Akulon® S223-D

PA66 DSM Engineering Plastics

Product Texts

Low/Medium Viscosity, Nucleated

ISO 1043 PA66

Akulon website

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

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	3600 / 1600	MPa	ISO 527-1/-2
Yield stress	95 / 60	MPa	ISO 527-1/-2
Yield strain	4 / 20	%	ISO 527-1/-2
Nominal strain at break	10 / >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)	6 / 12	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	6 / 6	kJ/m²	ISO 179/1eA

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
Melting temperature (10°C/min)	260 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	85 / *	°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	100 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	100 / *	E-6/K	ISO 11359-1/-2

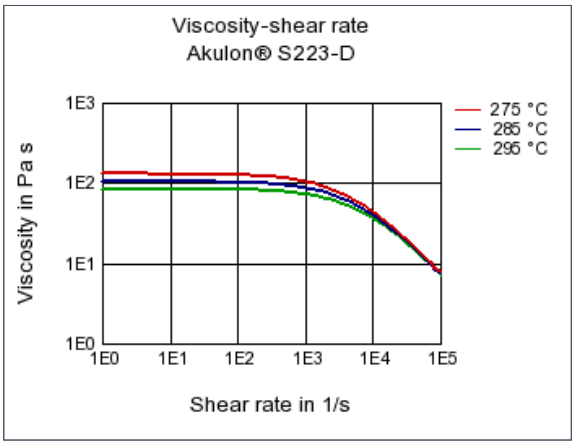
Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.2 / 15	-	IEC 60250
Relative permittivity, 1MHz	3 / 4.3	-	IEC 60250
Dissipation factor, 100Hz	60 / 2400	E-4	IEC 60250
Dissipation factor, 1MHz	170 / 1200	E-4	IEC 60250
Volume resistivity	1E13 / 1E10	Ohm*m	IEC 60093
Surface resistivity	* / 1E14	Ohm	IEC 60093
Electric strength	30 / 25	kV/mm	IEC 60243-1
Comparative tracking index	- / 600	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
ISO Data			
Water absorption	8.5 / *	%	Sim. to ISO 62
Humidity absorption	2.3 / *	%	Sim. to ISO 62
Density	1140 / -	kg/m³	ISO 1183

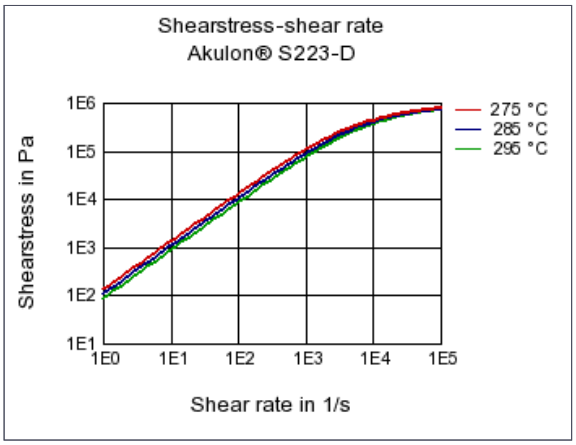
Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	969	kg/m³	-
Thermal conductivity of melt	0.13	W/(m K)	-
Spec. heat capacity of melt	2750	J/(kg K)	-
Eff. thermal diffusivity	4.87E-8	m²/s	-

Diagrams

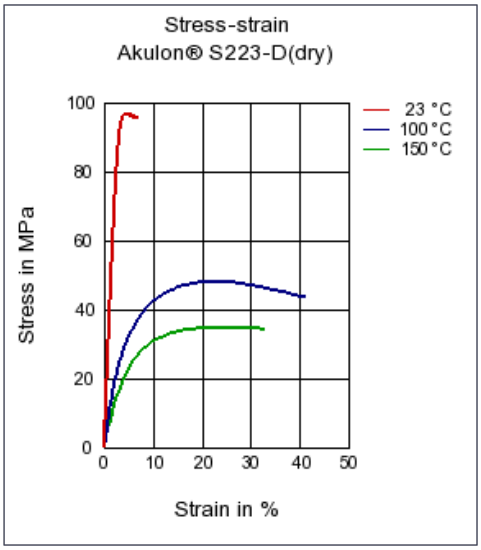
Viscosity-shear rate



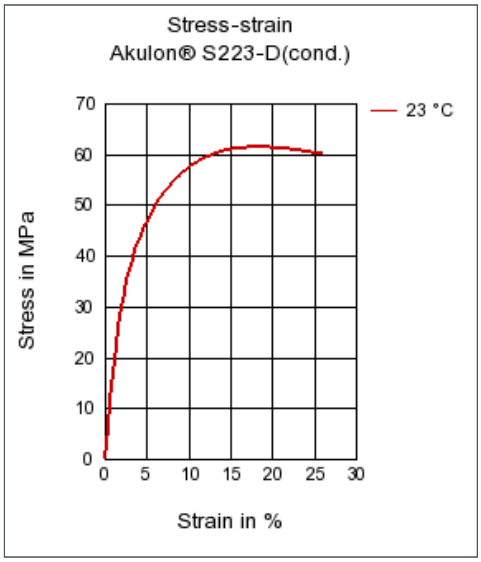
Shearstress-shear rate



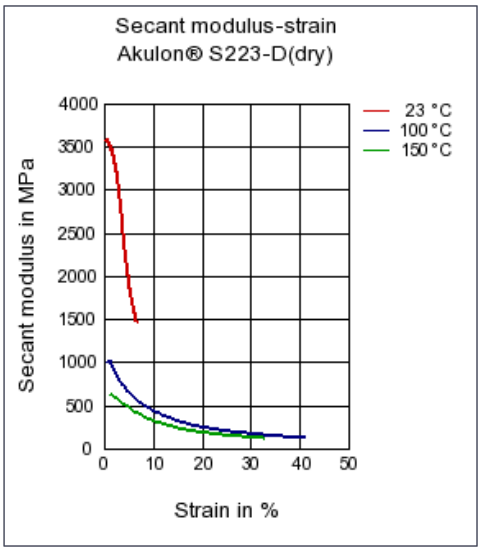
Stress-strain



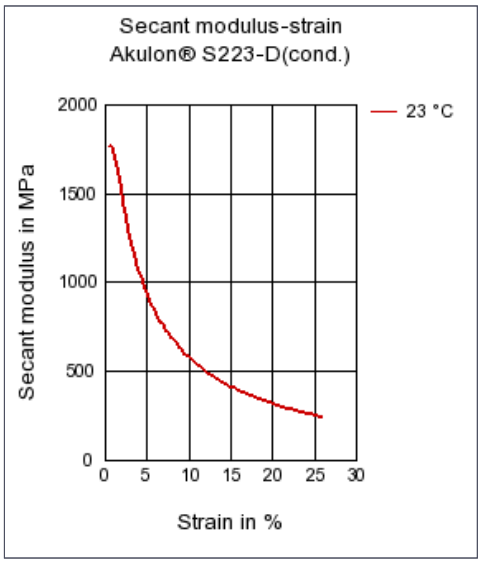
Stress-strain



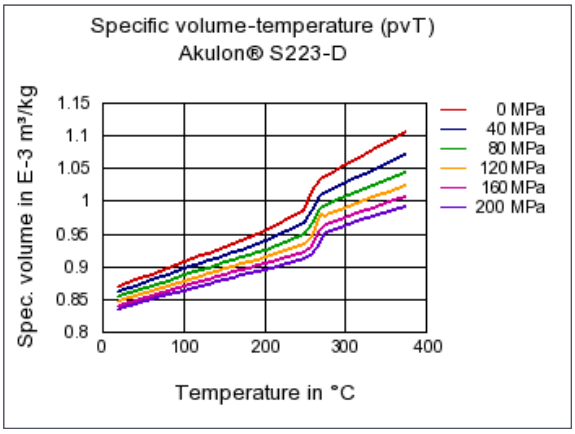
Secant modulus-strain



Secant modulus-strain



Specific volume-temperature (pvT)



Characteristics

Processing
Injection Molding

Additives
Release agent

Delivery form
Pellets

Other text information

Injection Molding
Injection Molding Recommendations