

TECHNICAL DATA SHEET

# Arnite® TV4 261

Envalior  
PBT-GF30

**Processing**

Injection molding

Pellets

**Additives**

Release agent

**Delivery Form**

## Product Text

**Product Information**

30% Glass Reinforced

ISO 1043 PBT-GF30

Processing/Physical Characteristics	Value	Unit	Standard
Melt volume-flow rate, MVR	18	cm <sup>3</sup> /10min	ISO 1133
Temperature	250	°C	
Load	2.16	kg	
Density of melt	1220	kg/m <sup>3</sup>	
Thermal conductivity of melt	0.185	W/(m K)	
Spec. heat capacity of melt	1850	J/(kg K)	
Eff. thermal diffusivity	8.23E-8	m <sup>2</sup> /s	
Mechanical Properties	Value	Unit	Standard
Tensile modulus	9750	MPa	ISO 527
Stress at break	145	MPa	ISO 527
Strain at break	2.8	%	ISO 527
Poisson's ratio	0.35		ISO 527
Charpy impact strength, +23°C	56	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	50	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	9.5	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	9.5	kJ/m <sup>2</sup>	ISO 179/1eA

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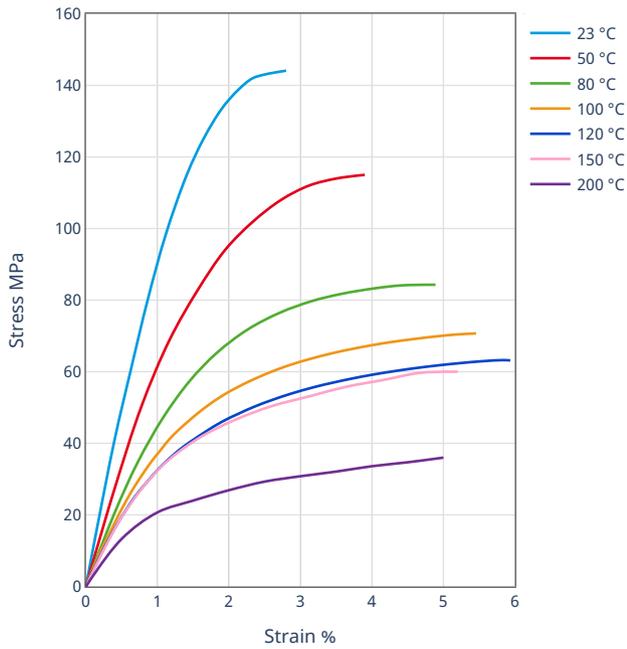
Thermal Properties	Value	Unit	Standard
Melting temperature, 10°C/min	225	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.80 MPa	205	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	220	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	35	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. 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		
Burning rate, FMVSS, thickness 1 mm	55	mm/min	ISO 3795 (FMVSS 302)
Oxygen index	20	%	ISO 4589-1/-2
Electrical Properties	Value	Unit	Standard
Relative permittivity, 100Hz	3.9		IEC 62631-2-1
Relative permittivity, 1MHz	3.7		IEC 62631-2-1
Dissipation factor, 100Hz	25	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	170	E-4	IEC 62631-2-1
Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
Electric strength	30	kV/mm	IEC 60243-1
Comparative tracking index	400		IEC 60112
Other Properties	Value	Unit	Standard
Water absorption	0.3	%	Sim. to ISO 62
Humidity absorption	0.15	%	Sim. to ISO 62
Density	1510	kg/m <sup>3</sup>	ISO 1183

## Diagrams

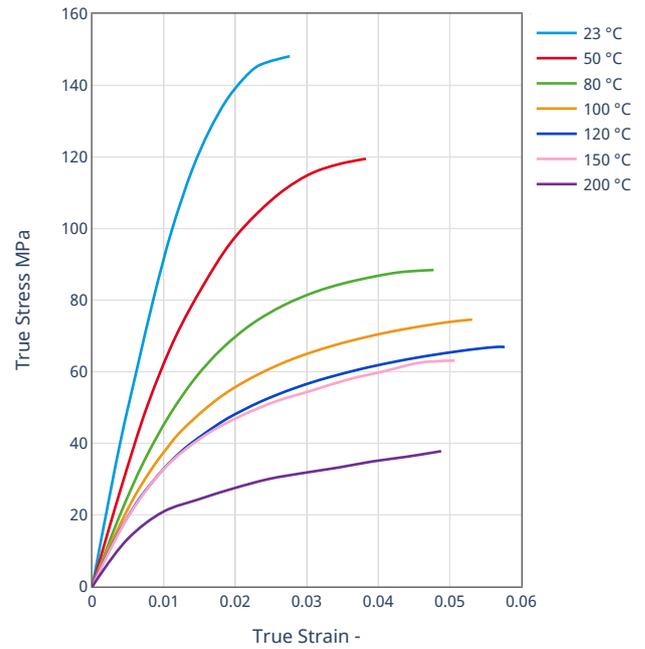
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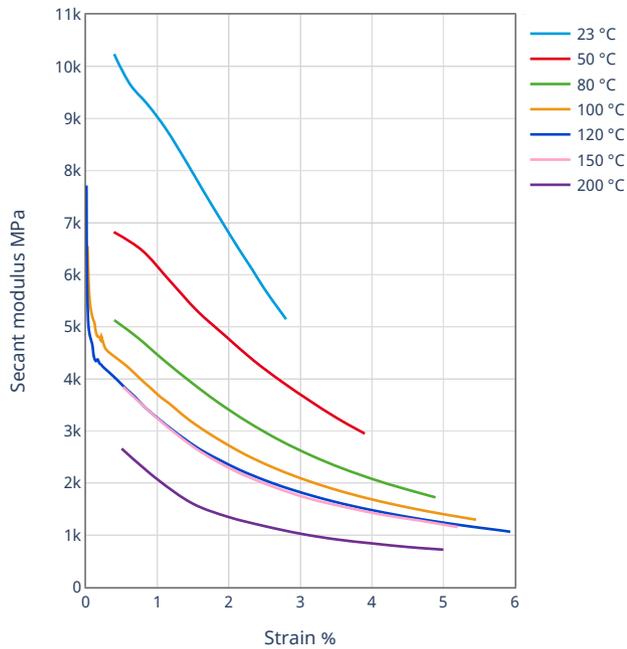
### Stress-strain



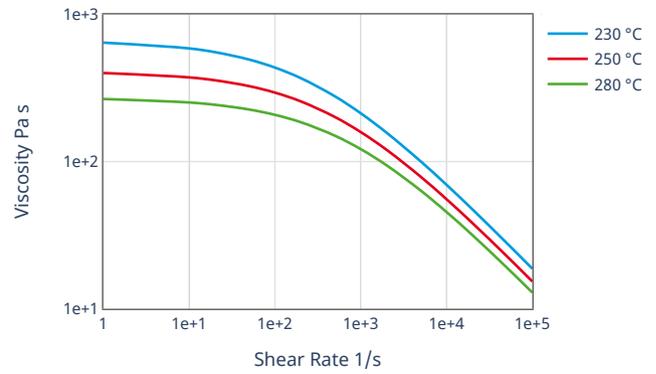
### True stress-true strain



### Secant modulus-strain



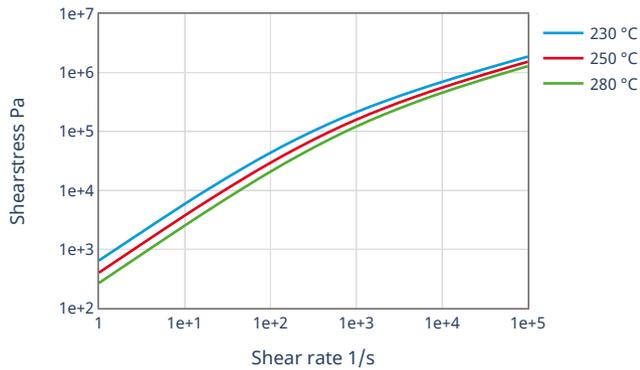
### Viscosity-shear rate



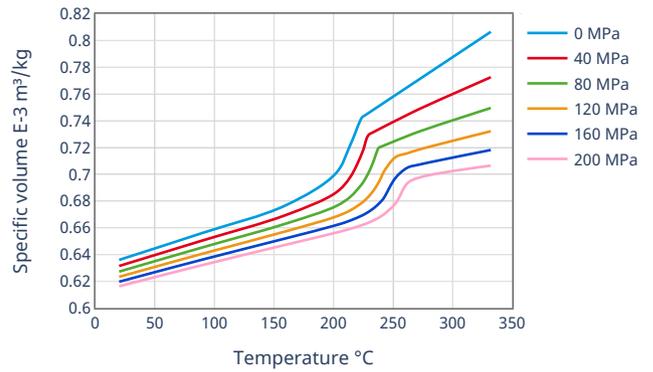
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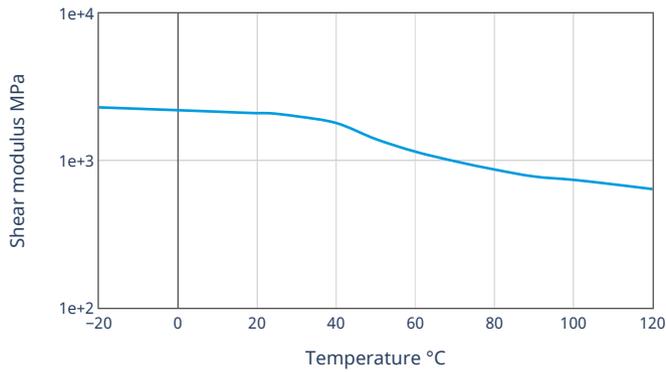
Shearstress-shear rate



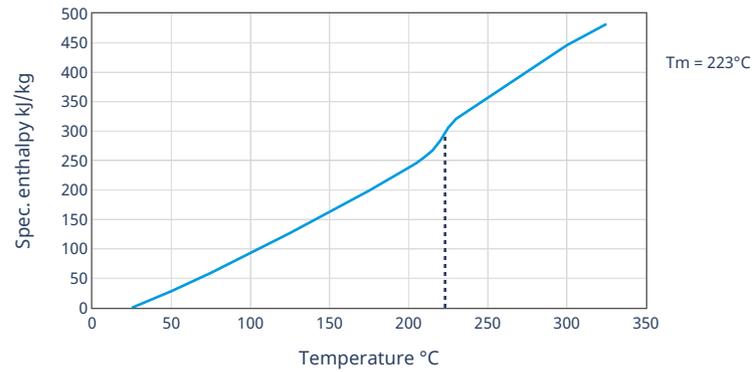
Spec. volume-Temperature (pVT)



Dynamic shear modulus-temperature



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