CELSTRAN® PP-GF20-0501 Black

polypropylene with 20 wt% long glass fibers - impact modified
Material code according to ISO 1043-1: PP Polypropylene copolymer reinforced with 20 weight percent long glass fibers. Black. Low emission. The fibers are chemically coupled to the polypropylene matrix. The pellets are cylindrical and normally as well as the embedded fibers 11 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. Application field: Functional/structural parts for automotive

Typical mechanical properties

Tensile Modulus	4700	MPa	ISO 527-1/-2
Stress at break, 5mm/min	84	MPa	ISO 527-1/-2
Strain at break, 5mm/min	2.5	%	ISO 527-1/-2
Flexural Modulus	4500	MPa	ISO 178
Flexural Strength	140	MPa	ISO 178
Charpy impact strength, 23°C	56	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	60	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	20	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	20	kJ/m²	ISO 179/1eA

Thermal properties

Temp. of deflection under load, 1.8 MPa	159	°C	ISO 75-1/-2

Other properties

Density	1030	kg/m³	ISO 1183

Injection

Drying Temperature	90 - 100	°C	
Drying Time, Dehumidified Dryer	2	h	
Processing Moisture Content	0.2	%	
Melt Temperature Optimum	250	°C	Internal
Screw tangential speed	0.1	m/s	
Max. mould temperature	30 - 70	°C	
Back pressure	3	MPa	
Injection speed	slow		

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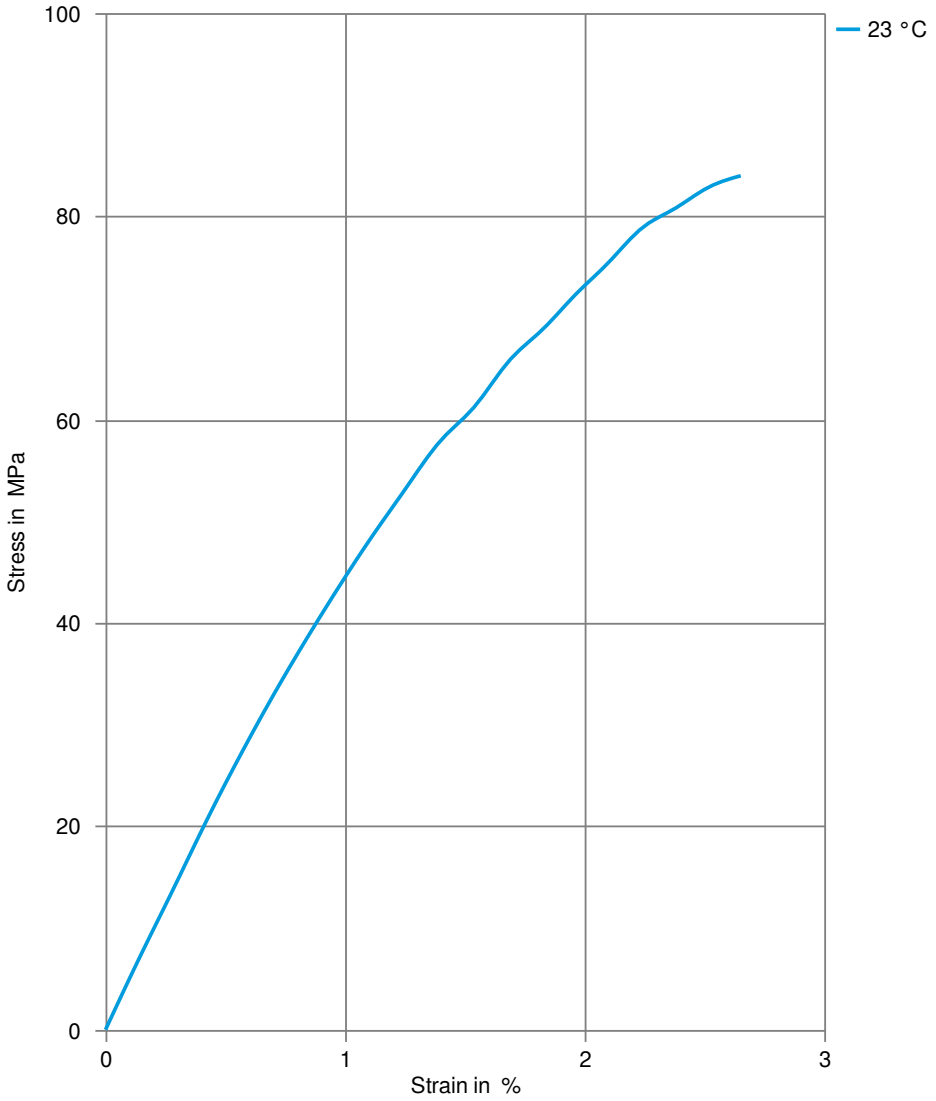
Stress-strain



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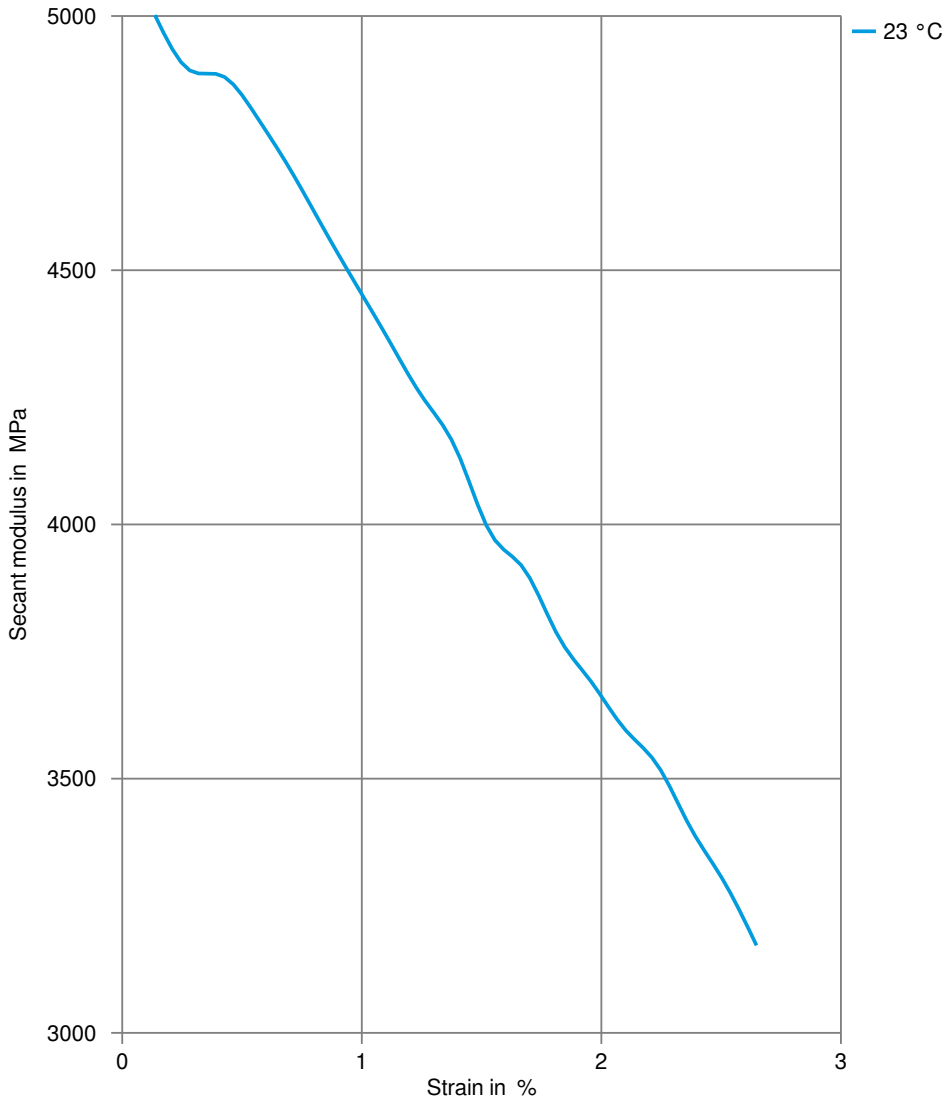
Secant modulus-strain



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Processing Texts

Pre-drying	It is normally not necessary to dry CELSTRAN PP. However, should there be surface moisture (condensate) on the molding compound as a result of incorrect storage, drying is required.
Longer pre-drying times/storage	The product can then be stored in standard conditions until processed.