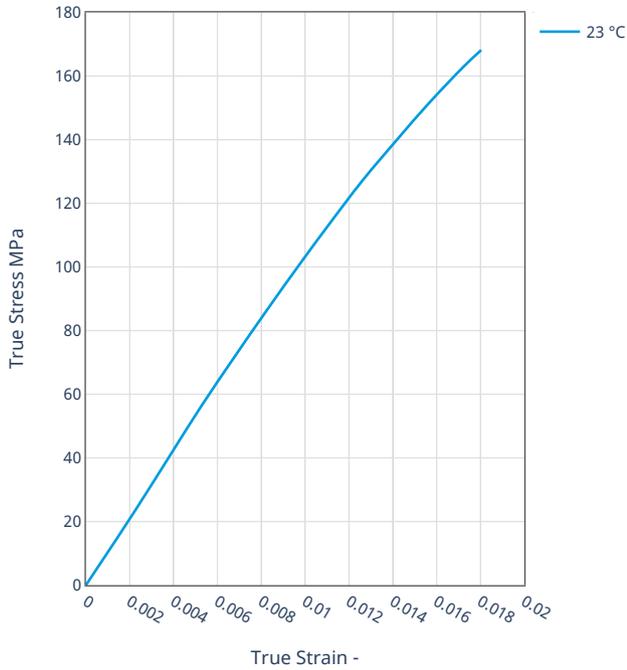
Stress-strain



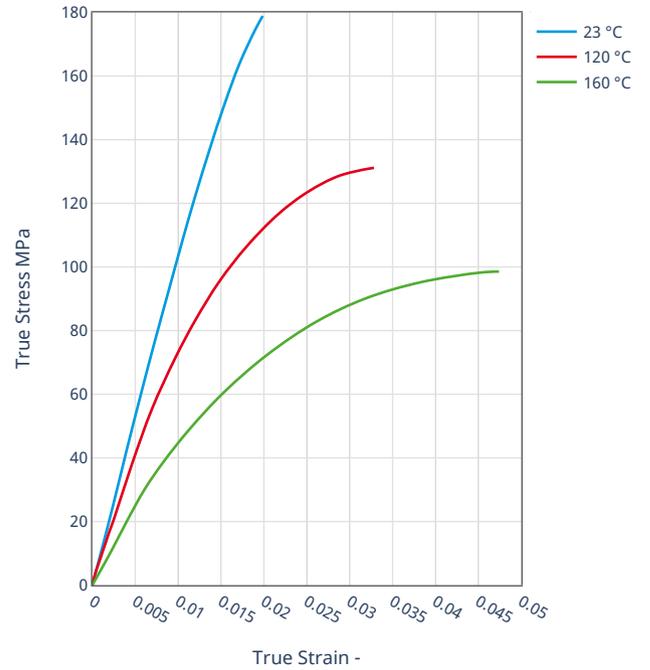
Stress-strain



True stress-true strain



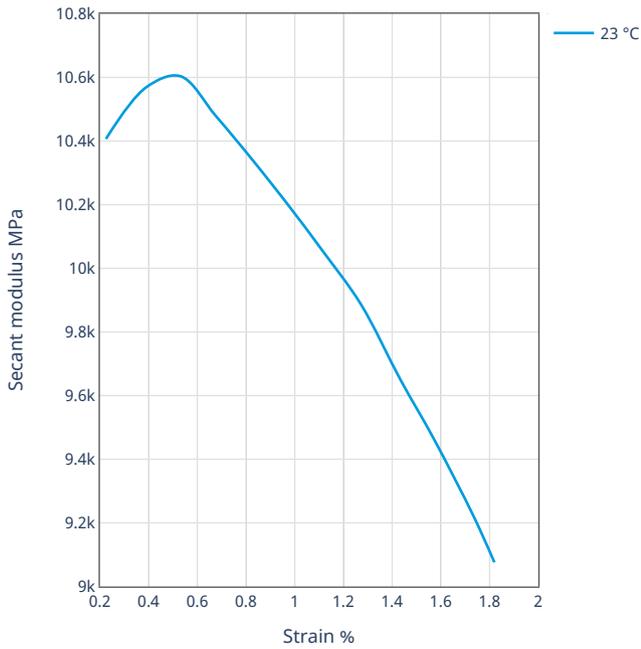
True stress-true strain



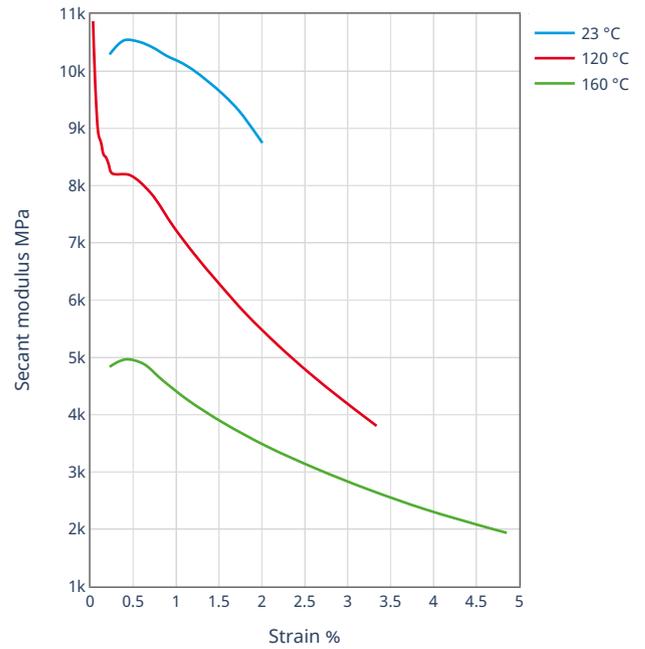
ForTii® K11

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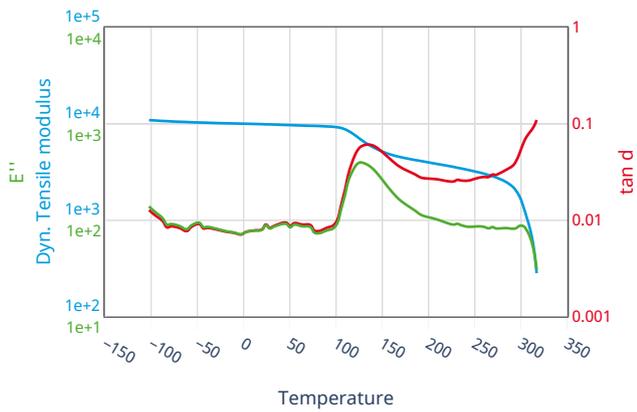
Secant modulus-strain



Secant modulus-strain



Dynamic tensile modulus-temperature



Processing 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