

TECHNICAL DATA SHEET

Akulon® Ultraflow K-FHG0

Envalior
PA6-GF50

Processing

Injection molding

Delivery Form

Pellets

Special Characteristics

Heat stabilized or stable to heat

Product Text

Product Information

50% Glass Reinforced, Heat Stabilized, High Flow

ISO 1043 PA6-GF50

Processing/Physical Characteristics	Value	Unit	Standard
Melt volume-flow rate, MVR	15	cm ³ /10min	ISO 1133
Temperature	275	°C	
Load	2.16	kg	
Molding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Molding shrinkage, normal	0.9	%	ISO 294-4, 2577
Density of melt	1357	kg/m ³	
Thermal conductivity of melt	0.3	W/(m K)	
Spec. heat capacity of melt	1870	J/(kg K)	
Eff. thermal diffusivity	1.18E-7	m ² /s	
Mechanical Properties	Value	Unit	Standard
Tensile modulus	16500	MPa	ISO 527
Stress at break	235	MPa	ISO 527
Strain at break	2.7	%	ISO 527
Poisson's ratio	0.35		ISO 527
Charpy impact strength, +23°C	90	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	85	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	15	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	12	kJ/m ²	ISO 179/1eA

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Thermal Properties	Value	Unit	Standard
Melting temperature, 10°C/min	220	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.80 MPa	210	°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	30	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	40	E-6/K	ISO 11359-1/-2

Electrical Properties	Value	Unit	Standard
Relative permittivity, 100Hz	5.5		IEC 62631-2-1
Relative permittivity, 1MHz	4.5		IEC 62631-2-1
Dissipation factor, 100Hz	360	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	270	E-4	IEC 62631-2-1
Comparative tracking index	500		IEC 60112

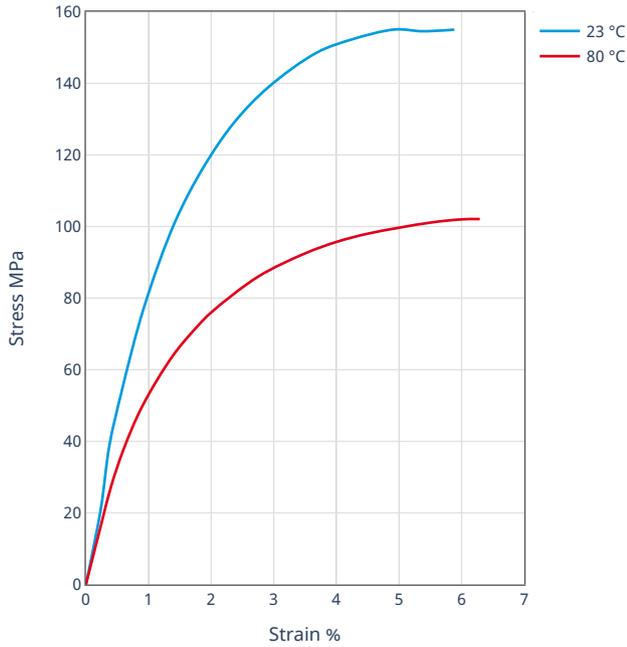
Other Properties	Value	Unit	Standard
Water absorption	4.5	%	Sim. to ISO 62
Humidity absorption	1.4	%	Sim. to ISO 62
Density	1560	kg/m ³	ISO 1183

Diagrams

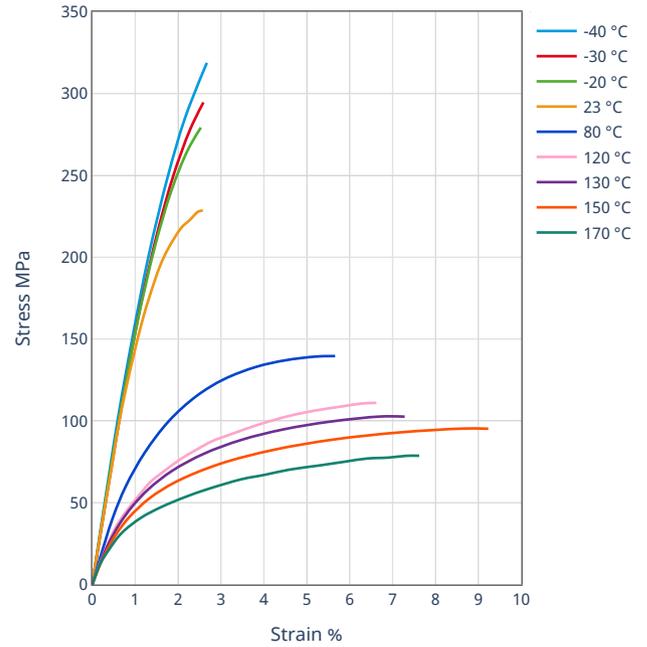
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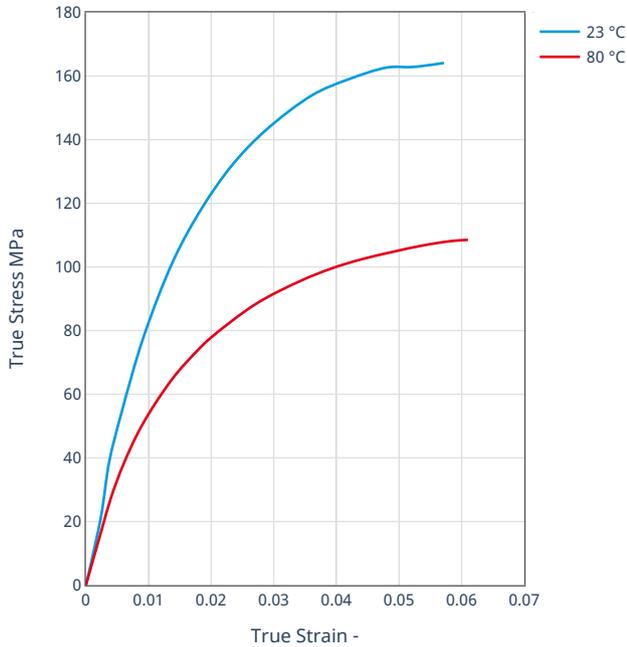
Stress-strain



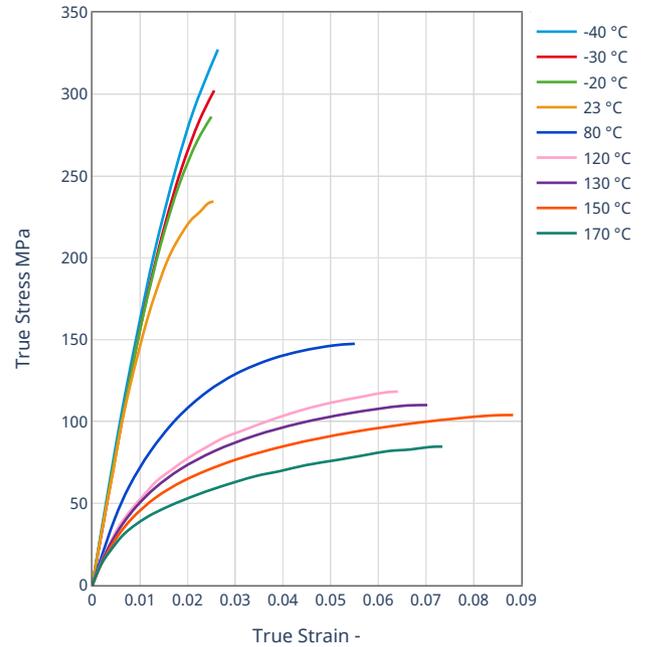
Stress-strain



True stress-true strain



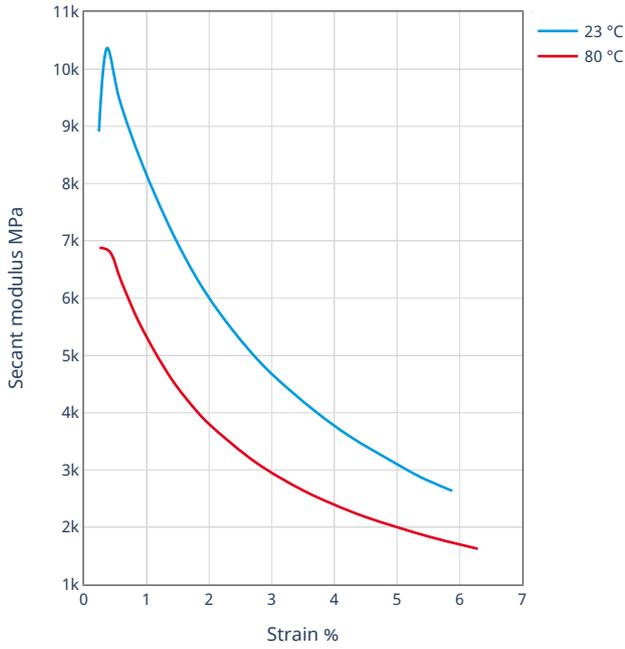
True stress-true strain



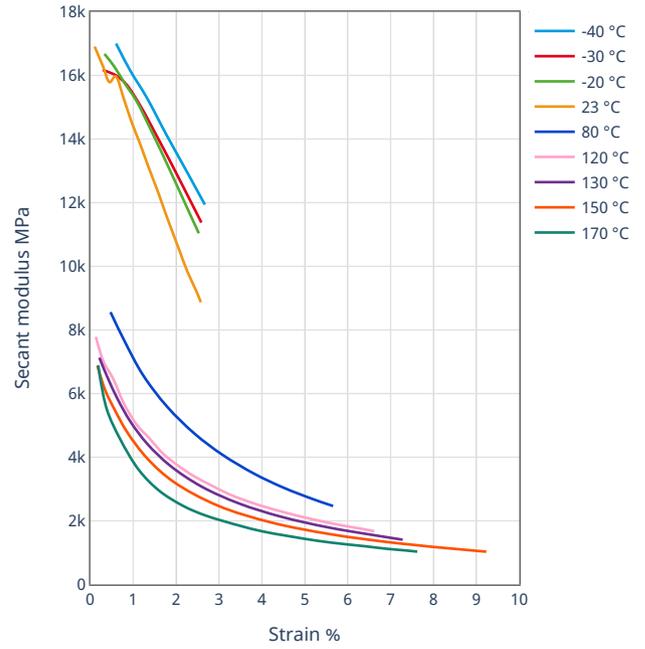
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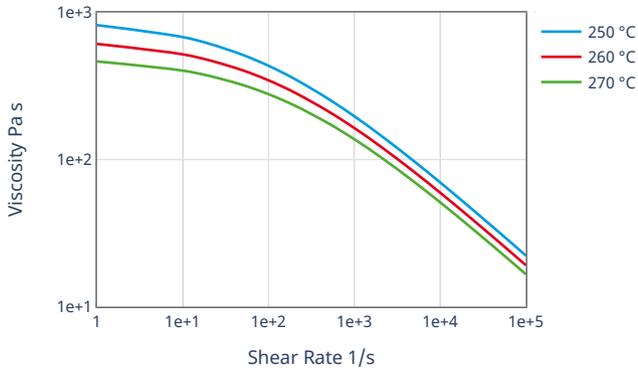
Secant modulus-strain



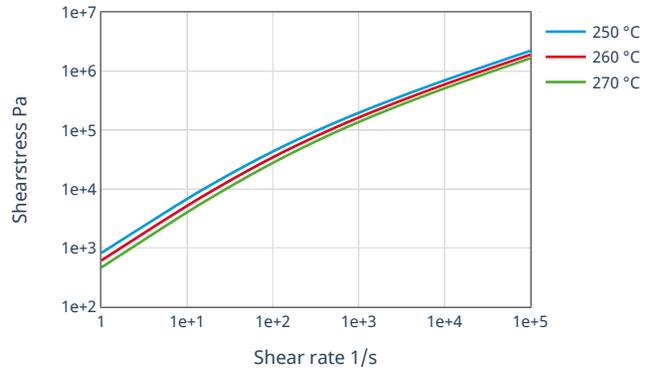
Secant modulus-strain



Viscosity-shear rate



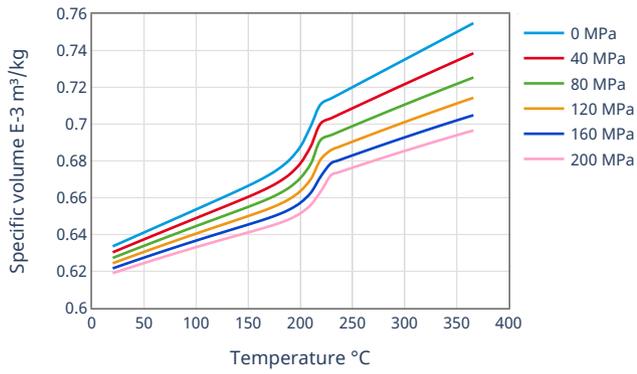
Shearstress-shear rate



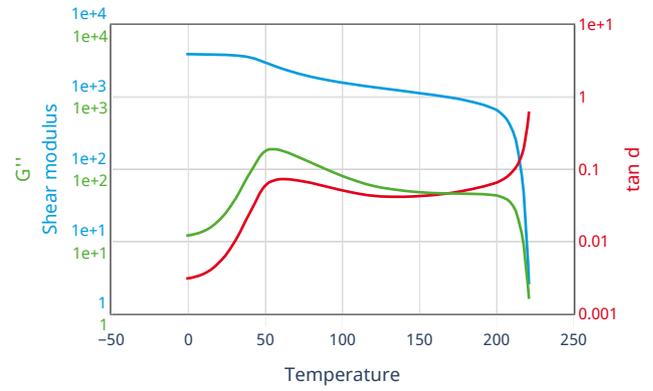
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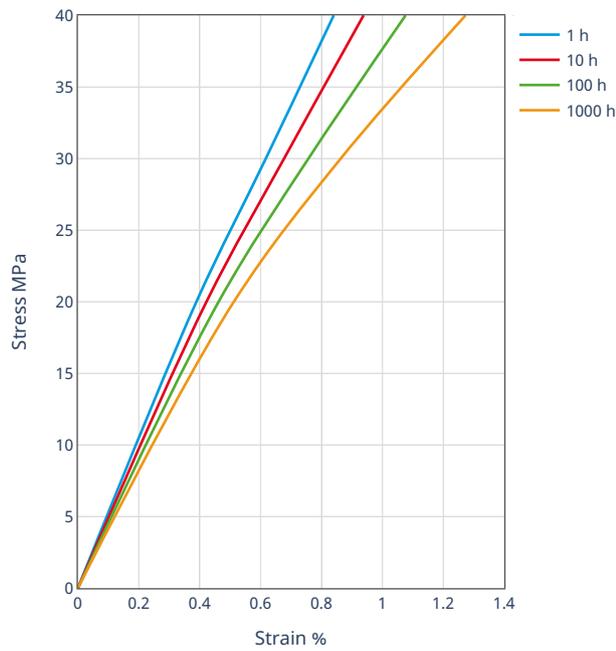
Spec. volume-Temperature (pVT)



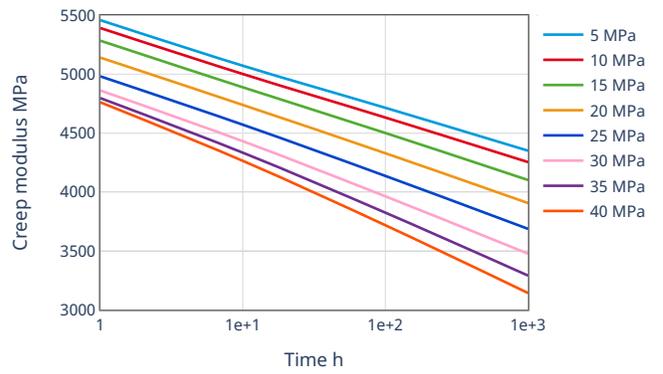
Dynamic shear modulus-temperature



Stress-strain (isochronous) 160°C



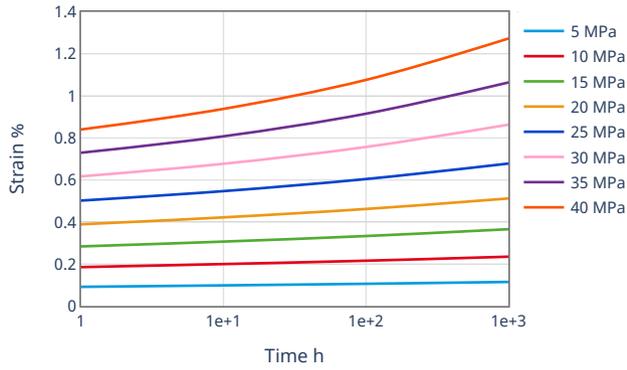
Creep modulus-time 160°C



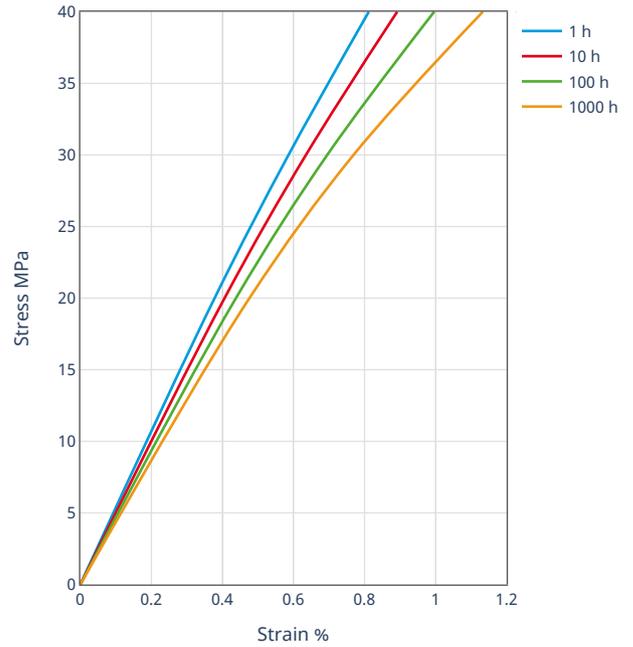
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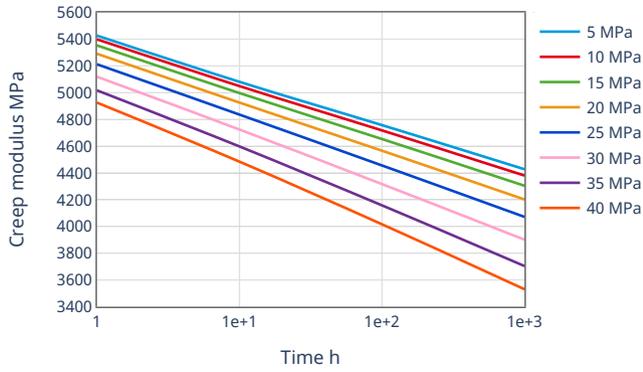
Creep curve 160°C



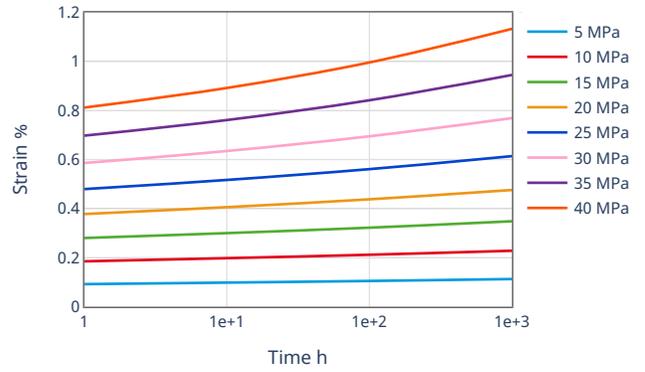
Stress-strain (isochronous) 140°C



Creep modulus-time 140°C



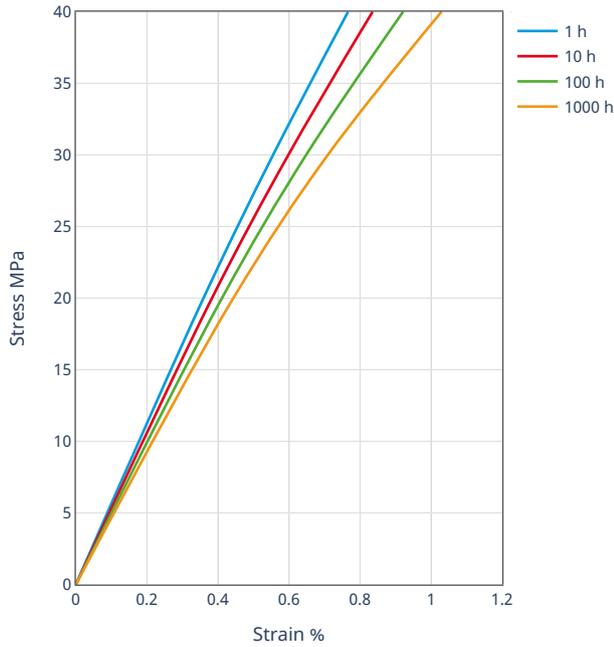
Creep curve 140°C



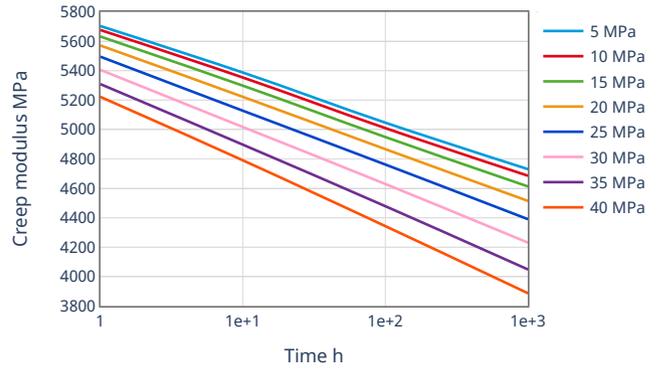
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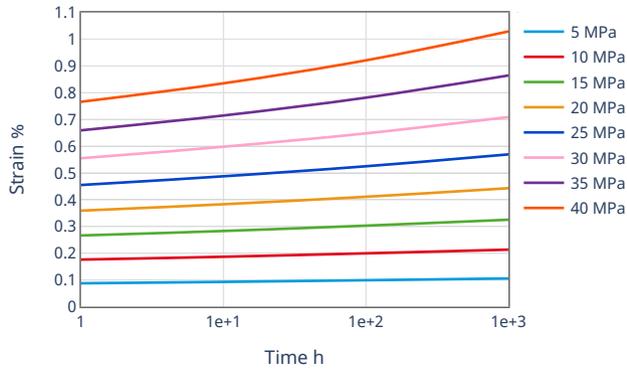
Stress-strain (isochronous) 120°C



Creep modulus-time 120°C



Creep curve 120°C



Processing Information

Injection molding

Injection Molding Recommendations