Akulon® Ultraflow K-FG9

PA6-GF45 DSM Engineering Plastics

Product Texts

45% Glass Reinforced, High Flow

ISO 1043 PA6-GF45

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	20 / *	cm³/10min	ISO 1133
Temperature	275 / *	°C	ISO 1133
Load	2.16 / *	kg	ISO 1133
Molding shrinkage, parallel	0.2 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.9 / *	%	ISO 294-4, 2577

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	14000 / 9500	MPa	ISO 527-1/-2
Stress at break	205 / 150	MPa	ISO 527-1/-2
Strain at break	3 / 6	%	ISO 527-1/-2
Charpy impact strength (+23°C)	95 / 100	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	80 / 80	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	19 / 28	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	14 / 14	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	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

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.5 / 14	-	IEC 60250
Relative permittivity, 1MHz	3.3 / 4.3	-	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

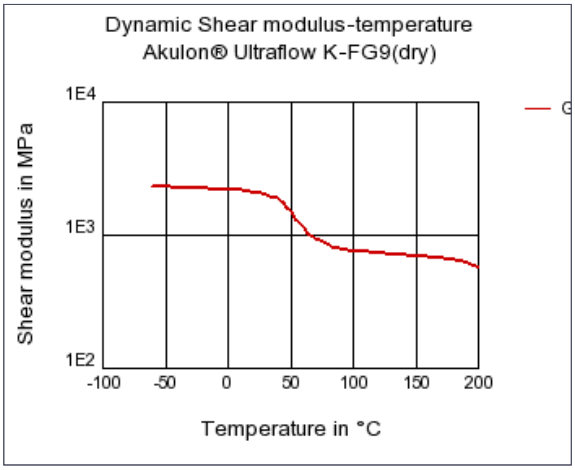
Other properties	dry / cond	Unit	Test Standard
ISO Data			
Water absorption	5 / *	%	Sim. to ISO 62
Humidity absorption	1.5 / *	%	Sim. to ISO 62
Density	1510 / -	kg/m³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	1280	kg/m³	-
Thermal conductivity of melt	0.3	W/(m K)	-

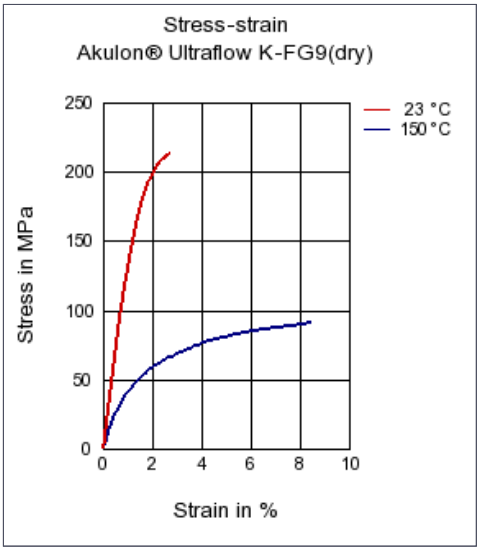
Spec. heat capacity of melt	1980	J/(kg K)	-
Eff. thermal diffusivity	1.19E-7	m²/s	-

Diagrams

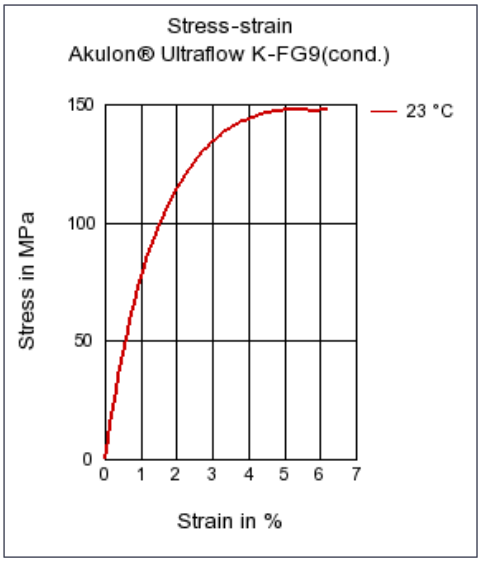
Dynamic Shear modulus-temperature



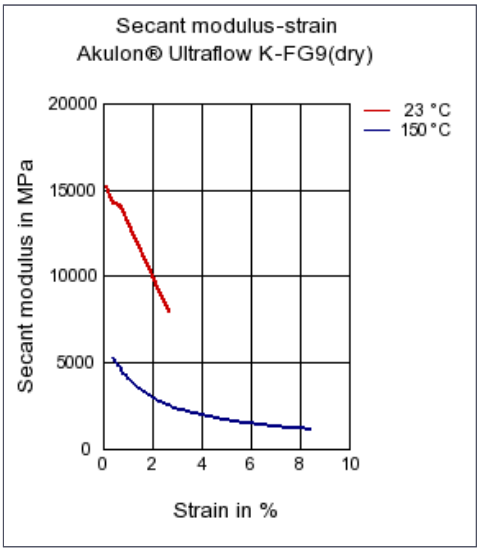
Stress-strain



Stress-strain



Secant modulus-strain



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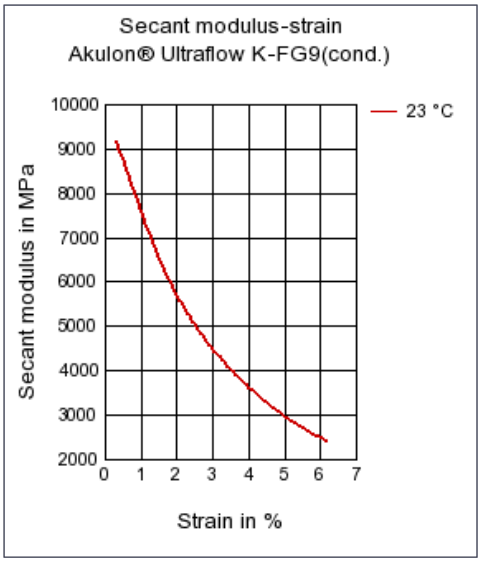
Secant modulus-strain



Characteristics

Processing

Injection Molding

Additives

Release agent

Delivery form

Pellets

Other text information

Injection Molding

Injection Molding Recommendations