ForTii®

ForTii® MX3

PPA-GF50

50% Glass Reinforced, PA4T, Heat Stabilized, for Automotive applications

Print Date: 2019-10-09

ForTii® MX3 outperforms in dimensional stability at elevated temperatures due to the high heat deflection temperature under load.

Properties	Typical Data	Unit	Test Method
Rheological properties	dry / cond		
Molding shrinkage (parallel)	0.35 / *	%	ISO 294-4
Molding shrinkage (normal)	0.9 / *	%	ISO 294-4
Mechanical properties	dry / cond		
Tensile modulus	18000 / 18200	MPa	ISO 527-1/-2
Tensile modulus (-40°C)	18300 / 18500	MPa	ISO 527-1/-2
Tensile modulus (40°C)	17700 / 17300	MPa	ISO 527-1/-2
Tensile modulus (80°C)	16800 / 10800	MPa	ISO 527-1/-2
Tensile modulus (100°C)	15700 / 8700	MPa	ISO 527-1/-2
Tensile modulus (120°C)	12400 / -	MPa	ISO 527-1/-2
Tensile modulus (150°C)	8200	MPa	ISO 527-1/-2
Tensile modulus (160°C)	7700	MPa	ISO 527-1/-2
Tensile modulus (180°C)	7100	MPa	ISO 527-1/-2
Tensile modulus (200°C)	6800	MPa	ISO 527-1/-2
Stress at break	250 / 240	MPa	ISO 527-1/-2
Stress at break (-40°C)	270 / 280	MPa	ISO 527-1/-2
Stress at break (40°C)	250 / 220	MPa	ISO 527-1/-2
Stress at break (80°C)	220 / 140	MPa	ISO 527-1/-2
Stress at break (100°C)	195 / 115	MPa	ISO 527-1/-2
Stress at break (120°C)	155 / -	MPa	ISO 527-1/-2
Stress at break (150°C)	115	MPa	ISO 527-1/-2

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Properties	Typical Data	Unit	Test Method
Stress at break (160°C)	105	MPa	ISO 527-1/-2
Stress at break (180°C)	90	MPa	ISO 527-1/-2
Stress at break (200°C)	82	MPa	ISO 527-1/-2
Strain at break	2 / 2	%	ISO 527-1/-2
Strain at break (-40°C)	2 / 2	%	ISO 527-1/-2
Strain at break (40°C)	2 / 2	%	ISO 527-1/-2
Strain at break (80°C)	2.3 / 4	%	ISO 527-1/-2
Strain at break (100°C)	2.6 / 4.5	%	ISO 527-1/-2
Strain at break (120°C)	3.6 / -	%	ISO 527-1/-2
Strain at break (150°C)	5.7	%	ISO 527-1/-2
Strain at break (160°C)	6	%	ISO 527-1/-2
Strain at break (180°C)	6	%	ISO 527-1/-2
Strain at break (200°C)	6	%	ISO 527-1/-2
Flexural modulus	18500 / -	MPa	ISO 178
Flexural strength	400 / -	MPa	ISO 178
Flexural modulus (120°C)	11700	MPa	ISO 178
Flexural modulus (160°C)	8000	MPa	ISO 178
Charpy impact strength (+23°C)	90 / 80	kJ/m²	ISO 179/1eU
Charpy impact strength (-30°C)	75 / 65	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	12 / 11	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	12 / 11	kJ/m²	ISO 179/1eA
Thermal properties	**dry / cond**		
Melting temperature (10°C/min)	325 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	305 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.27	E-4/°C	ASTM D696
Coeff. of linear therm. expansion (normal)	0.3	E-4/°C	ASTM D696
Electrical properties	**dry / cond**		
Volume resistivity	>1E13 / >1E13	Ohm*m	IEC 60093

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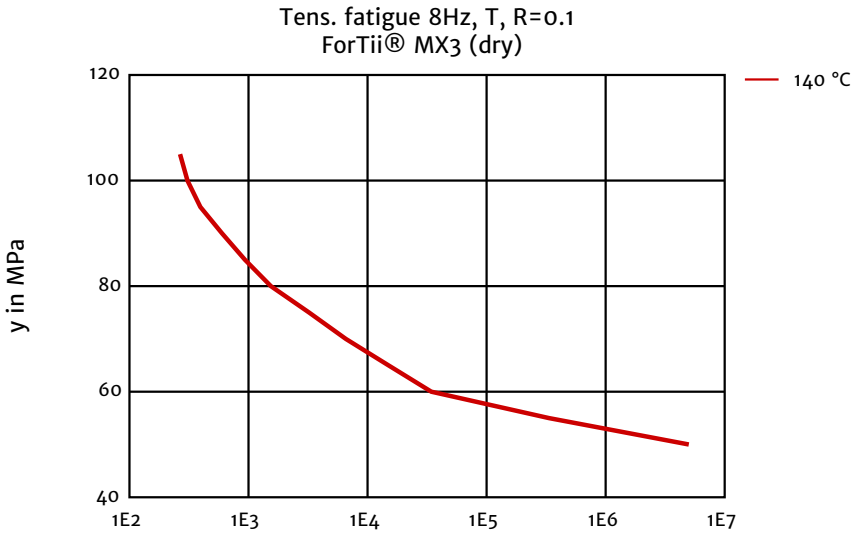
Properties	Typical Data	Unit	Test Method
Comparative tracking index	425 / -	V	IEC 60112
Relative permittivity (100Hz)	5.1 / 5.8	-	IEC 60250
Relative permittivity (1 MHz)	4.8 / 5	-	IEC 60250
Other properties	dry / cond		
Humidity absorption	1.4 / *	%	Sim. to ISO 62
Density	1650 / -	kg/m³	ISO 1183

Tens. fatigue 8Hz, T, R=0.1 , dry



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