


Akulon® Ultraflow K-FG0

PA6-GF50

DSM Engineering Plastics

Product Texts

50% Glass Reinforced, High Flow

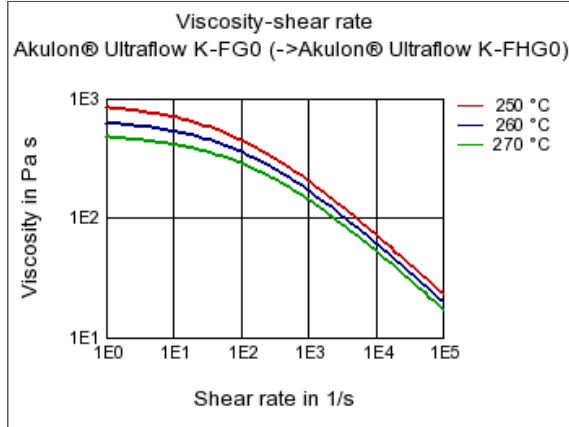
ISO 1043 PA6-GF50

[Akulon website](#)

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Molding shrinkage, parallel	0.4 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.9 / *	%	ISO 294-4, 2577
Mechanical properties			
ISO Data			
Tensile Modulus	16500 / 11000	MPa	ISO 527-1/-2
Stress at break	220 / 155	MPa	ISO 527-1/-2
Strain at break	2.5 / 5	%	ISO 527-1/-2
Charpy impact strength (+23°C)	90 / 100	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	85 / 85	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	15 / 25	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	12 / 12	kJ/m ²	ISO 179/1eA
Thermal properties			
ISO Data			
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	50 / *	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.6 / *	mm	IEC 60695-11-10
Electrical properties			
ISO Data			
Relative permittivity, 100Hz	3.5 / 14	-	IEC 60250
Relative permittivity, 1MHz	5.2 / 4.5	-	IEC 60250
Dissipation factor, 100Hz	50 / 3000	E-4	IEC 60250
Dissipation factor, 1MHz	150 / 1200	E-4	IEC 60250
Volume resistivity	1E13 / 1E11	Ohm*m	IEC 60093
Surface resistivity	* / 1E14	Ohm	IEC 60093
Comparative tracking index	600 / -	-	IEC 60112
Other properties			
ISO Data			
Water absorption	4.5 / *	%	Sim. to ISO 62
Humidity absorption	1.4 / *	%	Sim. to ISO 62
Density	1560 / -	kg/m ³	ISO 1183
Rheological calculation properties			
ISO Data			
Density of melt	1360	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	-

Diagrams

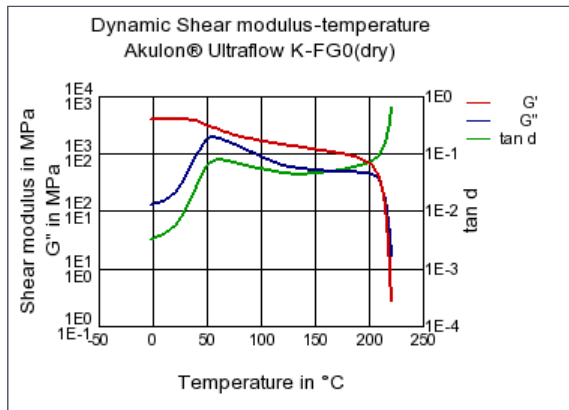
Viscosity-shear rate



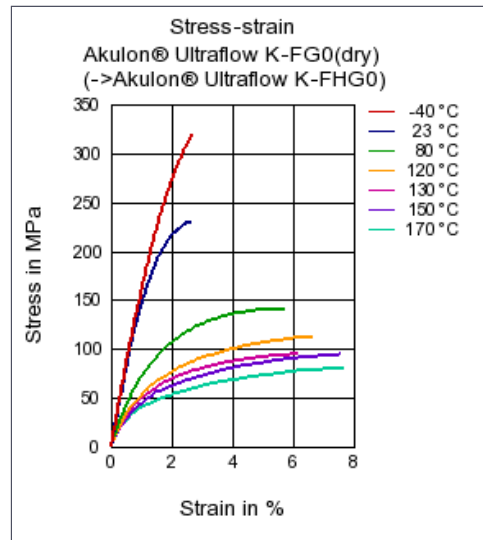
Shearstress-shear rate



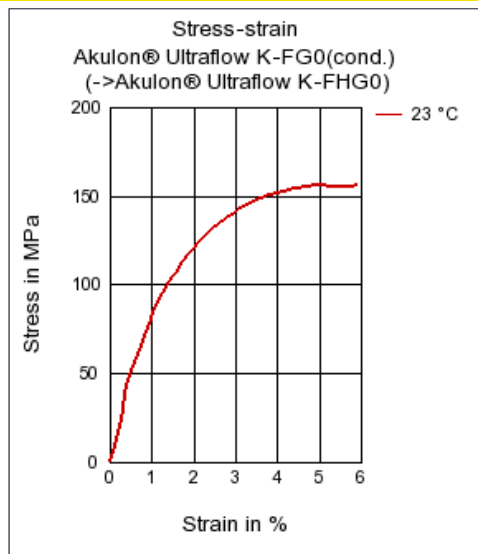
Dynamic Shear modulus-temperature



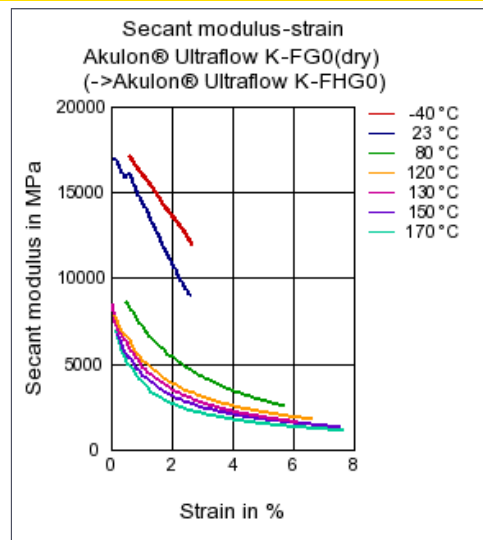
Stress-strain



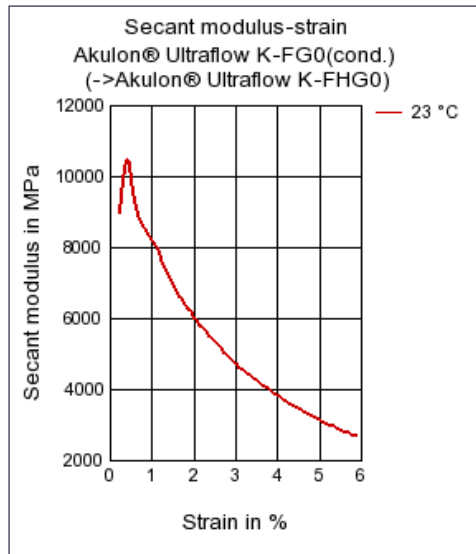
Stress-strain



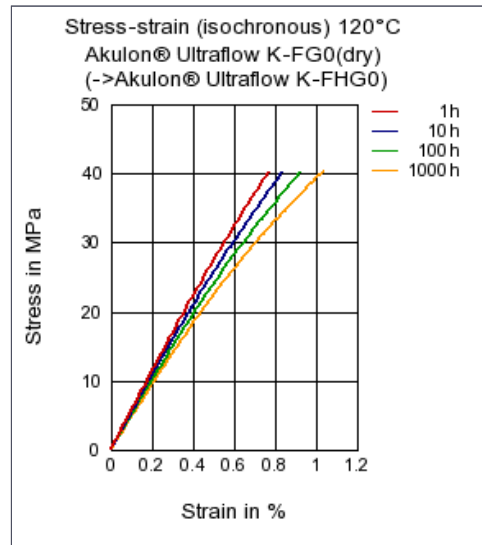
Secant modulus-strain



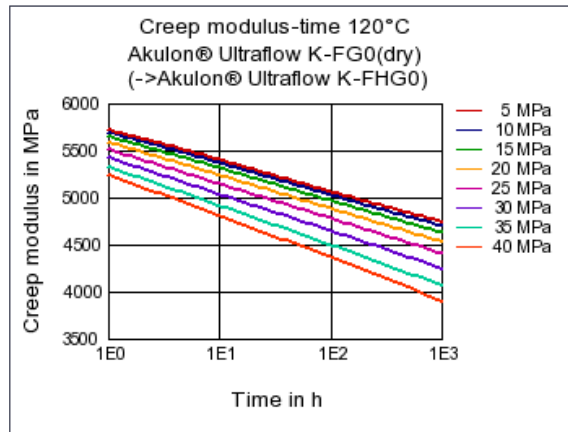
Secant modulus-strain



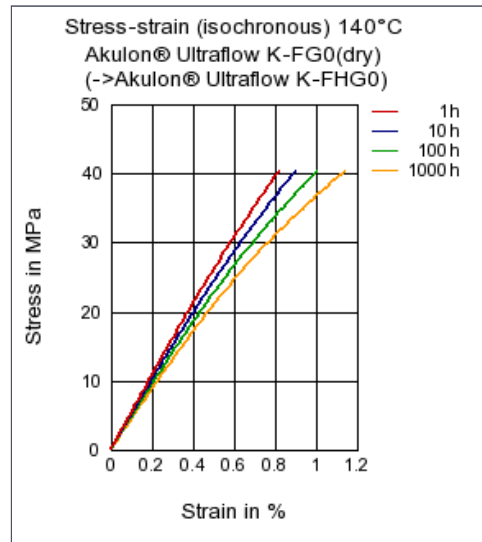
Stress-strain (isochronous) 120°C



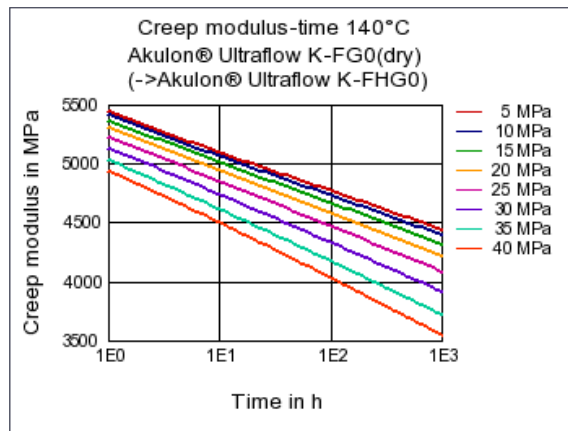
Creep modulus-time 120°C



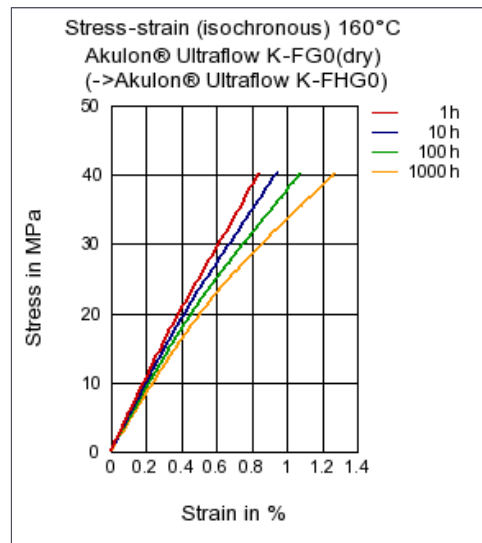
Stress-strain (isochronous) 140°C



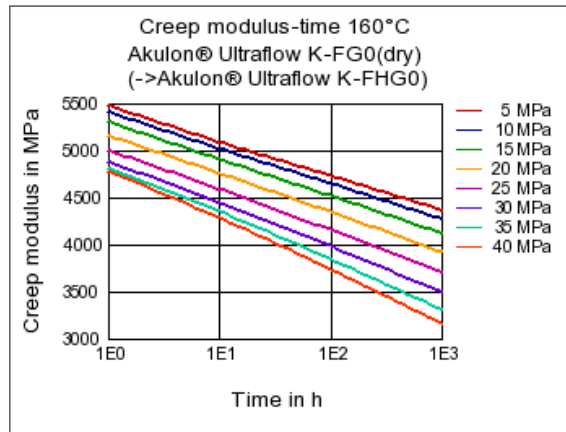
Creep modulus-time 140°C



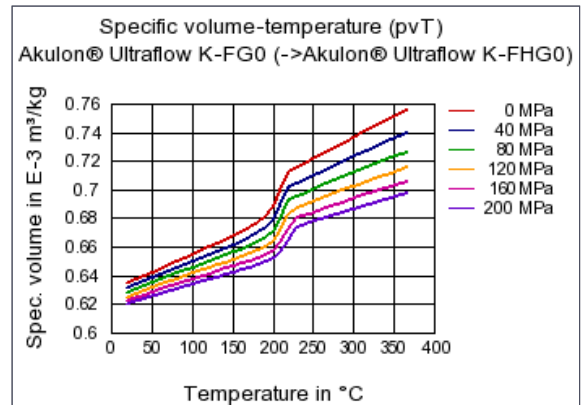
Stress-strain (isochronous) 160°C



Creep modulus-time 160°C



Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Other text information

Injection Molding

[Injection Molding Recommendations](#)