

TECHNICAL DATA SHEET

Akulon® K224-PG8

Envalior
PA6-I-GF40

Processing

Injection molding

Delivery Form

Pellets

Additives

Release agent

Special Characteristics

High impact or impact modified

Product Text

Product Information

40% Glass Reinforced, Impact Modified

ISO 1043 PA6-I-GF40

Processing/Physical Characteristics	Value	Unit	Standard
Melt volume-flow rate, MVR	14	cm ³ /10min	ISO 1133
Temperature	275	°C	
Load	5	kg	
Molding shrinkage, parallel	0.35	%	ISO 294-4, 2577
Molding shrinkage, normal	0.81	%	ISO 294-4, 2577
Density of melt	1279	kg/m ³	
Thermal conductivity of melt	0.3	W/(m K)	
Spec. heat capacity of melt	2010	J/(kg K)	
Eff. thermal diffusivity	1.15E-7	m ² /s	
Mechanical Properties	Value	Unit	Standard
Tensile modulus	11500	MPa	ISO 527
Stress at break	175	MPa	ISO 527
Strain at break	4.5	%	ISO 527
Poisson's ratio	0.35		ISO 527
Charpy impact strength, +23°C	105	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	110	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	25	kJ/m ²	ISO 179/1eA

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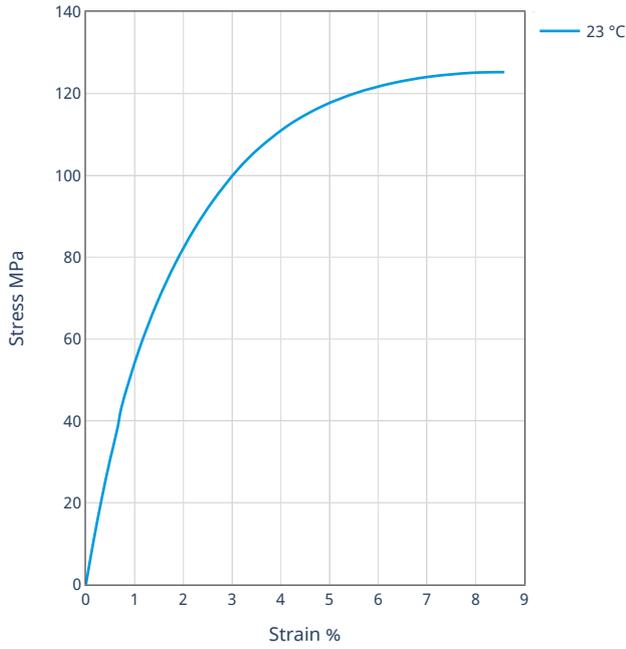
Mechanical Properties	Value	Unit	Standard
Charpy notched impact strength, -30°C	16	kJ/m ²	ISO 179/1eA
Thermal Properties			
Temp. of deflection under load, 1.80 MPa	200	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	215	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	20	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	65	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			
Relative permittivity, 100Hz	3.5		IEC 62631-2-1
Relative permittivity, 1MHz	3.3		IEC 62631-2-1
Dissipation factor, 100Hz	90	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	150	E-4	IEC 62631-2-1
Volume resistivity	1E13	Ohm*m	IEC 62631-3-1
Surface resistivity	1E14	Ohm	IEC 62631-3-2
Electric strength	25	kV/mm	IEC 60243-1
Comparative tracking index	600		IEC 60112
Other Properties			
Water absorption	4.9	%	Sim. to ISO 62
Humidity absorption	1.5	%	Sim. to ISO 62
Density	1430	kg/m ³	ISO 1183

Diagrams

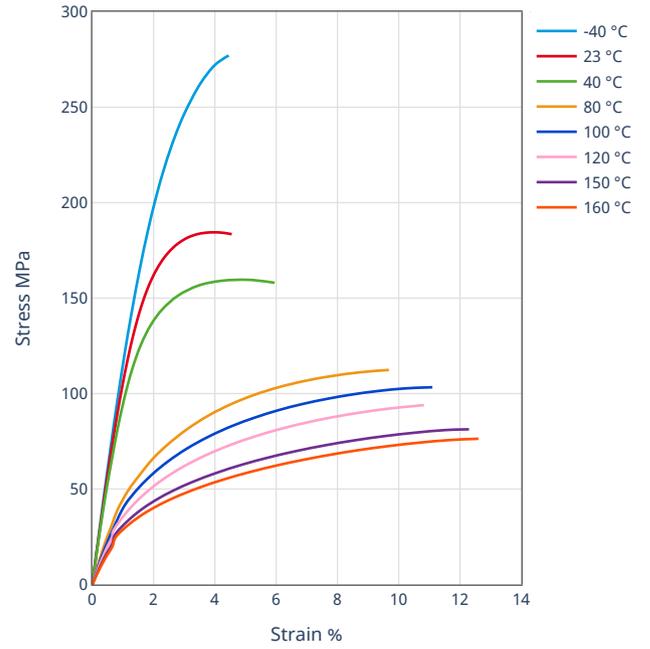
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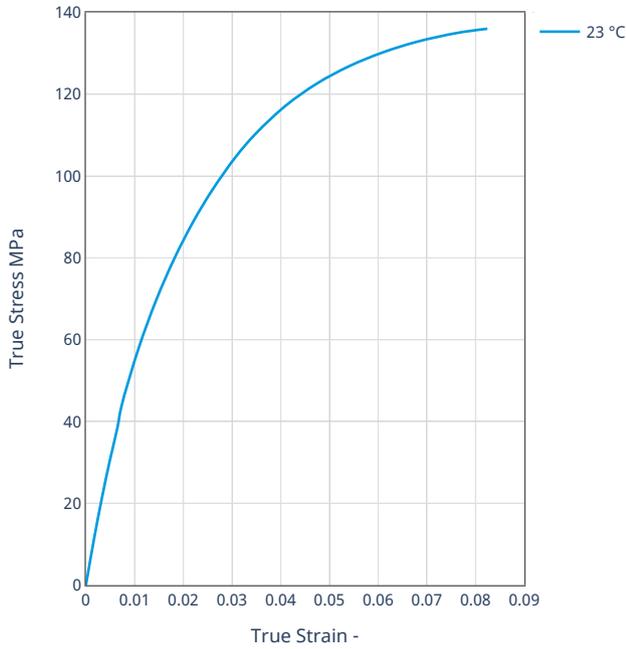
Stress-strain



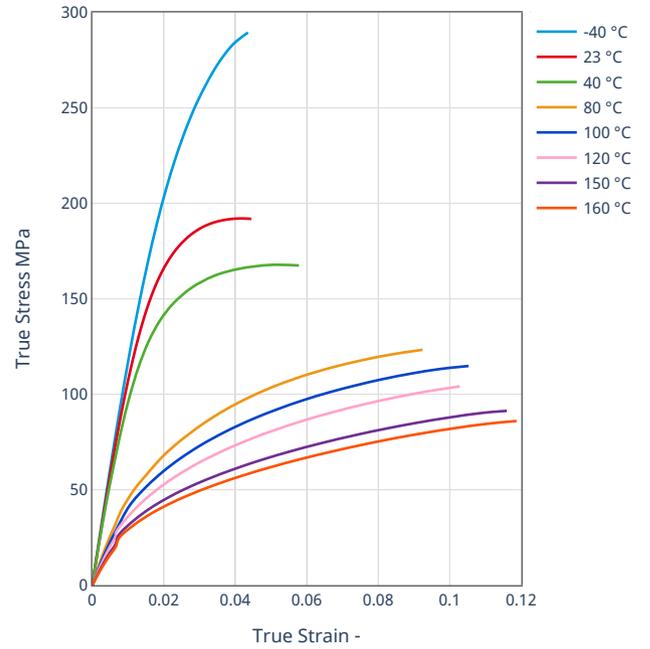
Stress-strain



True stress-true strain



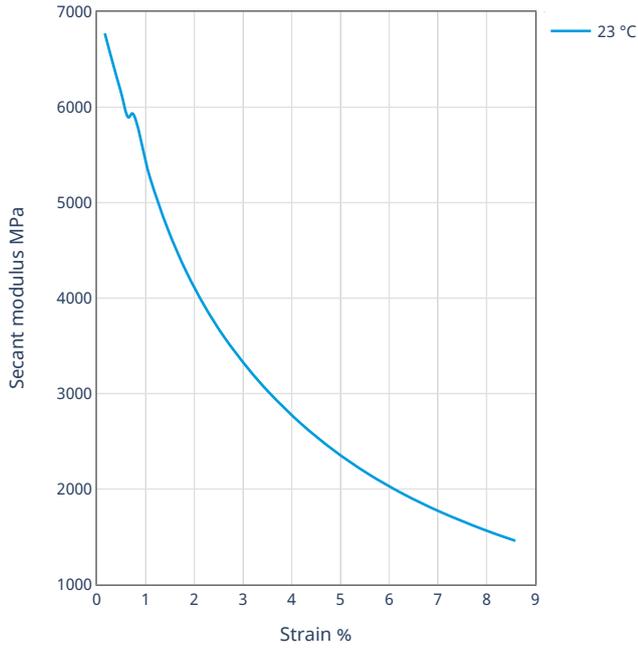
True stress-true strain



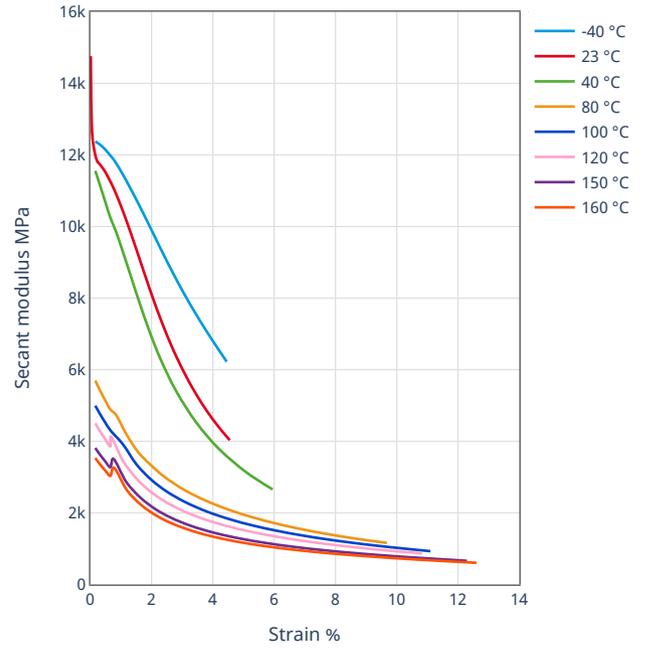
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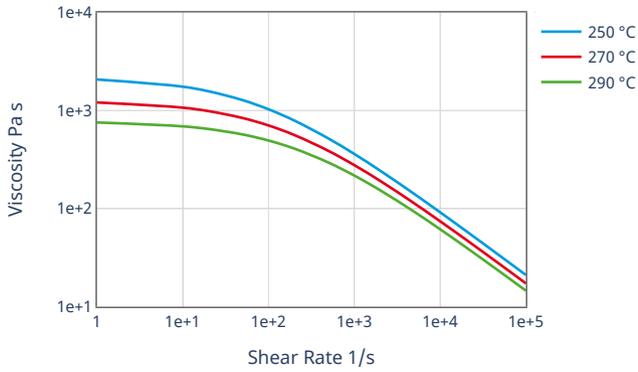
Secant modulus-strain



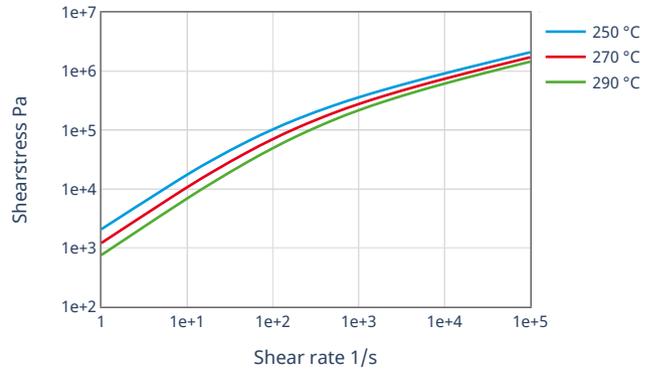
Secant modulus-strain



Viscosity-shear rate



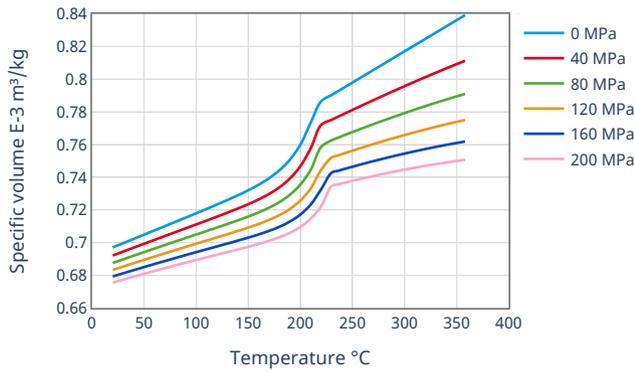
Shearstress-shear rate



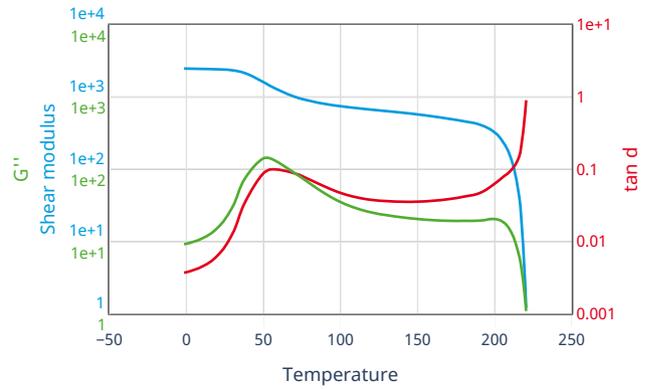
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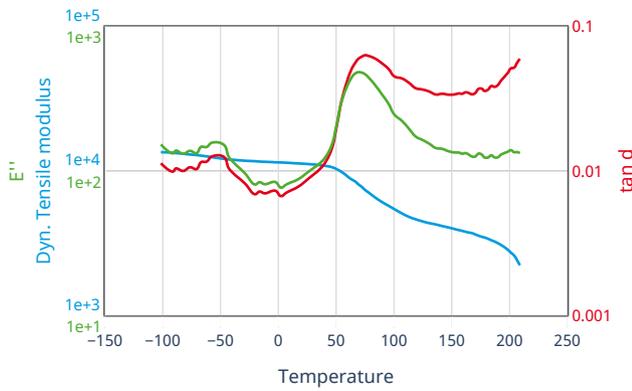
Spec. volume-Temperature (pVT)



Dynamic shear modulus-temperature



Dynamic tensile modulus-temperature



Processing Information

Injection molding

Injection Molding Recommendations

Steel recommendations for molds screws and barrels

Trouble shooting guideline for injection molding