Akulon® K223-HGM24

PA6-(GF+MD)30 — DSM Engineering Plastics

Product Texts

10% Glass Reinforced, 20% Mineral Reinforced, Heat Stabilized

ISO 1043 PA6-(GF+MD)30

Akulon website

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Molding shrinkage, parallel	0.3 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.9 / *	%	ISO 294-4, 2577

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	7500 / 3200	MPa	ISO 527-1/-2
Stress at break	110 / 50	MPa	ISO 527-1/-2
Strain at break	2.5 / 12	%	ISO 527-1/-2
Charpy impact strength (+23°C)	40 / 45	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	35 / 35	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	3 / 8	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	5 / 5	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)	180 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	210 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	35 / *	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
Thickness tested	1.6 / *	mm	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 / 4.5	-	IEC 60250
Dissipation factor, 100Hz	50 / 3200	E-4	IEC 60250
Dissipation factor, 1MHz	140 / 1200	E-4	IEC 60250
Volume resistivity	1E12 / 1E10	Ohm*m	IEC 60093
Surface resistivity	* / 1E13	Ohm	IEC 60093
Electric strength	35 / 30	kV/mm	IEC 60243-1
Comparative tracking index	- / 500	-	IEC 60112

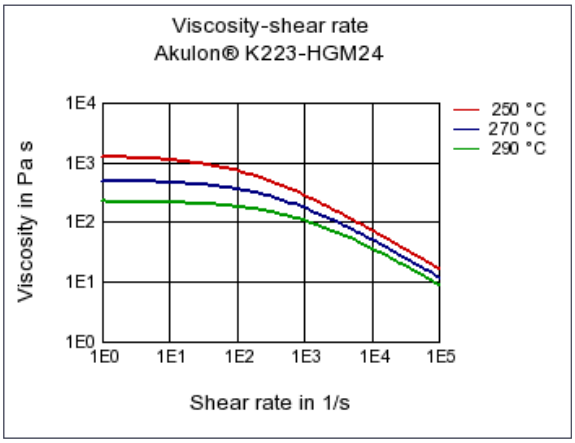
Other properties	dry / cond	Unit	Test Standard
ISO Data			
Water absorption	6.5 / *	%	Sim. to ISO 62
Humidity absorption	1.9 / *	%	Sim. to ISO 62
Density	1370 / -	kg/m³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	976	kg/m³	-
Thermal conductivity of melt	0.31	W/(m K)	-
Spec. heat capacity of melt	2180	J/(kg K)	-

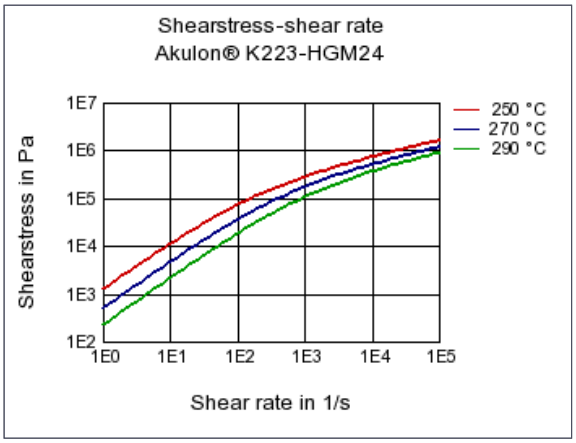
Eff. thermal diffusivity	1.46E-7	m²/s	-

Diagrams

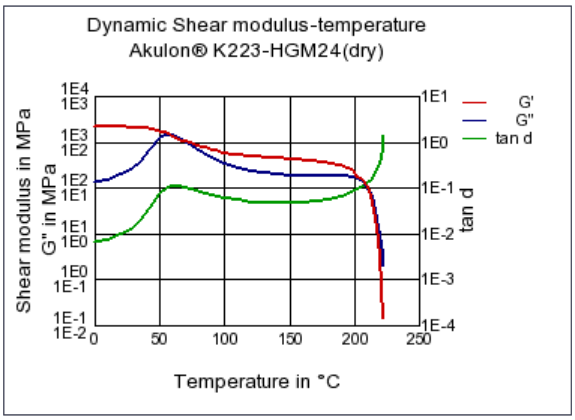
Viscosity-shear rate



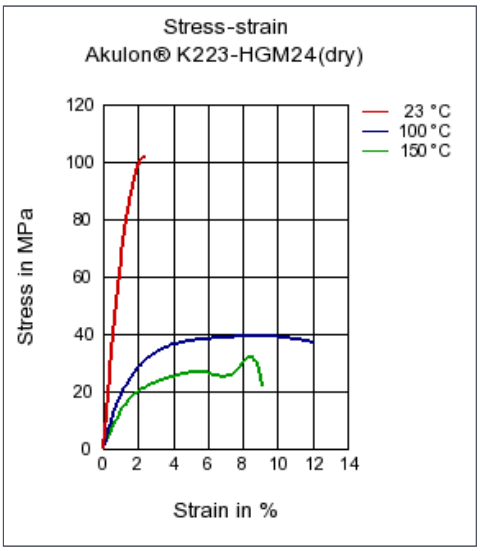
Shearstress-shear rate



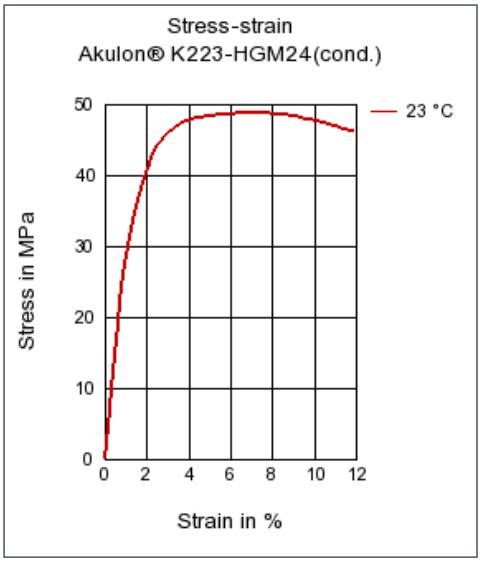
Dynamic Shear modulus-temperature



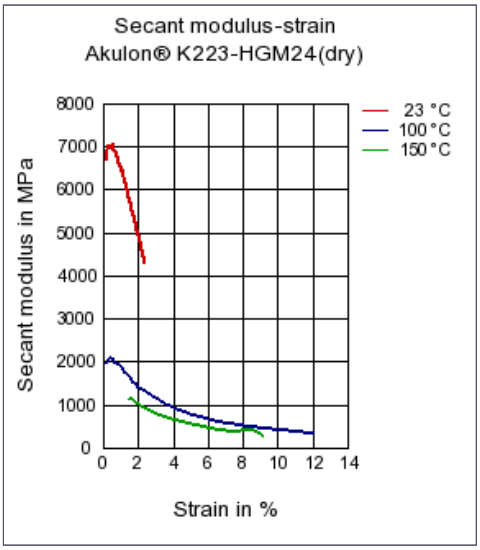
Stress-strain



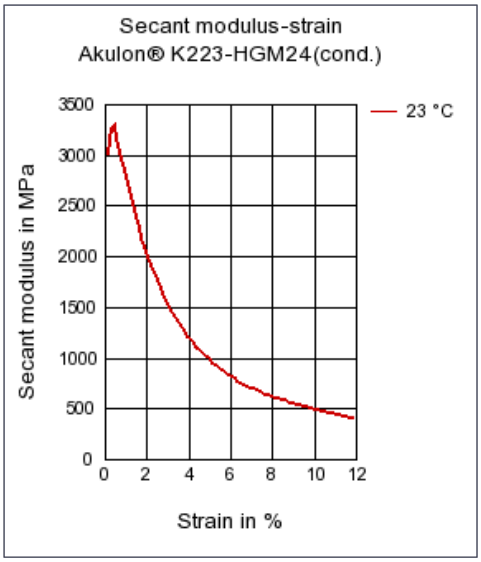
Stress-strain



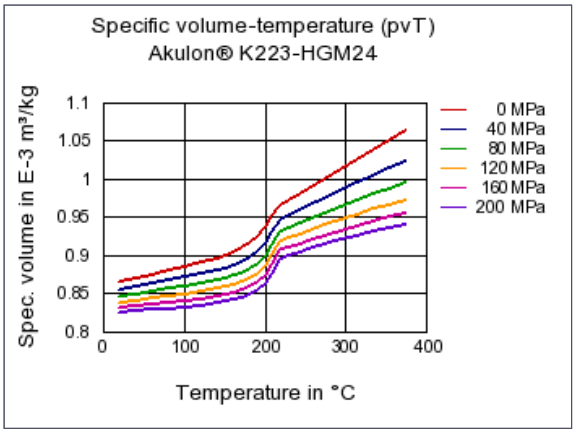
Secant modulus-strain



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

Other text information

Injection Molding
Injection Molding Recommendations