Akulon® K222-D

PA6 DSM Engineering Plastics

Product Texts

Low Viscosity

ISO 1043 PA6

Akulon website

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	185 / *	cm³/10min	ISO 1133
Temperature	275 / *	°C	ISO 1133
Load	5 / *	kg	ISO 1133

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	3800 / 1200	MPa	ISO 527-1/-2
Yield stress	95 / 55	MPa	ISO 527-1/-2
Yield strain	3.5 / 25	%	ISO 527-1/-2
Nominal strain at break	15 / >50	%	ISO 527-1/-2
Charpy impact strength (+23°C)	N / N	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	N / N	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	8 / 35	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	4 / 4	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)	60 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	150 / *	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	195 / *	°C	ISO 306
Coeff. of linear therm. expansion, parallel	90 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	90 / *	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	V-2 / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
UL recognition	UL / *	-	-
Burning behav. at thickness h	V-2 / *	class	IEC 60695-11-10
Thickness tested	3.0 / *	mm	IEC 60695-11-10
UL recognition	UL / *	-	-
Oxygen index	26 / *	%	ISO 4589-1/-2

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.2 / 14	-	IEC 60250
Relative permittivity, 1MHz	3 / 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 / 1E10	Ohm*m	IEC 60093
Surface resistivity	* / 1E14	Ohm	IEC 60093
Electric strength	25 / 20	kV/mm	IEC 60243-1
Comparative tracking index	- / 600	-	IEC 60112

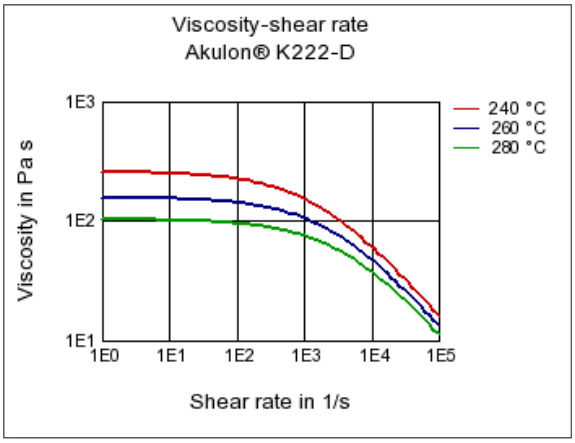
Other properties	dry / cond	Unit	Test Standard
ISO Data			

Water absorption	9 / *	%	Sim. to ISO 62
Humidity absorption	2.5 / *	%	Sim. to ISO 62
Density	1130 / -	kg/m³	ISO 1183

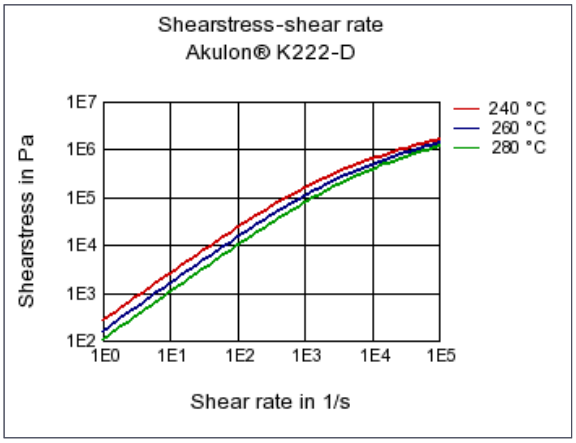
Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	960	kg/m³	-
Thermal conductivity of melt	0.23	W/(m K)	-
Spec. heat capacity of melt	2680	J/(kg K)	-
Eff. thermal diffusivity	8.82E-8	m²/s	-

Diagrams

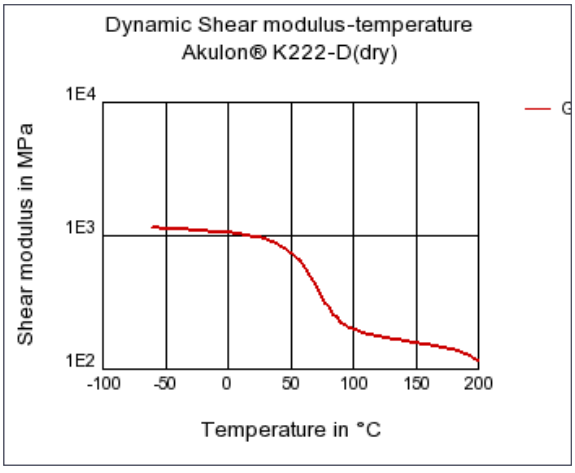
Viscosity-shear rate



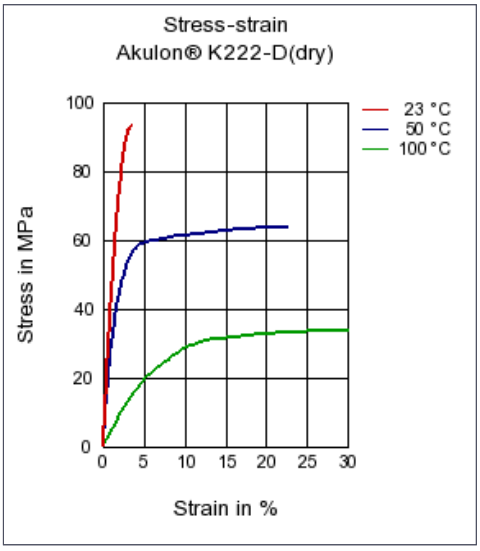
Shearstress-shear rate



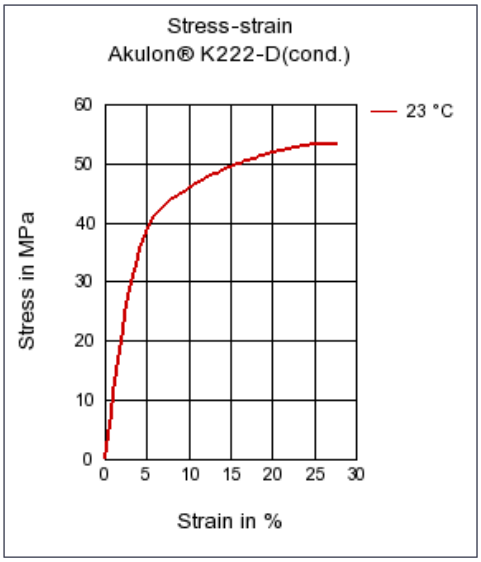
Dynamic Shear modulus-temperature



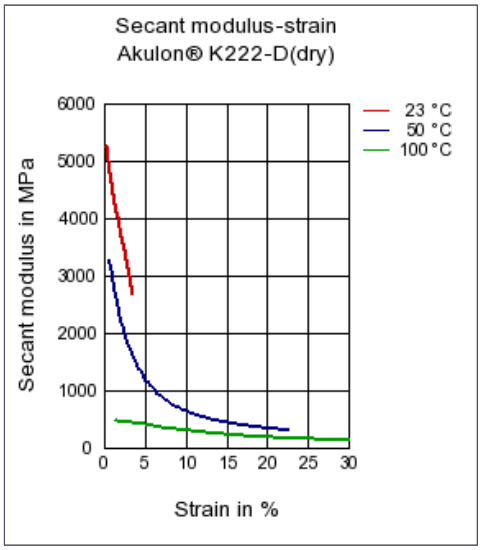
Stress-strain



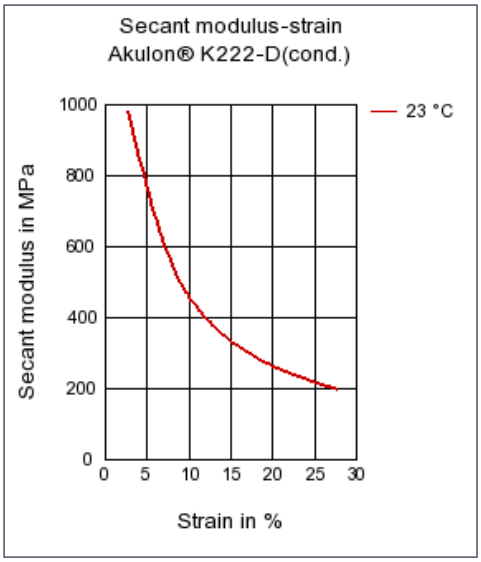
Stress-strain



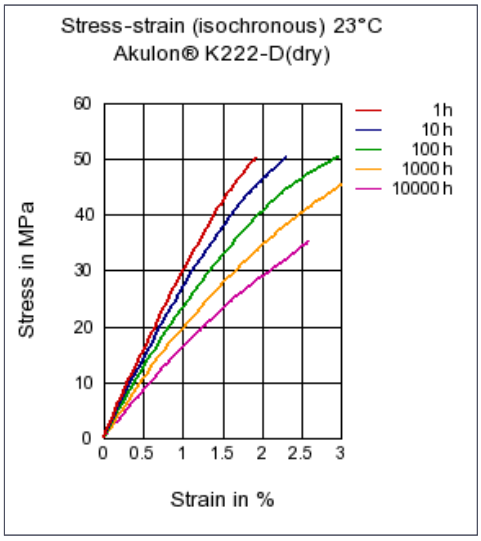
Secant modulus-strain



Secant modulus-strain



Stress-strain (isochronous) 23°C



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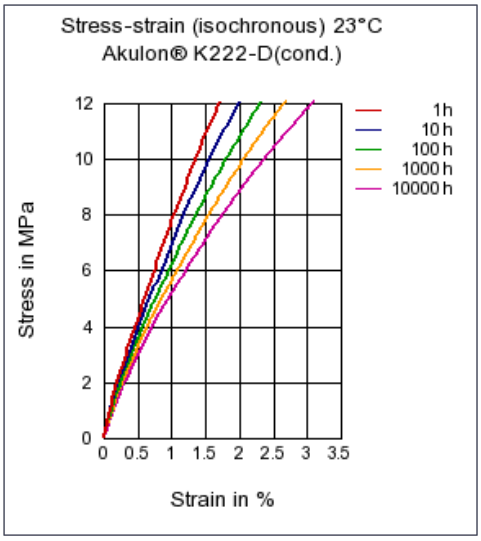
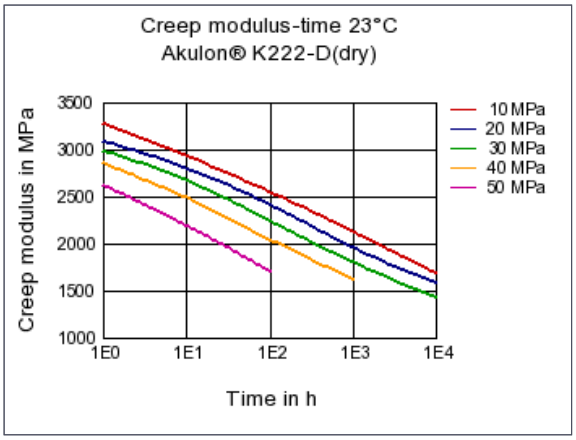
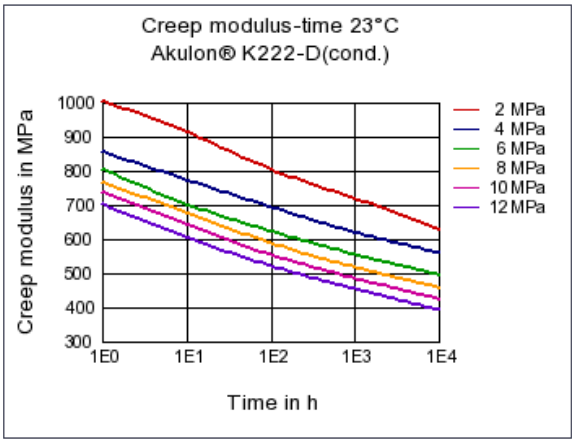


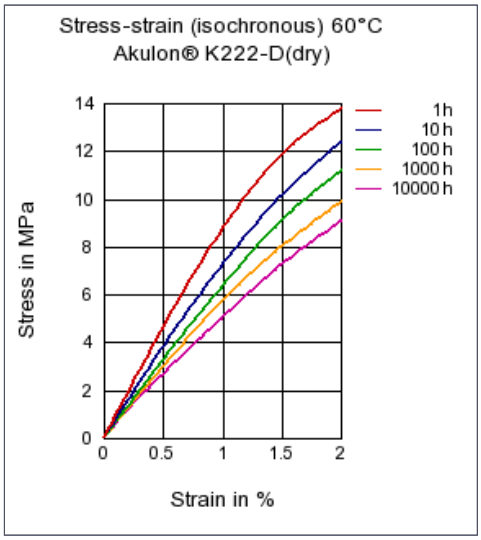
Creep modulus-time 23°C



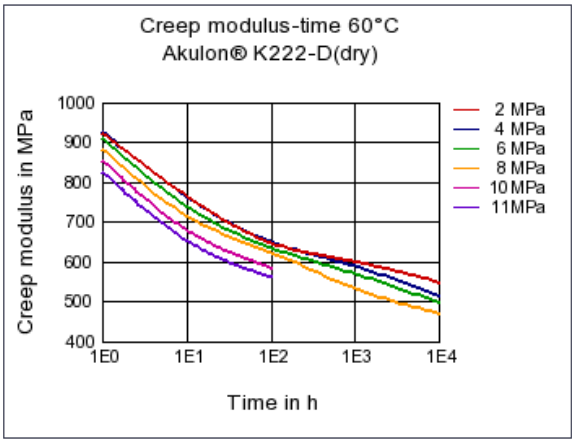
Creep modulus-time 23°C



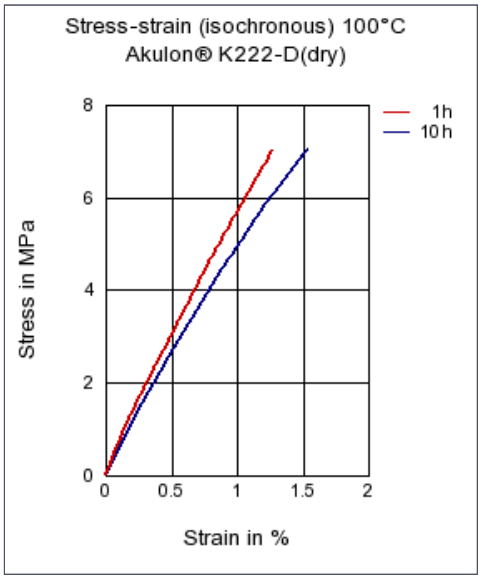
Stress-strain (isochronous) 60°C



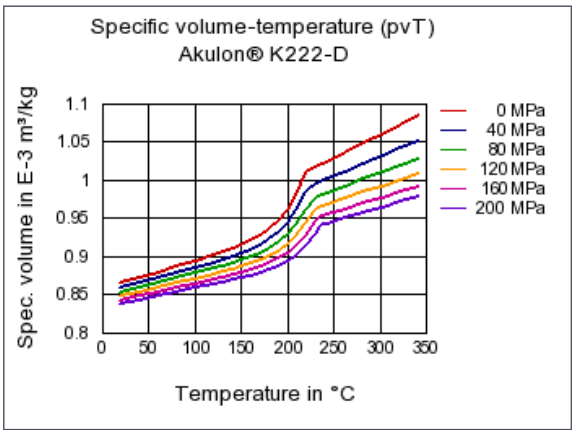
Creep modulus-time 60°C



Stress-strain (isochronous) 100°C



Specific volume-temperature (pvT)



Characteristics

Processing
Injection Molding

Additives
Release agent

Delivery form
Pellets

Other text information

Injection Molding
Injection Molding Recommendations