

CELSTRAN® PA66-GF60-02 AD3002 BLACK

Celstran PA66

Material code according to ISO 1043-1: PA66

Heat stabilized Nylon 66 reinforced by 60 weight percent long glass fibers. The pellets are cylindrical and normally as well as the embedded fibers 10 mm long.

Parts molded of CELSTRAN have outstanding mechanical properties such as high strength and stiffness combined with high heat deflection. The notched impact strength is increased at elevated and low temperatures due to the fiber skeleton built in the parts. The long fiber reinforcement reduces creep significantly.

The very isotropic shrinkage in the molded parts minimizes the warpage.

Complex parts can be manufactured with high reproducibility by injection molding.

Can be used for substituting die cast metal with the advantage of Weight reduction, no corrosion problems, no post treatment.

Typical mechanical properties

	dry/cond.		
Tensile Modulus	20500 / 15000	MPa	ISO 527-1/-2
Stress at break, 5mm/min	245 / 203	MPa	ISO 527-1/-2
Strain at break, 5mm/min	1.5 / 1.84	%	ISO 527-1/-2
Flexural Modulus	19100 / 15000	MPa	ISO 178
Flexural Strength	400 / 330	MPa	ISO 178
Charpy impact strength, 23°C	74 / -	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	67 / -	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	45 / -	kJ/m ²	ISO 179/1eA
Izod impact strength, 23°C	73 / -	kJ/m ²	ISO 180/1U
Izod impact strength, -30°C	65	kJ/m ²	ISO 180/1U

Other properties

Density	1690 kg/m ³	ISO 1183
---------	------------------------	----------

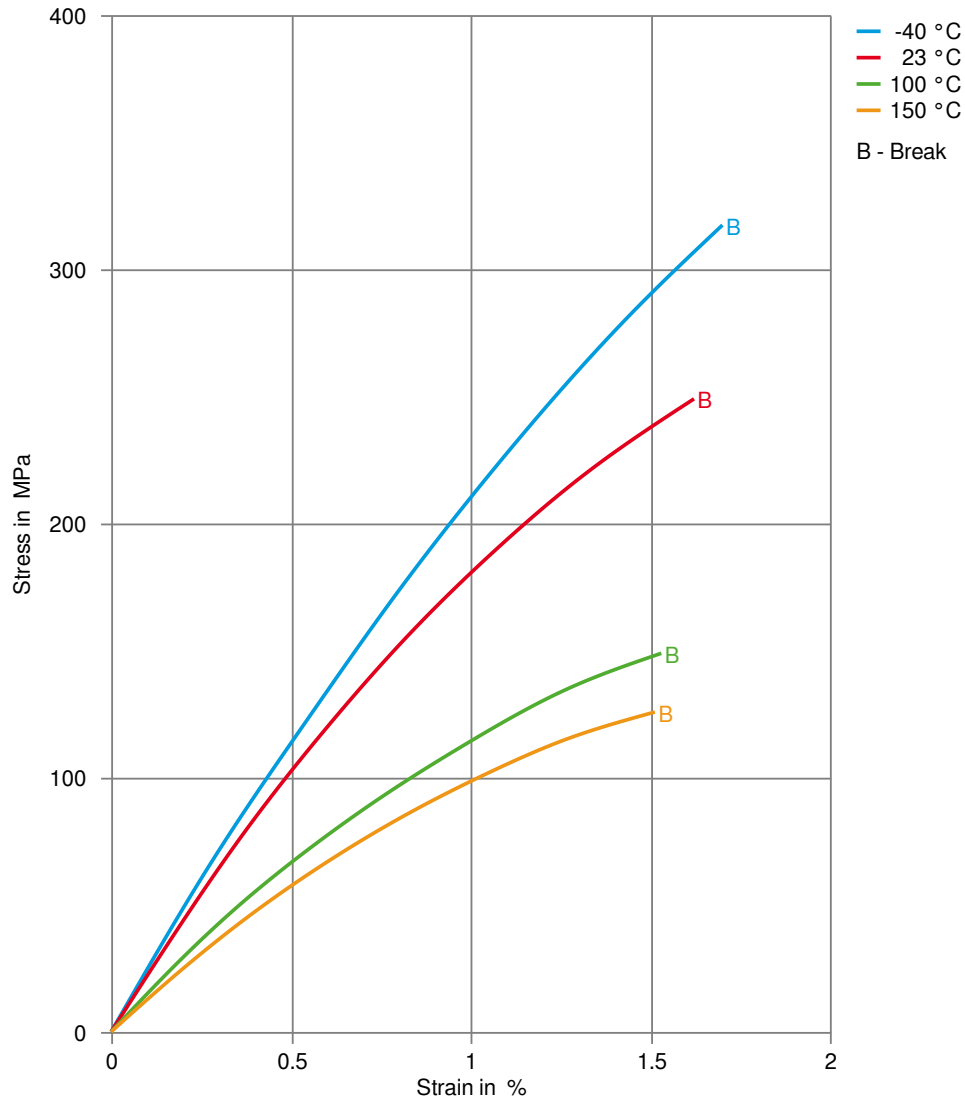
Injection

Drying Temperature	70 - 80 °C	
Drying Time, Dehumidified Dryer	2 - 4 h	
Processing Moisture Content	0.15 %	
Melt Temperature Optimum	320 °C	Internal
Screw tangential speed	0.1 m/s	
Max. mould temperature	90 - 120 °C	
Back pressure	3 MPa	
Injection speed	medium	



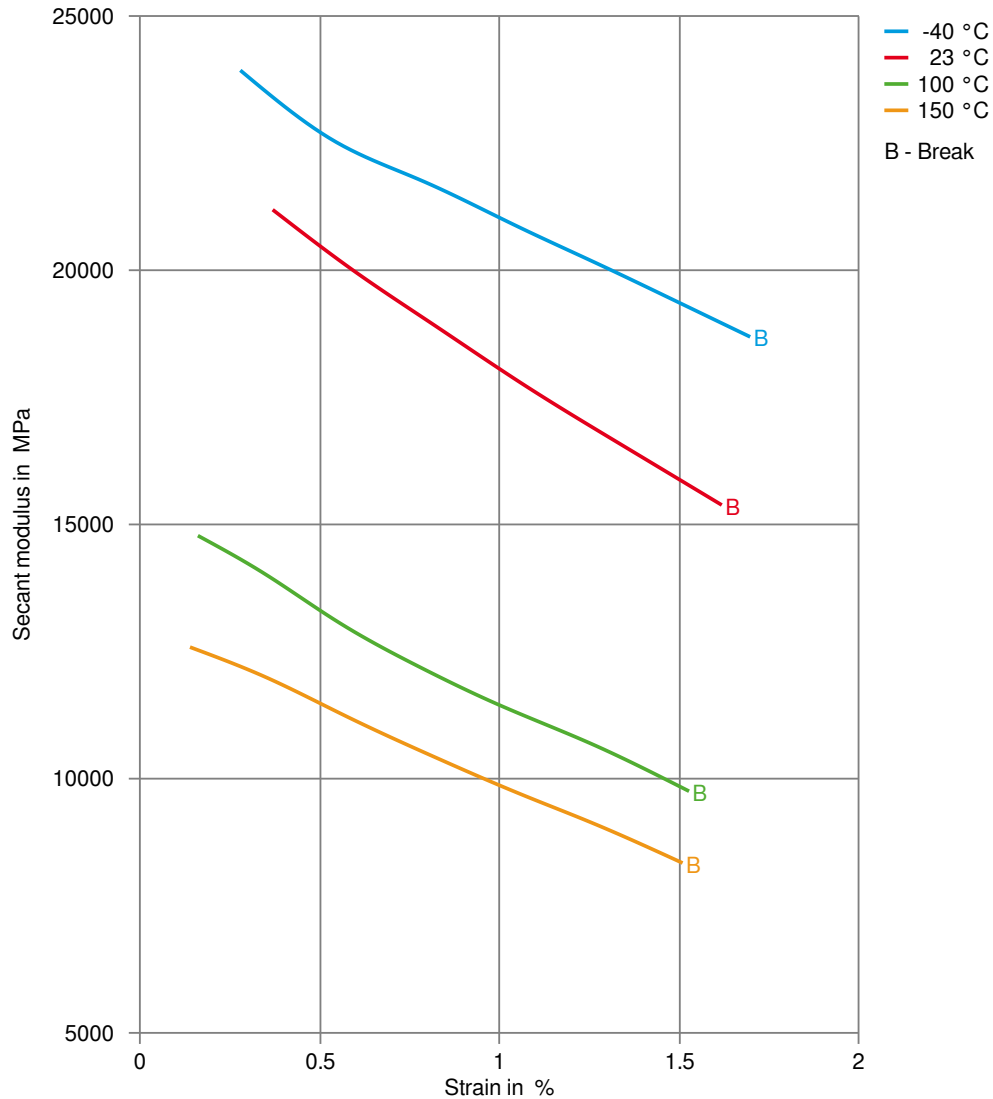
CELSTRAN® PA66-GF60-02 AD3002 BLACK

Stress-strain (dry)



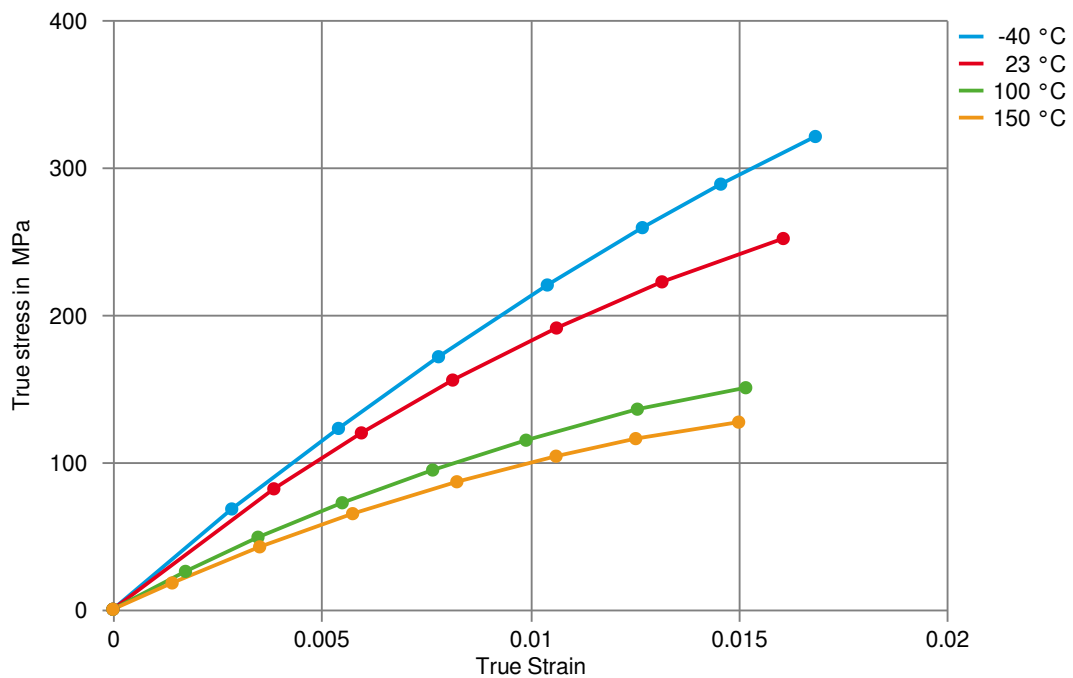
CELSTRAN® PA66-GF60-02 AD3002 BLACK

Secant modulus-strain (dry)



CELSTRAN® PA66-GF60-02 AD3002 BLACK

True stress-strain



CELSTRAN® PA66-GF60-02 AD3002 BLACK

Processing Texts

Pre-drying

CELSTAN 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 $\leq -30^{\circ}\text{C}$. The time between drying and processing should be as short as possible.

Other Approvals

Other Approvals

OEM	Specification	Additional Information
Ford	WSB-M4D680-A	
GM	GMW17810P-PA66-GF60	Black (limited approval)

