


Akulon® Ultraflow K220-HGM44

PA6-(GF+MD)40

DSM Engineering Plastics

Product Texts

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

ISO 1043 PA6-(GF+MD)40

[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			
ISO Data			
Tensile Modulus	11000 / 6000	MPa	ISO 527-1/-2
Stress at break	135 / 70	MPa	ISO 527-1/-2
Strain at break	2 / 3.5	%	ISO 527-1/-2
Charpy impact strength (+23°C)	40 / 50	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	35 / 35	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	7 / 9	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	4.5 / 4.5	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)	185 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	215 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	30 / *	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	3.3 / 4.5	-	IEC 60250
Dissipation factor, 100Hz	50 / 4000	E-4	IEC 60250
Dissipation factor, 1MHz	130 / 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	550 / 550	-	IEC 60112
Other properties			
ISO Data			
Water absorption	5.5 / *	%	Sim. to ISO 62
Humidity absorption	1.6 / *	%	Sim. to ISO 62
Density	1470 / -	kg/m ³	ISO 1183
Rheological calculation properties			
ISO Data			
Density of melt	1190	kg/m ³	-
Thermal conductivity of melt	0.39	W/(m K)	-
Spec. heat capacity of melt	2290	J/(kg K)	-

Eff. thermal diffusivity

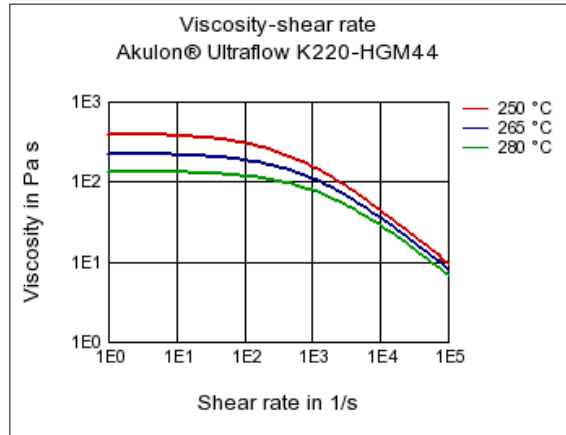
1.44E-7

m²/s

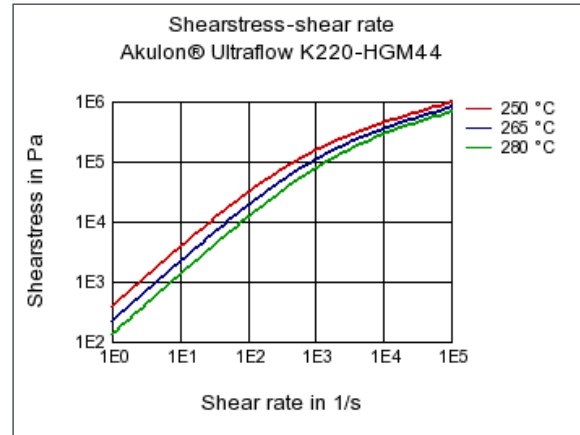
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Diagrams

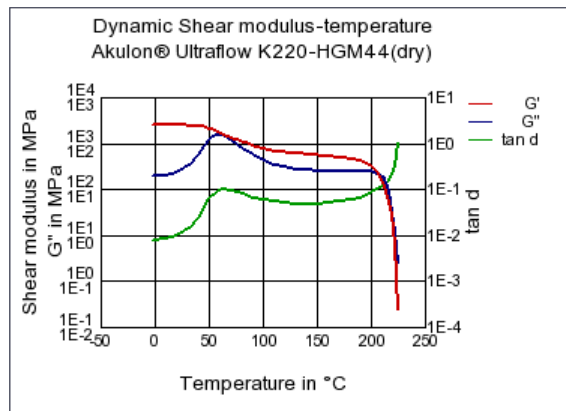
Viscosity-shear rate



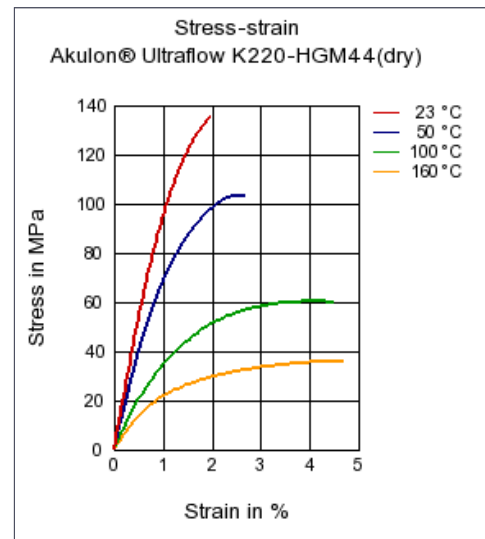
Shearstress-shear rate



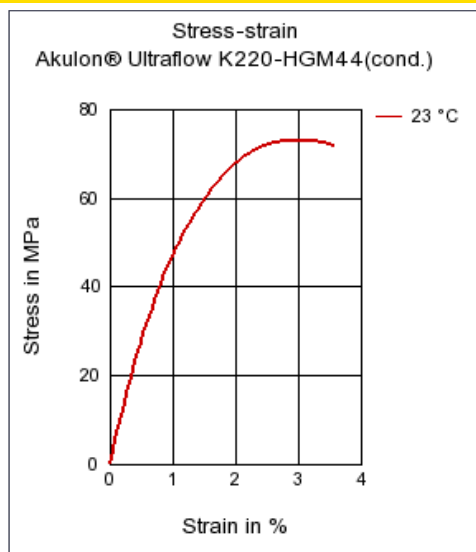
Dynamic Shear modulus-temperature



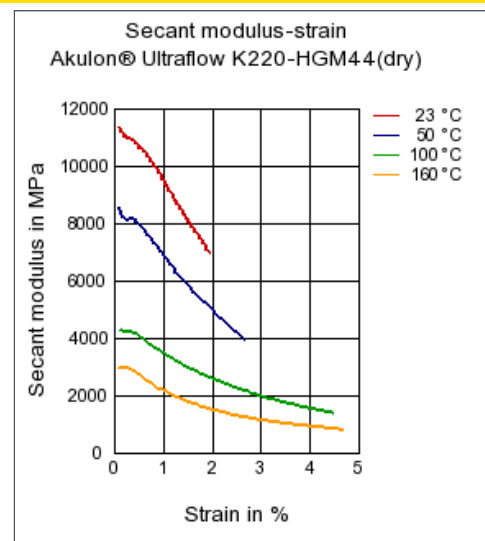
Stress-strain



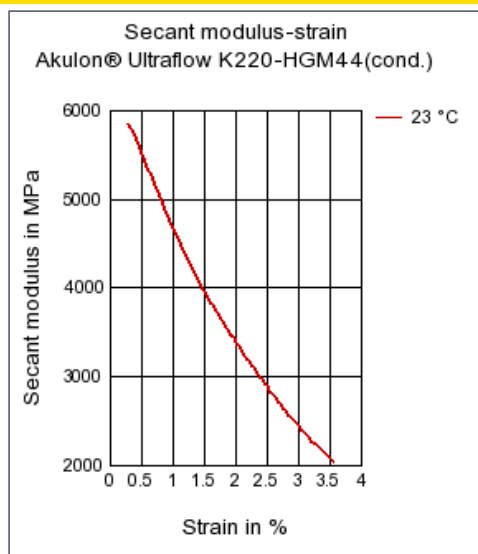
Stress-strain



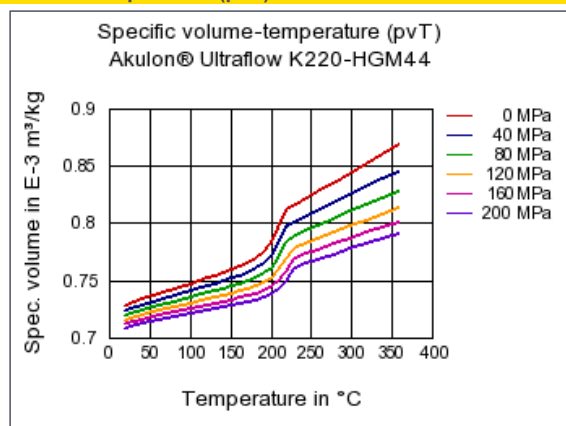
Secant modulus-strain



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](#)