

TECHNICAL DATA SHEET

Arnite® TV4 270

Envalior
PBT-GF35

Processing

Injection molding

Delivery Form

Pellets

Additives

Release agent

Certifications

Food contact

Product Text

Product Information

35% Glass Reinforced, Food Contact Quality

ISO 1043 PBT-GF35

Processing/Physical Characteristics	Value	Unit	Standard
Density of melt	1260	kg/m ³	
Thermal conductivity of melt	0.197	W/(m K)	
Spec. heat capacity of melt	1740	J/(kg K)	
Eff. thermal diffusivity	9.01E-8	m ² /s	
Mechanical Properties	Value	Unit	Standard
Tensile modulus	11500	MPa	ISO 527
Stress at break	155	MPa	ISO 527
Strain at break	2.5	%	ISO 527
Poisson's ratio	0.35		ISO 527
Charpy impact strength, +23°C	65	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	65	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	9.7	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	13	kJ/m ²	ISO 179/1eA
Thermal Properties	Value	Unit	Standard
Melting temperature, 10°C/min	225	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.80 MPa	213	°C	ISO 75-1/-2

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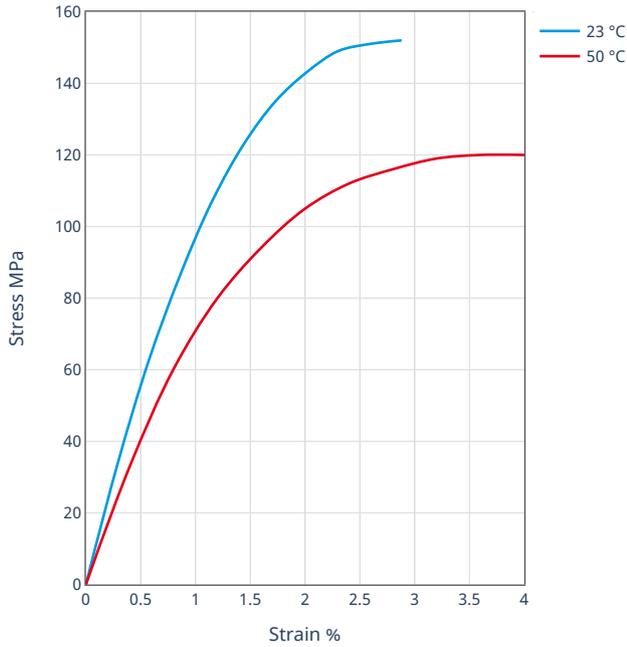
Thermal Properties	Value	Unit	Standard
Temp. of deflection under load, 0.45 MPa	224	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	30	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	70	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	
Yellow card available	yes		
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
Electric strength	30	kV/mm	IEC 60243-1
Comparative tracking index	475		IEC 60112
Other Properties	Value	Unit	Standard
Water absorption	0.25	%	Sim. to ISO 62
Humidity absorption	0.15	%	Sim. to ISO 62
Density	1570	kg/m ³	ISO 1183

Diagrams

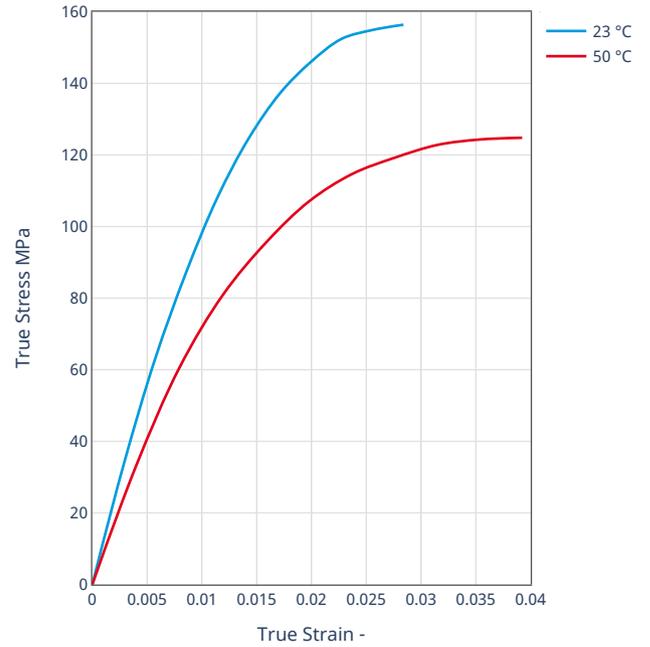
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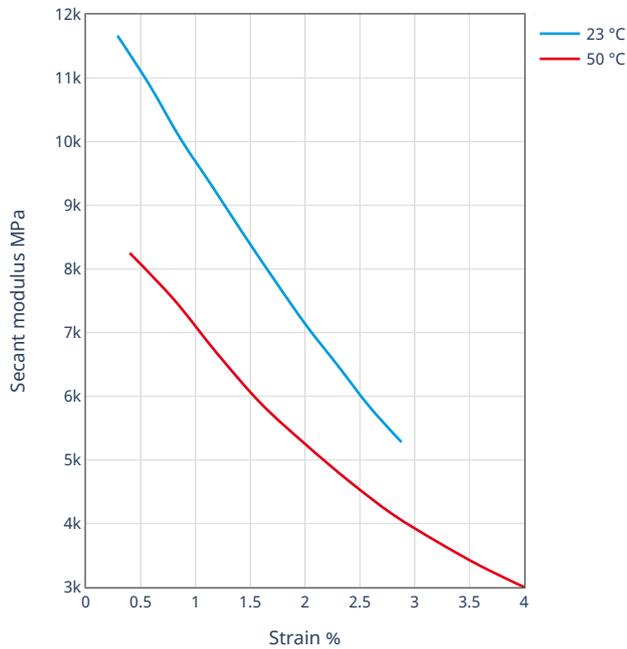
Stress-strain



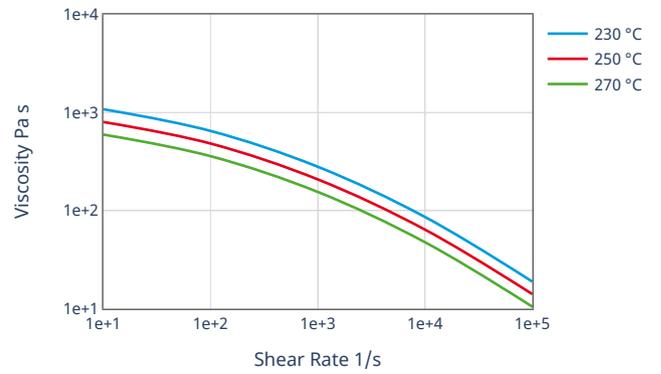
True stress-true strain



Secant modulus-strain



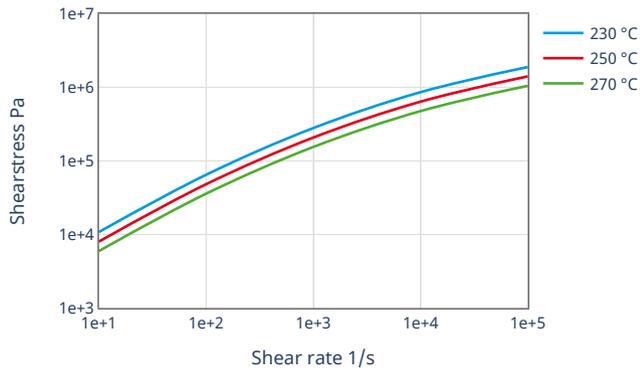
Viscosity-shear rate



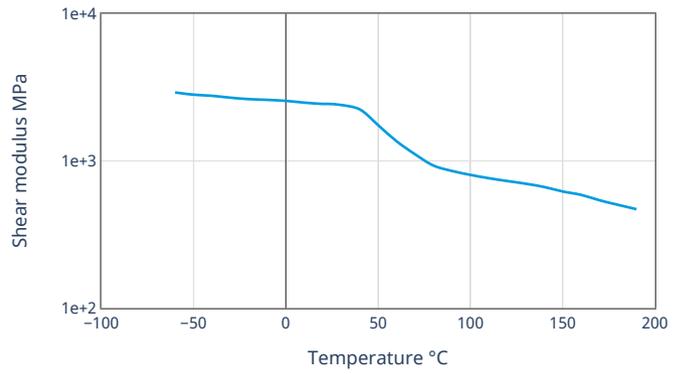
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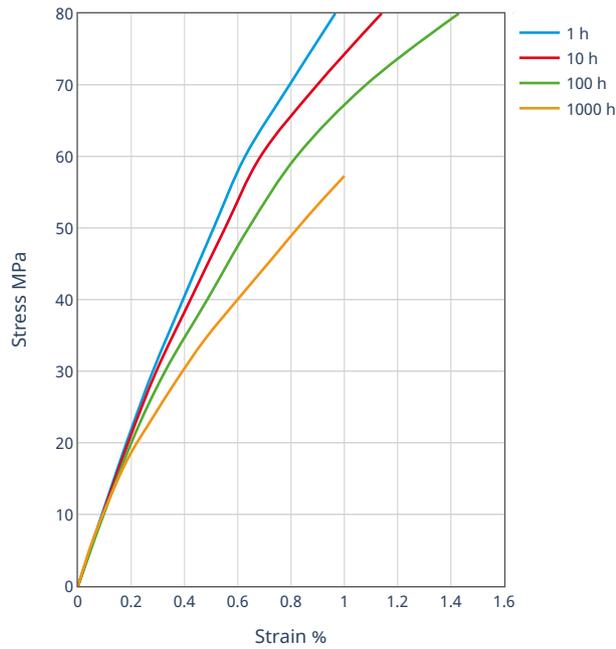
Shearstress-shear rate



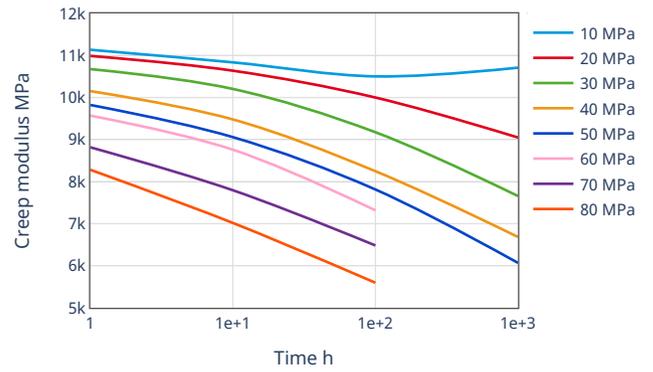
Dynamic shear modulus-temperature



Stress-strain (isochronous) 23°C



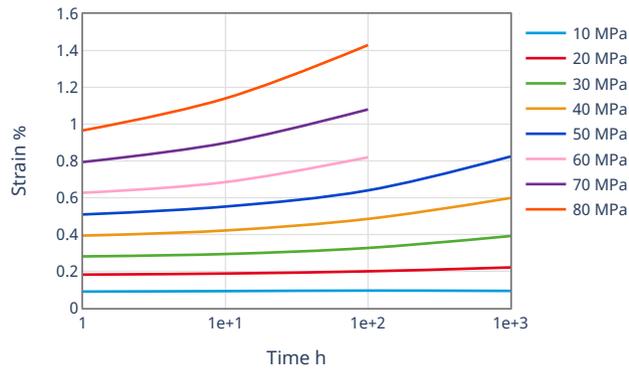
Creep modulus-time 23°C



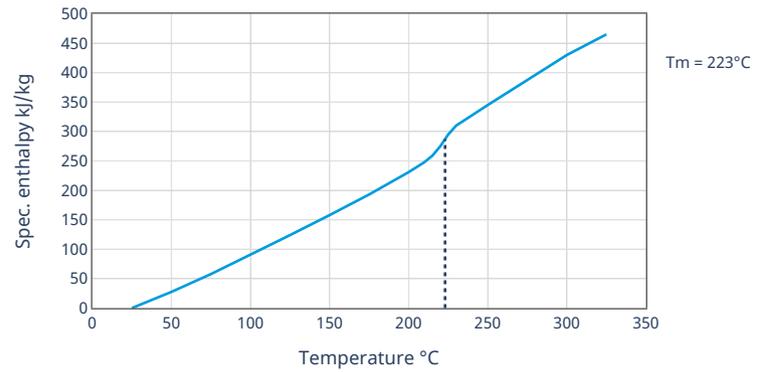
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Creep curve 23°C



Spec. enthalpy/mass-temp. (DSC)



Processing Information

Injection molding

Injection Molding Recommendations

Steel recommendations for molds screws and barrels

Supporting document for Stanyl quality processing