Akulon® Ultraflow K-FHG7

PA6-GF35 DSM Engineering Plastics

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Molding shrinkage, parallel	0.3 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.0 / *	%	ISO 294-4, 2577

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	11000 / 7000	MPa	ISO 527-1/-2
Stress at break	185 / 125	MPa	ISO 527-1/-2
Strain at break	3.3 / 6.5	%	ISO 527-1/-2
Charpy impact strength (+23°C)	95 / 100	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	70 / 70	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	15 / 23	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	12 / 12	kJ/m²	ISO 179/1eA

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
Melting temperature (10°C/min)	220 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	200 / *	°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	15 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	60 / *	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.5 / 14	-	IEC 60250
Relative permittivity, 1MHz	3.3 / 4.4	-	IEC 60250
Dissipation factor, 100Hz	50 / 3000	E-4	IEC 60250
Dissipation factor, 1MHz	150 / 1200	E-4	IEC 60250
Volume resistivity	>1E13 / >1E13	Ohm*m	IEC 60093
Surface resistivity	* / >1E15	Ohm	IEC 60093
Comparative tracking index	500 / -	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
ISO Data			
Water absorption	5.6 / *	%	Sim. to ISO 62
Humidity absorption	1.7 / *	%	Sim. to ISO 62
Density	1400 / -	kg/m³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	1200	kg/m³	-
Thermal conductivity of melt	0.27	W/(m K)	-
Spec. heat capacity of melt	2170	J/(kg K)	-
Eff. thermal diffusivity	1.02E-7	m²/s	-

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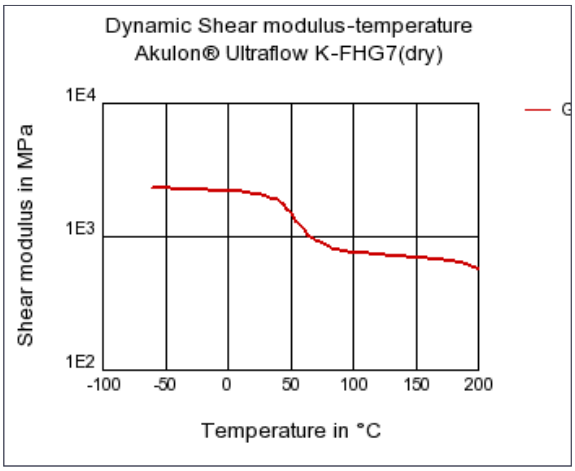
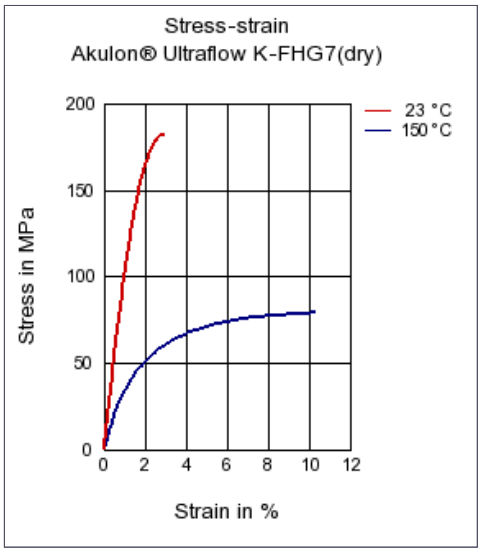
Diagrams

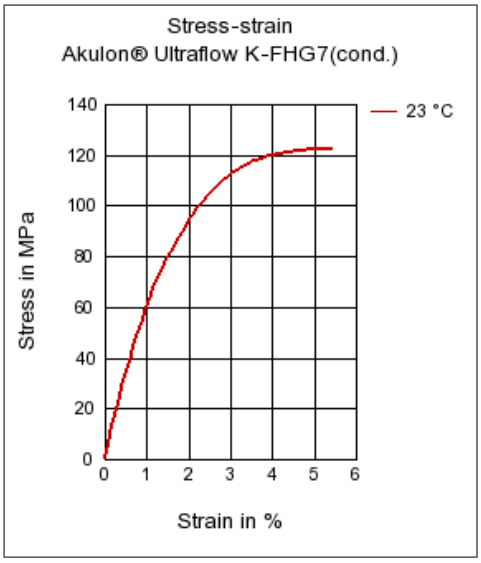
Dynamic Shear modulus-temperature



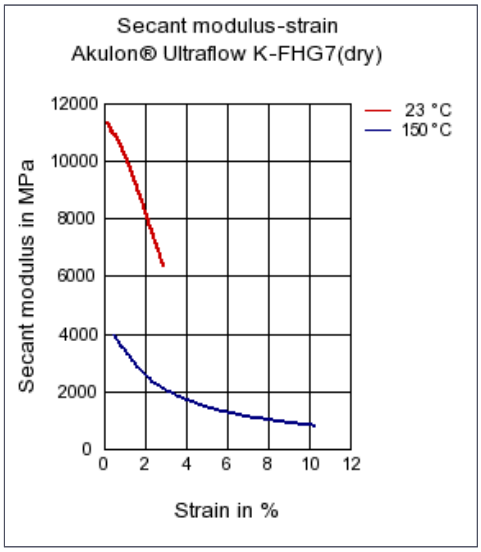
Stress-strain



Stress-strain



Secant modulus-strain



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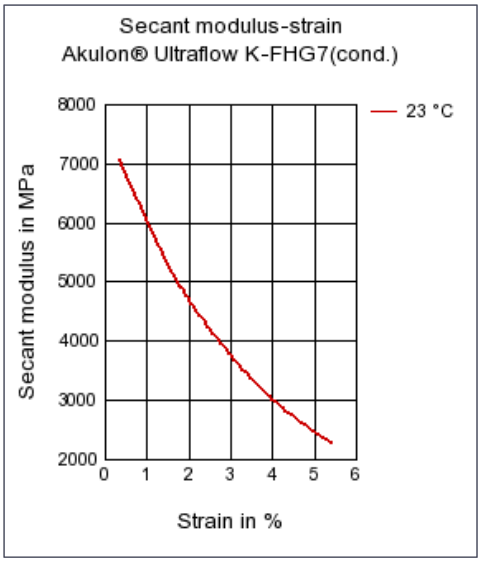
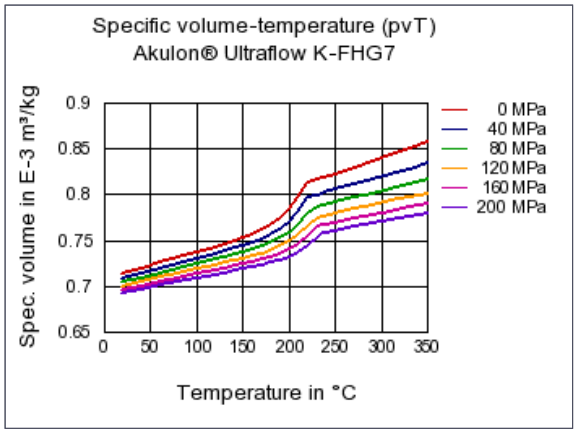
Secant modulus-strain



Specific volume-temperature (pvT)



Characteristics

Processing
Injection Molding

Additives
Release agent

Delivery form
Pellets

Special Characteristics
Heat stabilized or stable to heat