

TECHNICAL DATA SHEET

Akulon® Ultraflow K-FHG12

Envalior
PA6-GF60

Processing

Injection molding

Delivery Form

Pellets

Special Characteristics

Heat stabilized or stable to heat

Certifications

Drinking water contact

Product Text

Product Information

60% Glass Reinforced, Heat Stabilized, High Flow

ISO 1043 PA6-GF60

Processing/Physical Characteristics	Value	Unit	Standard
Molding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Molding shrinkage, normal	0.8	%	ISO 294-4, 2577
Density of melt	1380	kg/m ³	
Thermal conductivity of melt	0.39	W/(m K)	
Spec. heat capacity of melt	1720	J/(kg K)	
Eff. thermal diffusivity	1.64E-7	m ² /s	

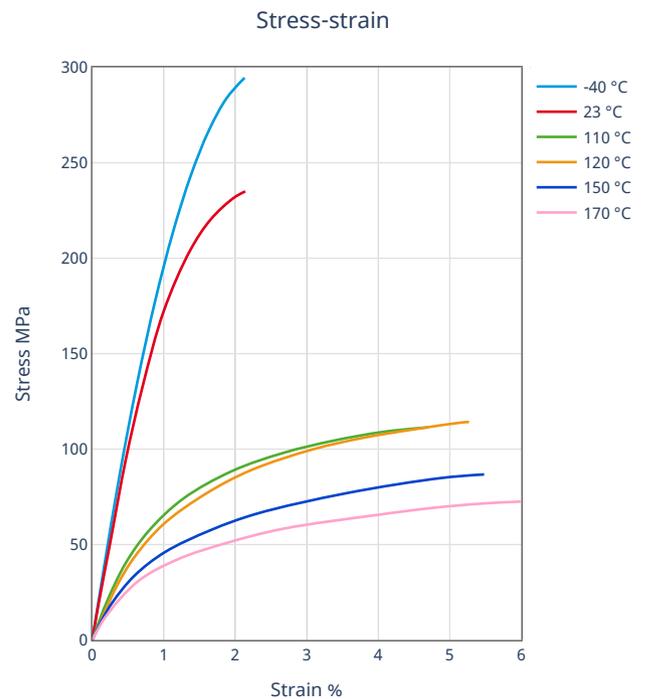
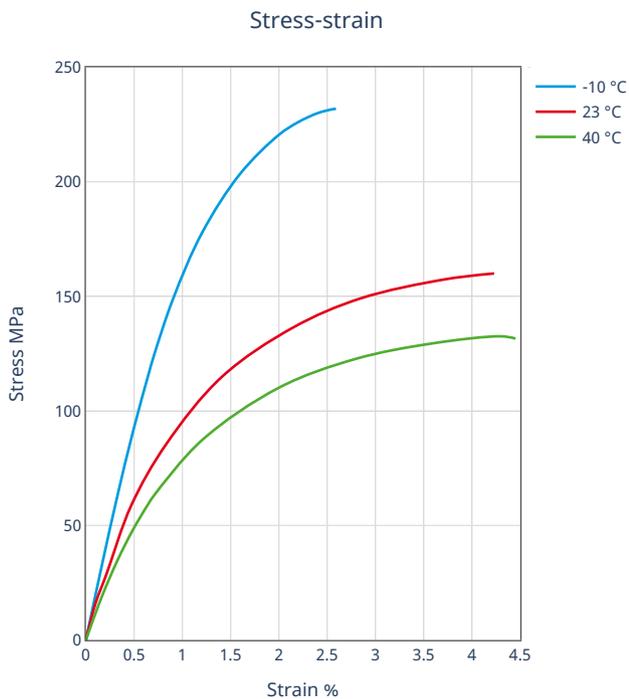
Mechanical Properties	Value	Unit	Standard
Tensile modulus	20000	MPa	ISO 527
Stress at break	240	MPa	ISO 527
Strain at break	2.2	%	ISO 527
Poisson's ratio	0.35		ISO 527
Charpy impact strength, +23°C	90	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	85	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +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	10	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	40	E-6/K	ISO 11359-1/-2
Other Properties	Value	Unit	Standard
Water absorption	3.6	%	Sim. to ISO 62
Humidity absorption	1	%	Sim. to ISO 62
Density	1697	kg/m ³	ISO 1183

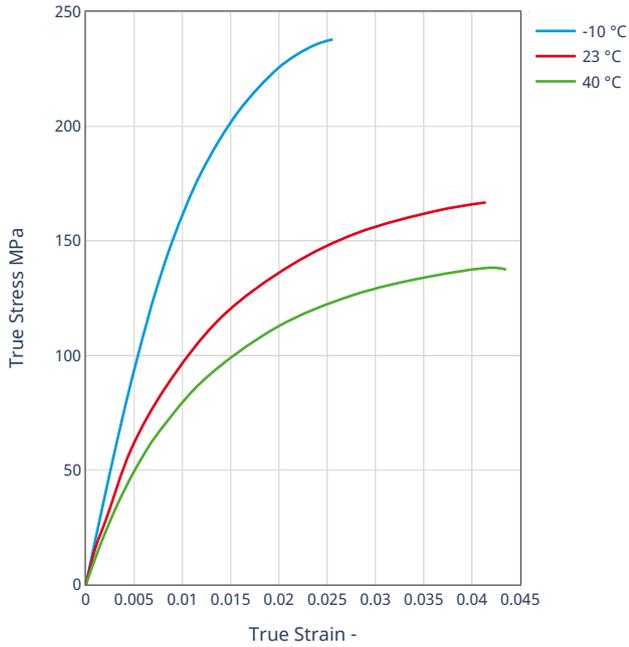
Diagrams



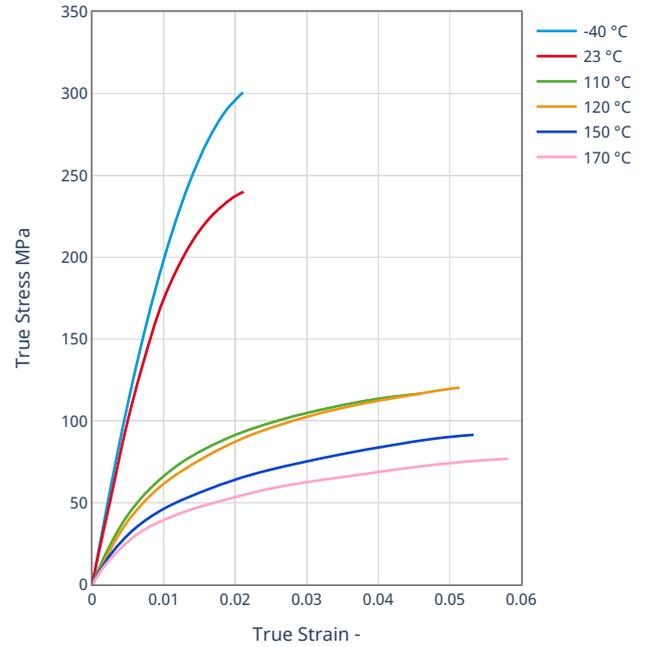
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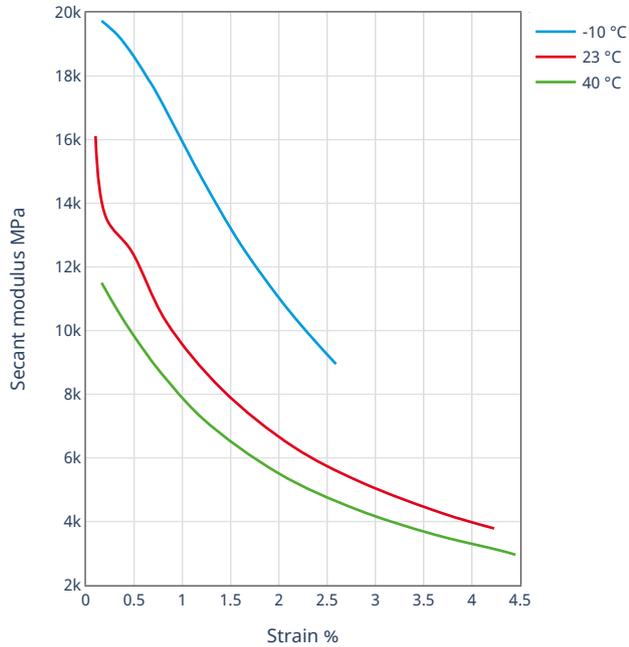
True stress-true strain



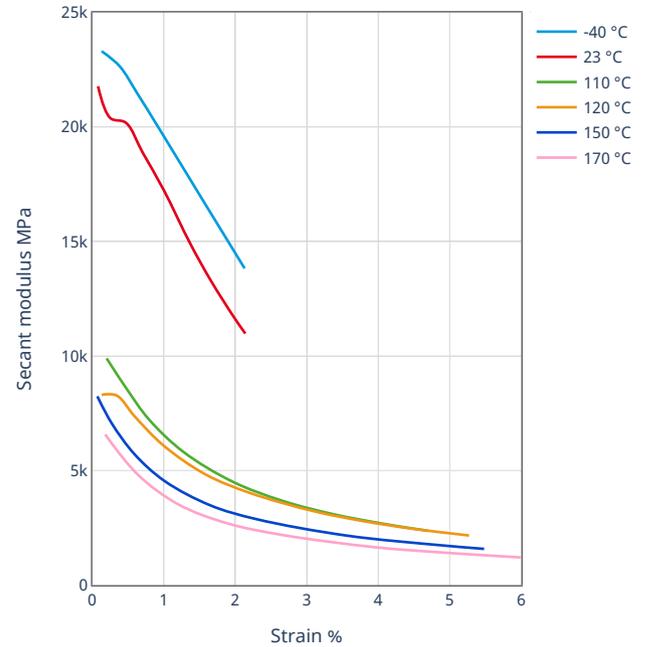
True stress-true strain



Secant modulus-strain



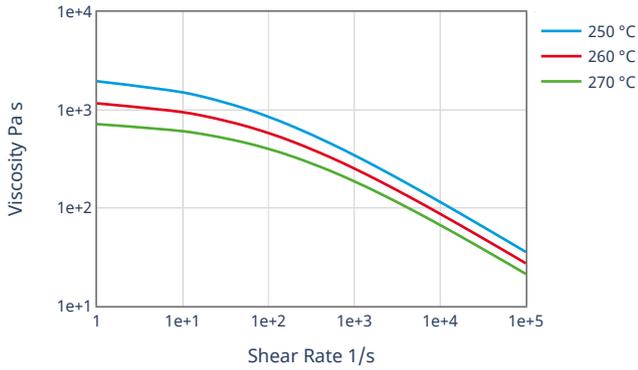
Secant modulus-strain



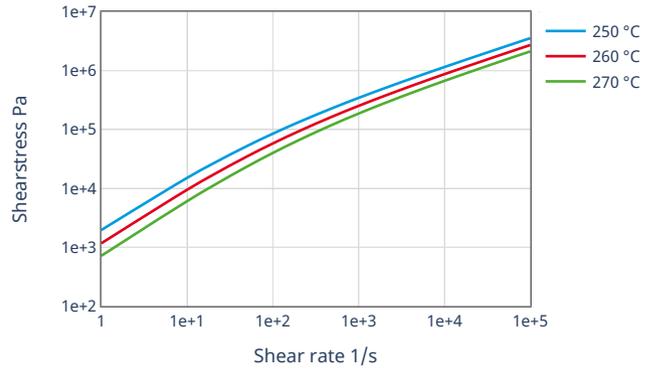
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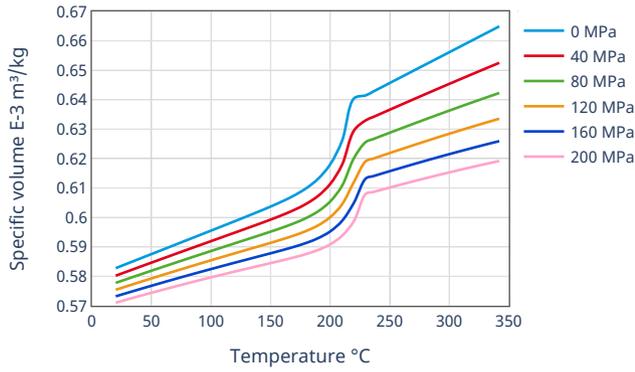
Viscosity-shear rate



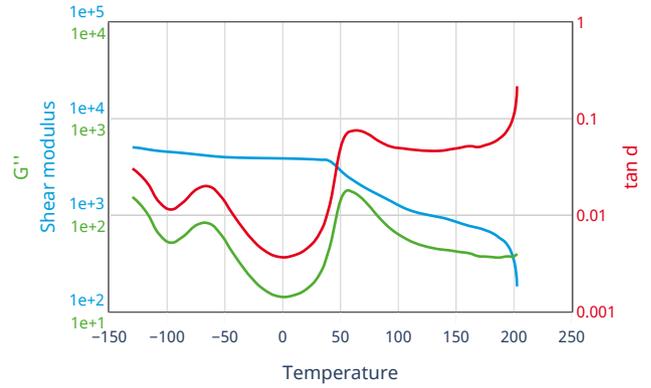
Shearstress-shear rate



Spec. volume-Temperature (pVT)



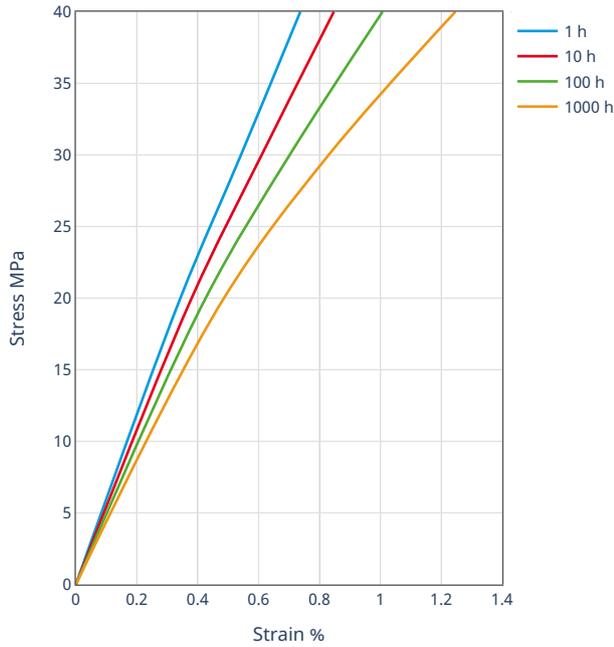
Dynamic shear modulus-temperature



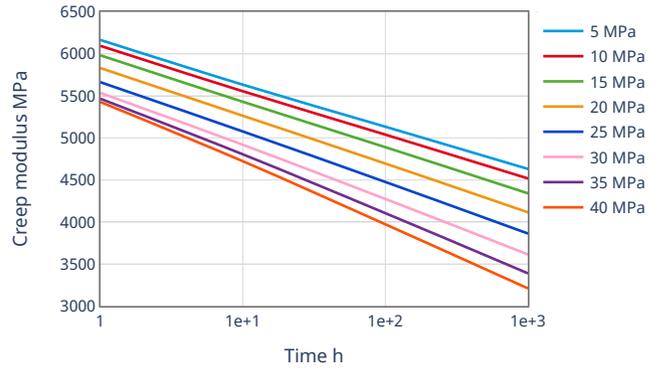
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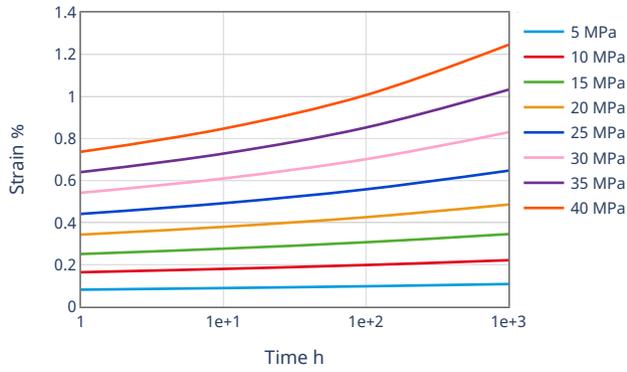
Stress-strain (isochronous) 160°C



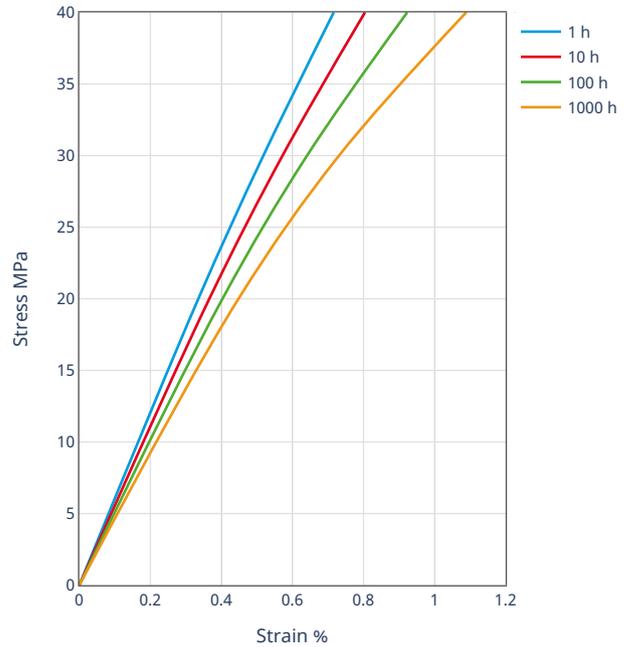
Creep modulus-time 160°C



Creep curve 160°C



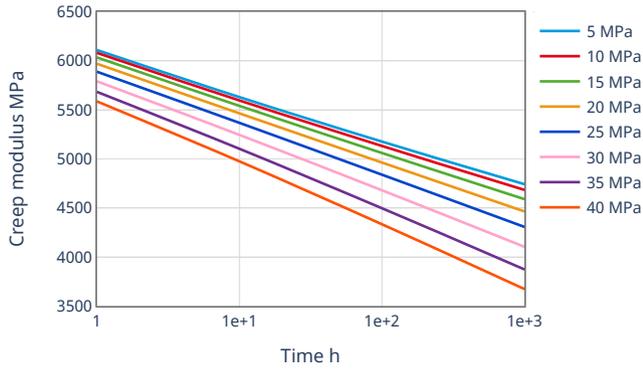
Stress-strain (isochronous) 140°C



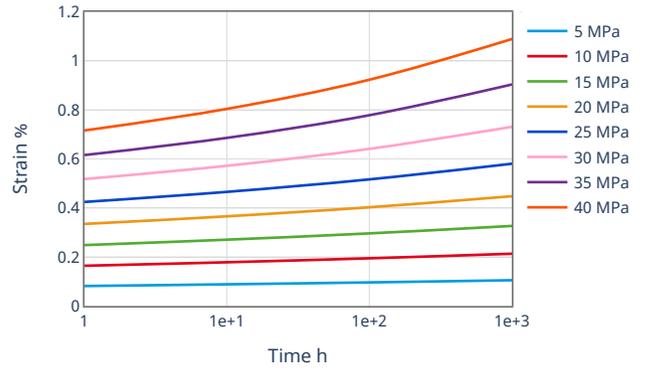
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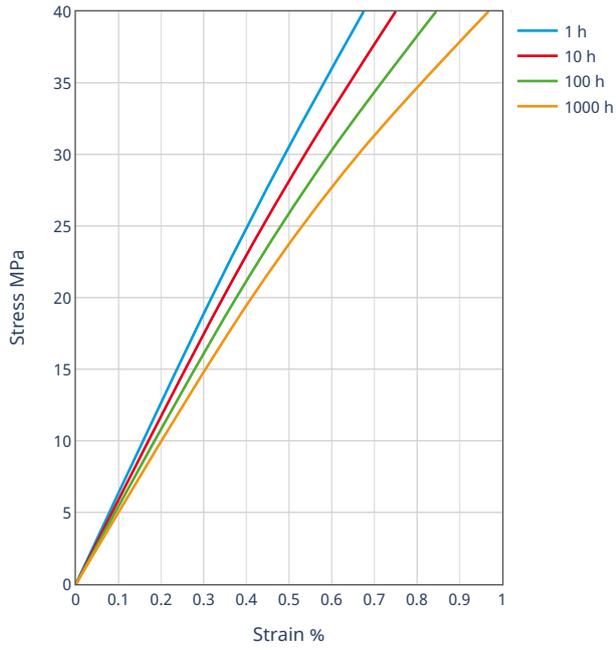
Creep modulus-time 140°C



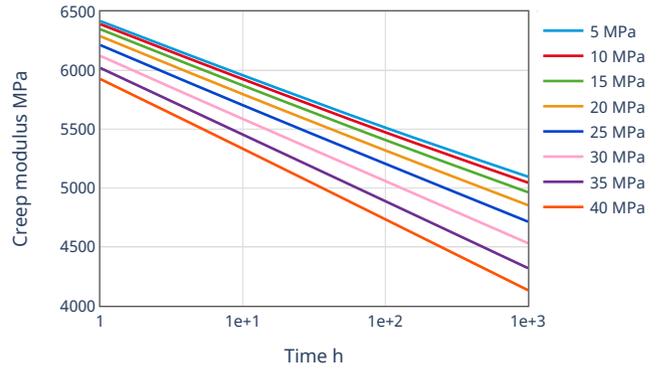
Creep curve 140°C



Stress-strain (isochronous) 120°C

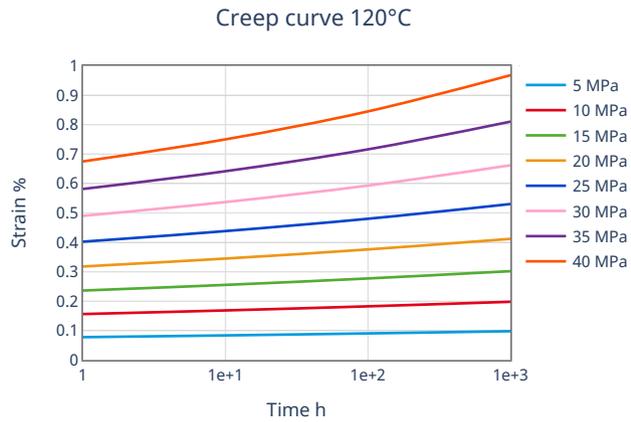


Creep modulus-time 120°C



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Processing Information

Injection molding

Injection Molding Recommendations