

TECHNICAL DATA SHEET

ForTii® MX2

Envalior
PPA-GF40

Processing

Injection molding

Delivery Form

Pellets

Special Characteristics

Heat stabilized or stable to heat

Features

Fatigue resistance

Chemical Resistance

General chemical resistance

Applications

Automotive

Product Text

Product Information

40% Glass Reinforced, PA4T, Heat Stabilized, for Automotive applications

ISO 1043 PPA-GF40

ForTii® MX2 is a high Tg PPA that outperforms in dimensional stability at elevated temperatures due to the high heat deflection temperature (HDT). MX2 has excellent fatigue performance and good chemical resistance.

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	14500	MPa	ISO 527
Stress at break	230	MPa	ISO 527
Strain at break	2.3	%	ISO 527
Poisson's ratio	0.35		ISO 527
Charpy impact strength, +23°C	70	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	65	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	11	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	10	kJ/m ²	ISO 179/1eA

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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	317	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	17	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	55	E-6/K	ISO 11359-1/-2

Electrical Properties	Value	Unit	Standard
Relative permittivity, 100Hz	4.9		IEC 62631-2-1
Relative permittivity, 1MHz	4.6		IEC 62631-2-1
Dissipation factor, 100Hz	57	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	180	E-4	IEC 62631-2-1
Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2

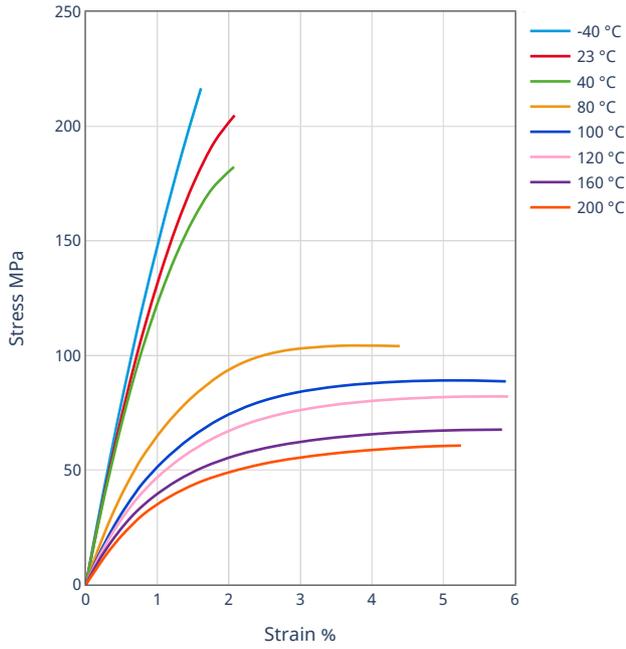
Other Properties	Value	Unit	Standard
Water absorption	4.7	%	Sim. to ISO 62
Humidity absorption	1.8	%	Sim. to ISO 62
Density	1550	kg/m ³	ISO 1183

Diagrams

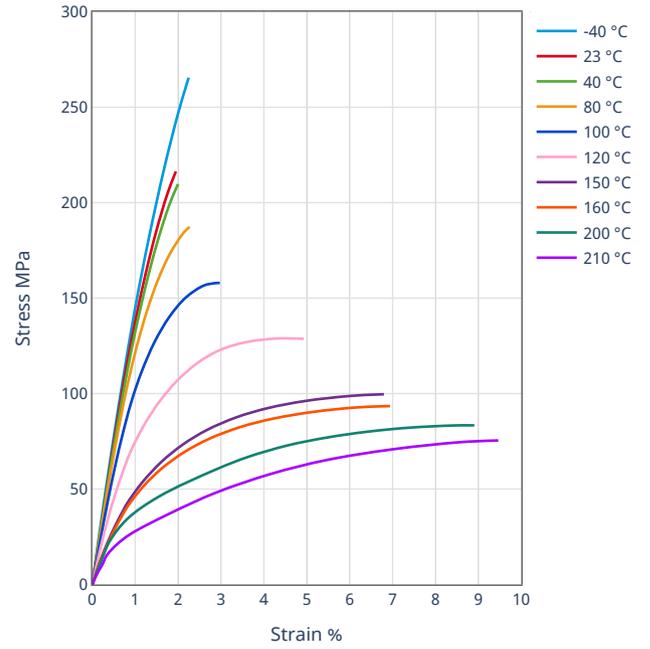
ForTii® MX2

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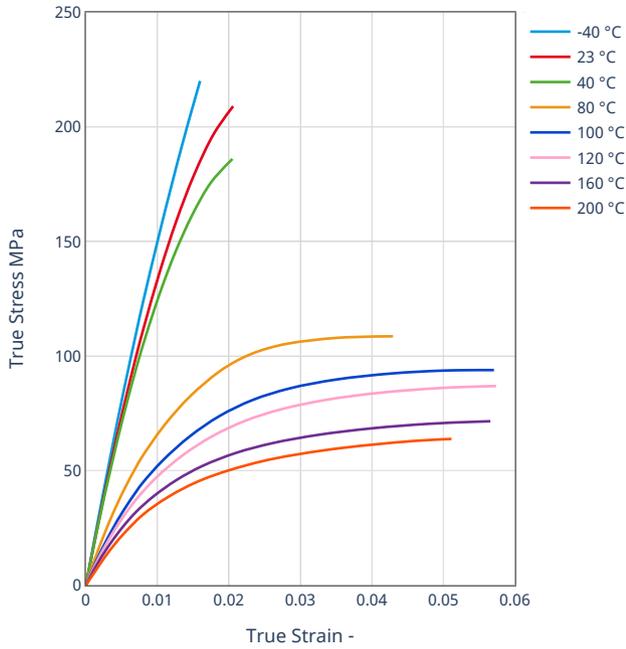
Stress-strain



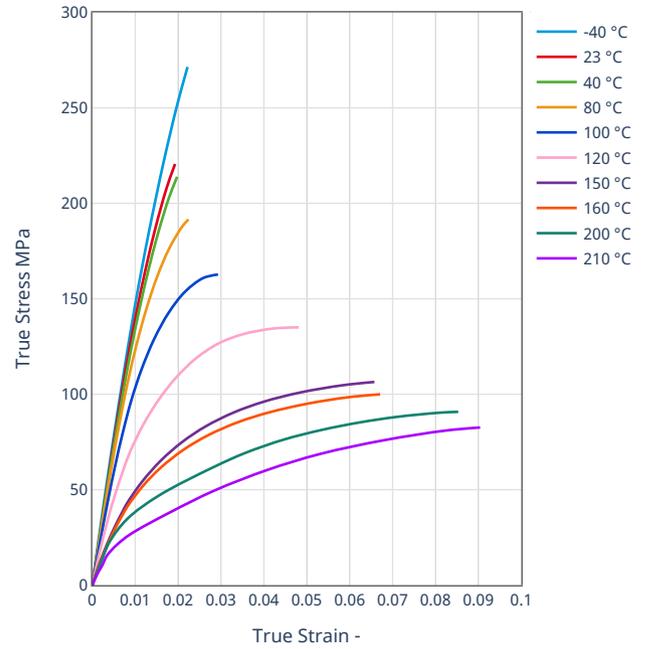
Stress-strain



True stress-true strain



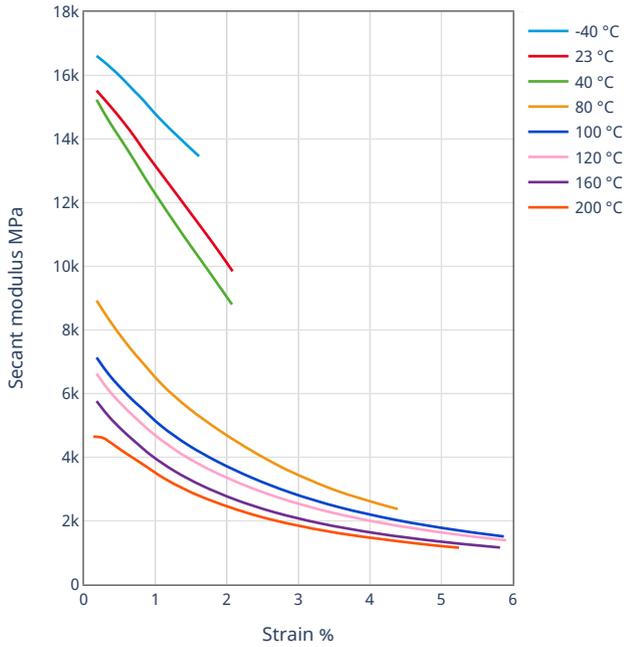
True stress-true strain



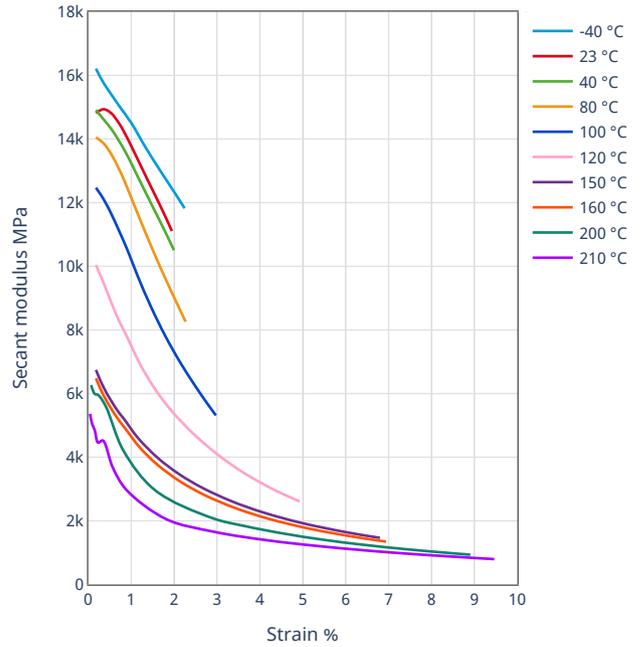
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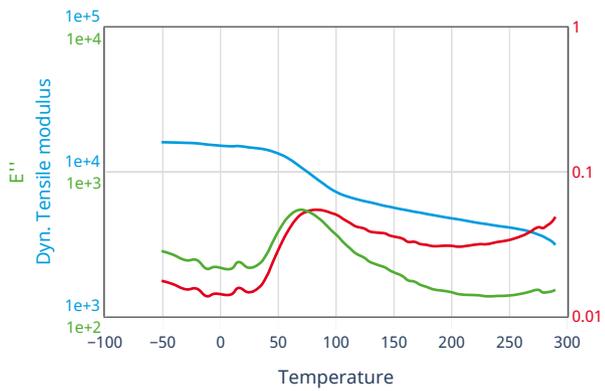
Secant modulus-strain



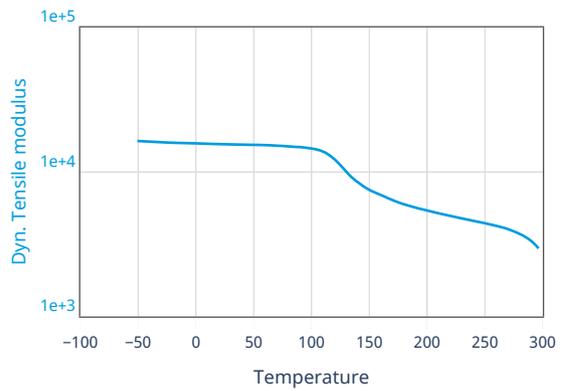
Secant modulus-strain



Dynamic tensile modulus-temperature



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