Celanese
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CELSTRAN® PA6-GF40-01 AD3002 BLACK

CELSTRAN® Long Fibre

40% long strand glass fiber reinforced nylon 6 Natural

Product information

Resin Identification	PA6-LGF40	ISO 1043
Part Marking Code	>PA6-LGF40<	ISO 11469

Typical mechanical properties

	dry/cond.		
Tensile modulus	13000 / 10200	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	205 / 147	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.9 / 2.2	%	ISO 527-1/-2
Flexural modulus	12000 / 8900	MPa	ISO 178
Flexural strength	320 / 230	MPa	ISO 178
Charpy impact strength, 23 °C	78 / 76	kJ/m²	ISO 179/1eU
Charpy impact strength, -30 °C	62 / -	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23 °C	27 / 28	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30 °C	26 / -	kJ/m²	ISO 179/1eA
Poisson's ratio	0.33 / -[C]		

[C]: Calculated

Thermal properties

	dry/cond.		
Temperature of deflection under load, 1.8 MPa	210 / *	°C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	28 / *	E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	97 / *	E-6/K	ISO 11359-1/-2

Physical/Other properties

	dry/cond.		
Density	1450 / -	kg/m³	ISO 1183

Injection

Ejection temperature	182	°C

Characteristics

Processing	Injection Moulding
Delivery form	Pellets

Additional information

Injection molding

Preprocessing

PA6&PA66 drying requirements: 4 hrs. @80° C.
A dehumidifier or desiccant dryer is recommended.

Processing

Celstran can be processed on a standard injection molding unit.
A general purpose metering screw is recommended with a zone distribution of 40% feed, 40% transition, and 20% metering.

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A free flowing check ring assembly is recommended.

Melt Temp: 275-285 °C.
Mold Temp: 85- 95 °C.

Processing Notes

Pre-Drying

CELSTRAN PA should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be =< -30 °C. The time between drying and processing should be as short as possible.

Storage

Note: Material can be over dried and may discolor.

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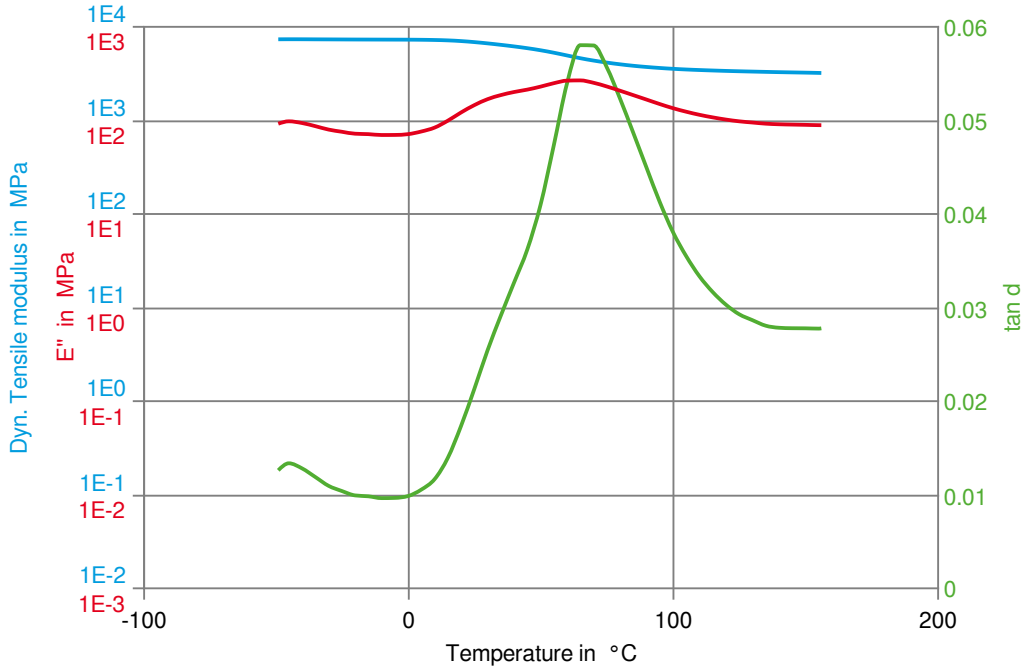
Dynamic Tensile modulus-temperature (dry)



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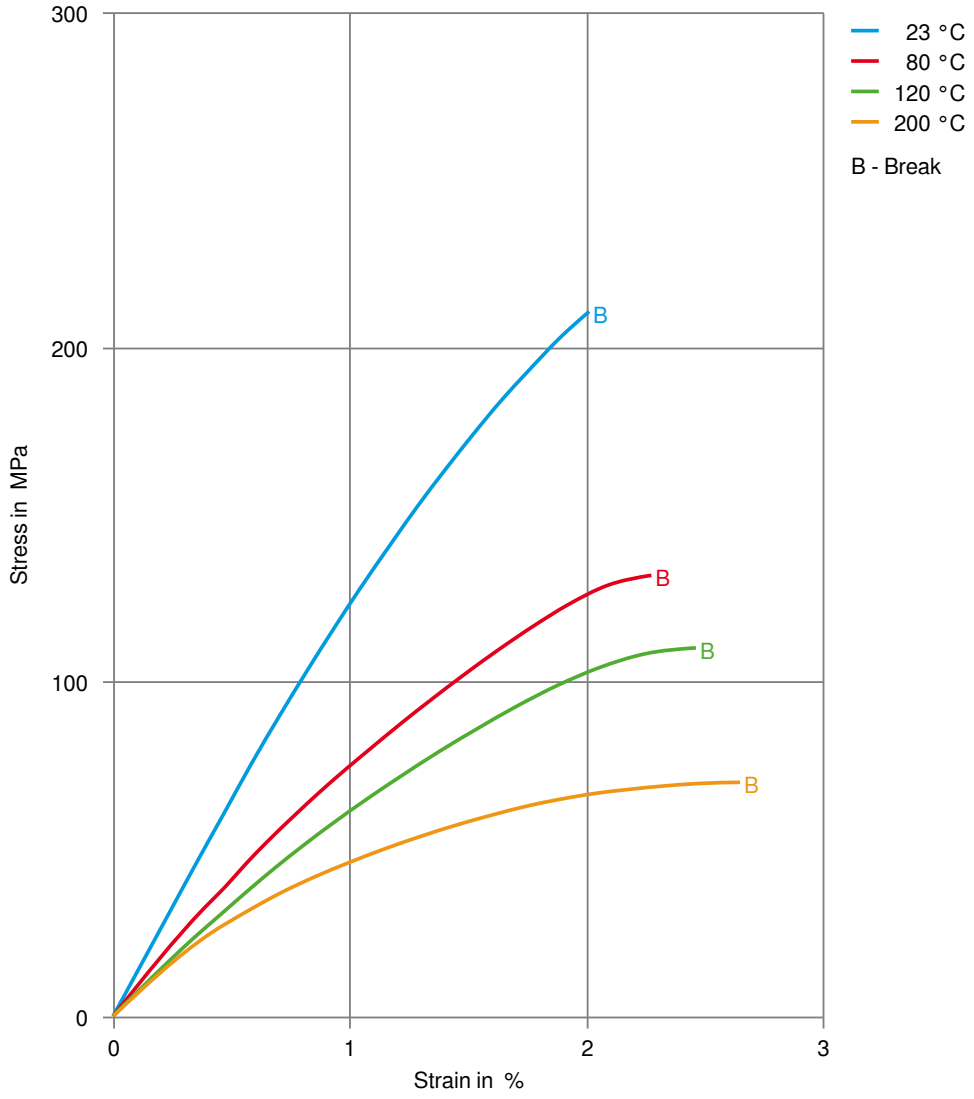
Stress-strain (dry)



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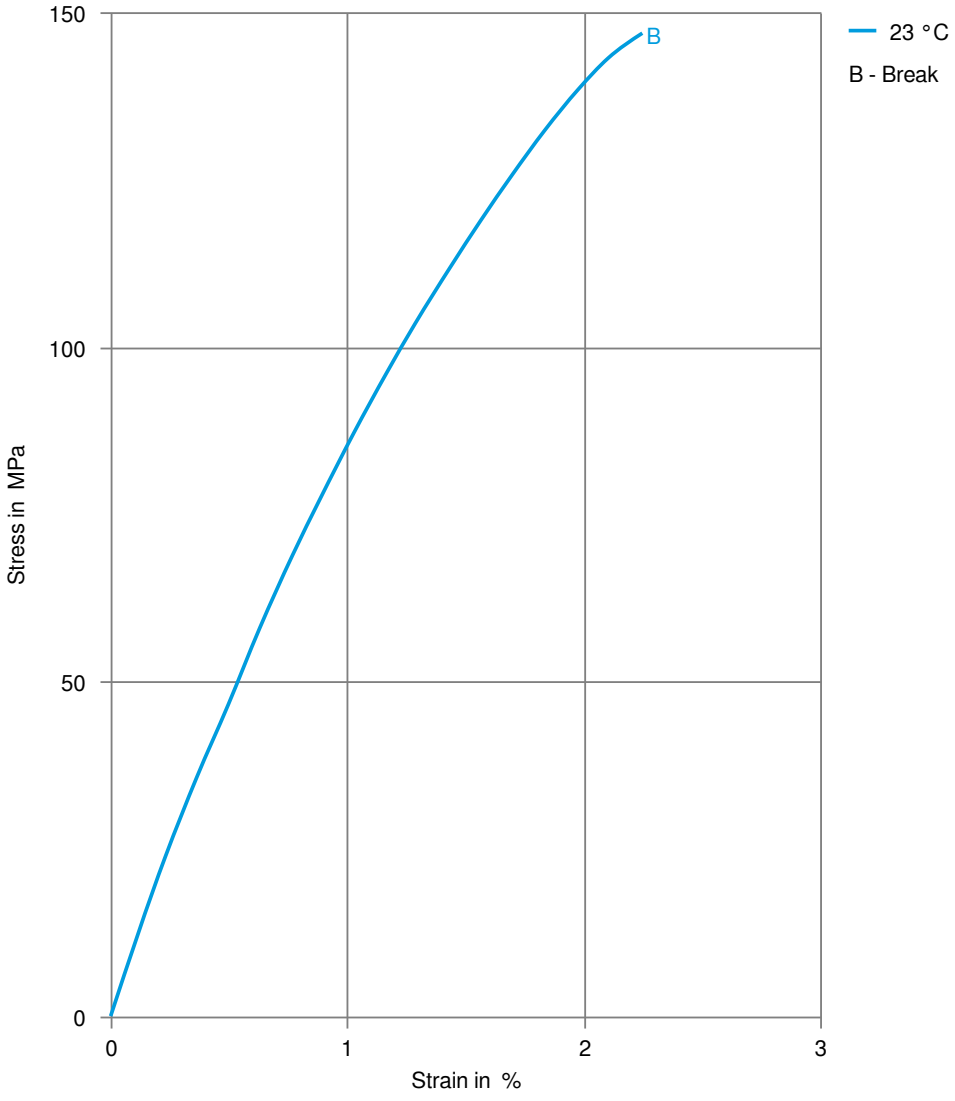
Stress-strain (cond.)



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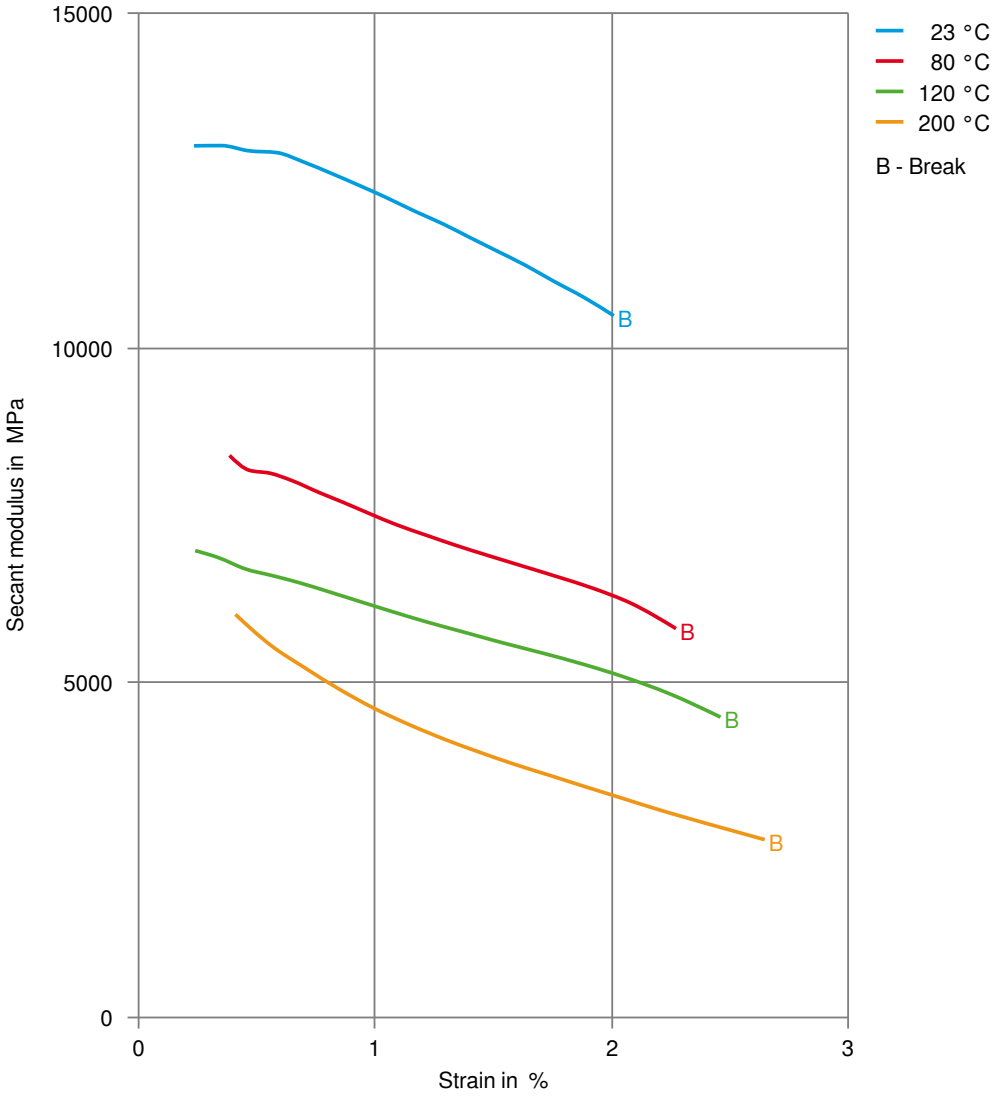
Secant modulus-strain (dry)



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Secant modulus-strain (cond.)