

TECHNICAL DATA SHEET

ForTii® Ace WX51-FC

Envalior
PPA-GF30

Processing

Injection molding

Pellets

Certifications

Food contact, Drinking water contact

Delivery Form

Product Text

Product Information

30% Glass Reinforced, PA4T, Food Contact Quality, Drinking Water Grade

ISO 1043 PPA-GF30

ForTii Ace WX51-FC has best in class high temperature and wet mechanical performance, weldline strength and weldline strength retention in hot water and steam. For detailed statements and information regarding food contact and water contact approvals please contact your Envalior representative.

Processing/Physical Characteristics	Value	Unit	Standard
Molding shrinkage, parallel	0.43	%	ISO 294-4, 2577
Molding shrinkage, normal	1.2	%	ISO 294-4, 2577
Mechanical Properties	Value	Unit	Standard
Tensile modulus	11000	MPa	ISO 527
Stress at break	210	MPa	ISO 527
Strain at break	2.6	%	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	10	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	10	kJ/m ²	ISO 179/1eA
Thermal Properties	Value	Unit	Standard
Melting temperature, 10°C/min	340	°C	ISO 11357-1/-3

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Thermal Properties	Value	Unit	Standard
Temp. of deflection under load, 1.80 MPa	320	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	335	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	18	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	60	E-6/K	ISO 11359-1/-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
Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2
Electric strength	45	kV/mm	IEC 60243-1
Comparative tracking index	600		IEC 60112

Other Properties	Value	Unit	Standard
Water absorption	4.8	%	Sim. to ISO 62
Humidity absorption	2	%	Sim. to ISO 62
Density	1460	kg/m ³	ISO 1183

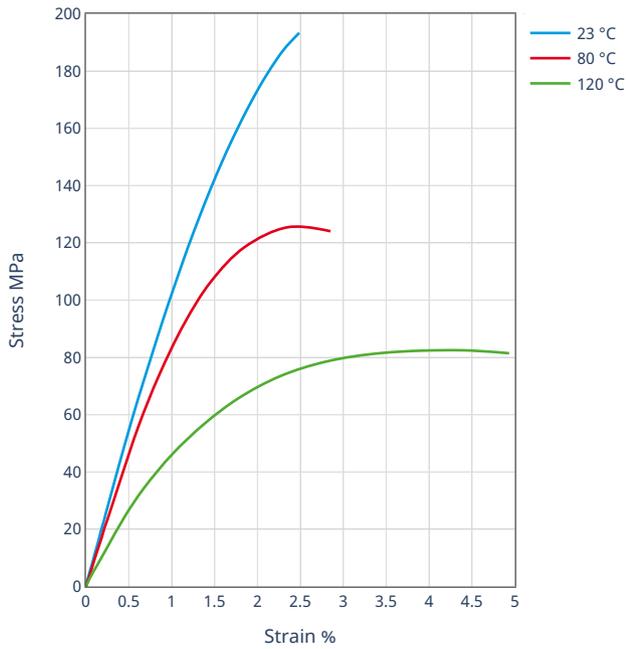
Processing Recommendation Injection Molding	Value	Unit	Standard
Pre-drying - temperature	100 - 130	°C	
Pre-drying - time	2 - 4	h	
Melt temperature	350 - 370	°C	
Mold temperature	120 - 200	°C	
Zone 1	330 - 340	°C	
Zone 2	340 - 350	°C	
Zone 3	340 - 350	°C	
Nozzle temperature	350 - 370	°C	
Back pressure	0.5 - 3	MPa	

Diagrams

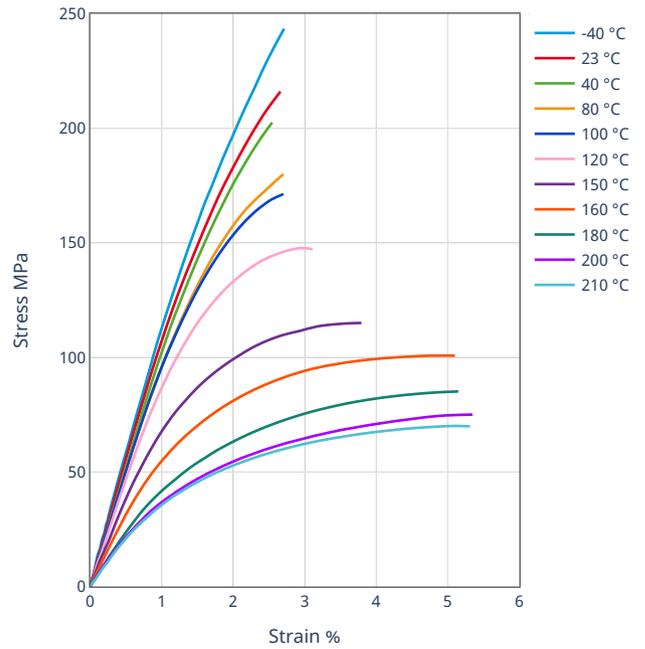
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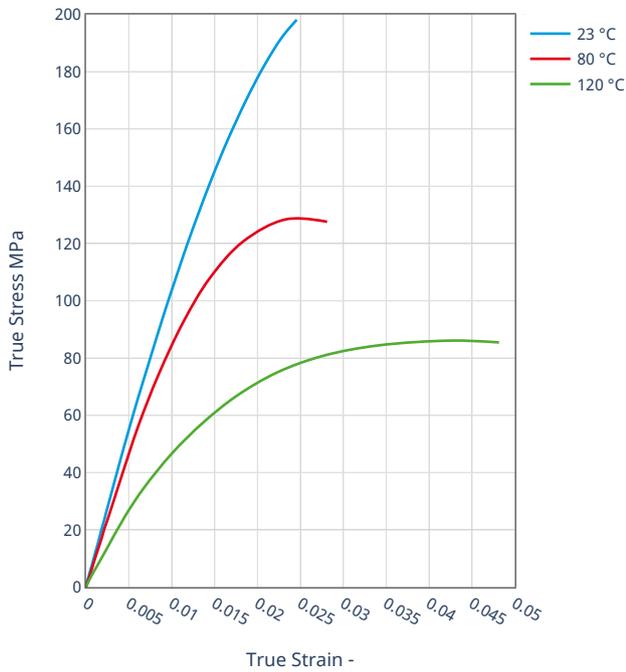
Stress-strain



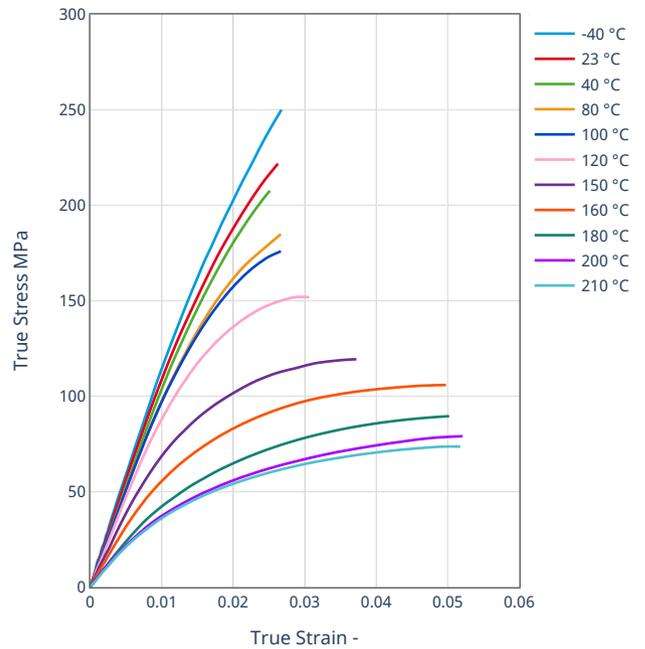
Stress-strain



True stress-true strain



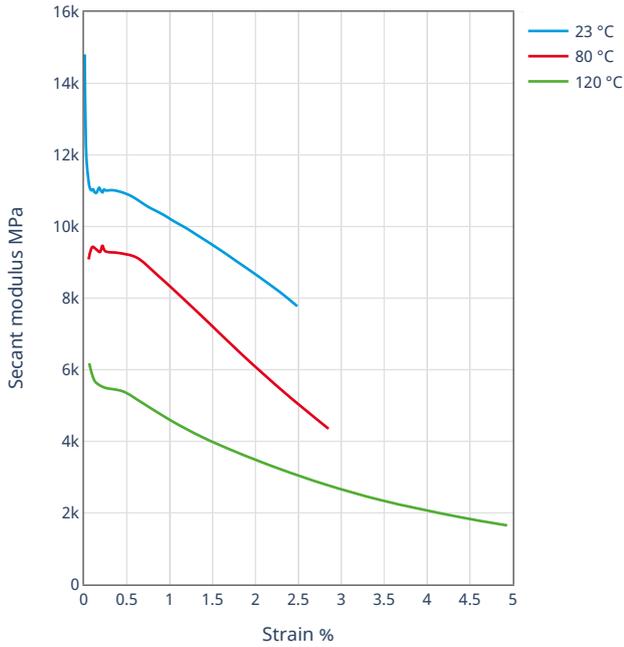
True stress-true strain



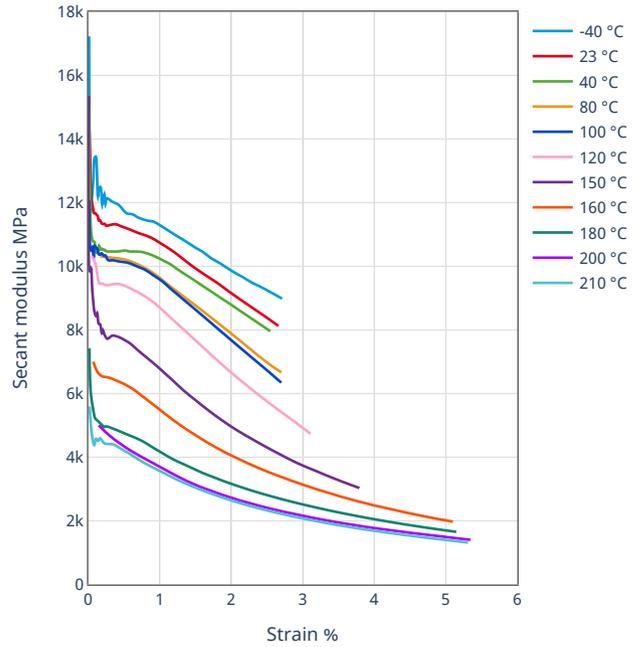
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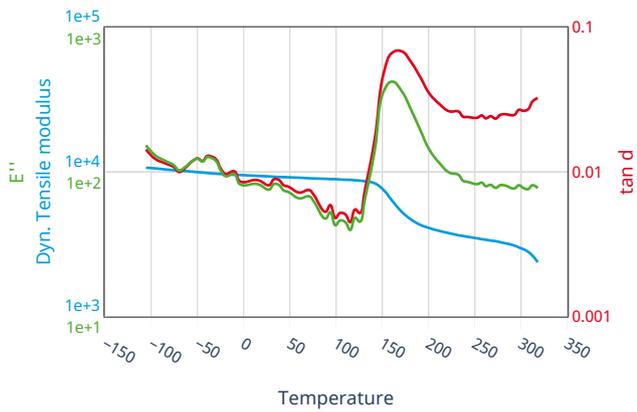
Secant modulus-strain



Secant modulus-strain



Dynamic tensile modulus-temperature



Processing Information

Injection molding

Injection Molding Recommendations