

CELSTRAN® PP-GF20-0553 Black

Polypropylene with 20% reinforced long-glass-fiber

Material code according to ISO 1043-1: PP Polypropylene copolymer reinforced with 20weight 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

Rheological properties

Moulding shrinkage range, parallel	0.4 %	ISO 294-4, 2577
Moulding shrinkage range, normal	0.5 %	ISO 294-4, 2577

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/m ²	ISO 179/1eU
Charpy impact strength, -30°C	60 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	20 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	20 kJ/m ²	ISO 179/1eA

Thermal properties

Temp. of deflection under load, 1.8 MPa	159 °C	ISO 75-1/-2
Temp. of deflection under load, 8 MPa	136 °C	ISO 75-1/-2

Flammability

Burning Behav. at thickness h	HB class	UL 94
Thickness tested	1.00 mm	UL 94

Other properties

Density	1030 kg/m ³	ISO 1183
---------	------------------------	----------

VDA Properties

Emission of organic compounds	30 µgC/g	VDA 277
Thermal desorption analysis of organic emissions	96 µg/g	VDA 278
Odour	3.5 class	VDA 270



CELSTRAN® PP-GF20-0553 Black

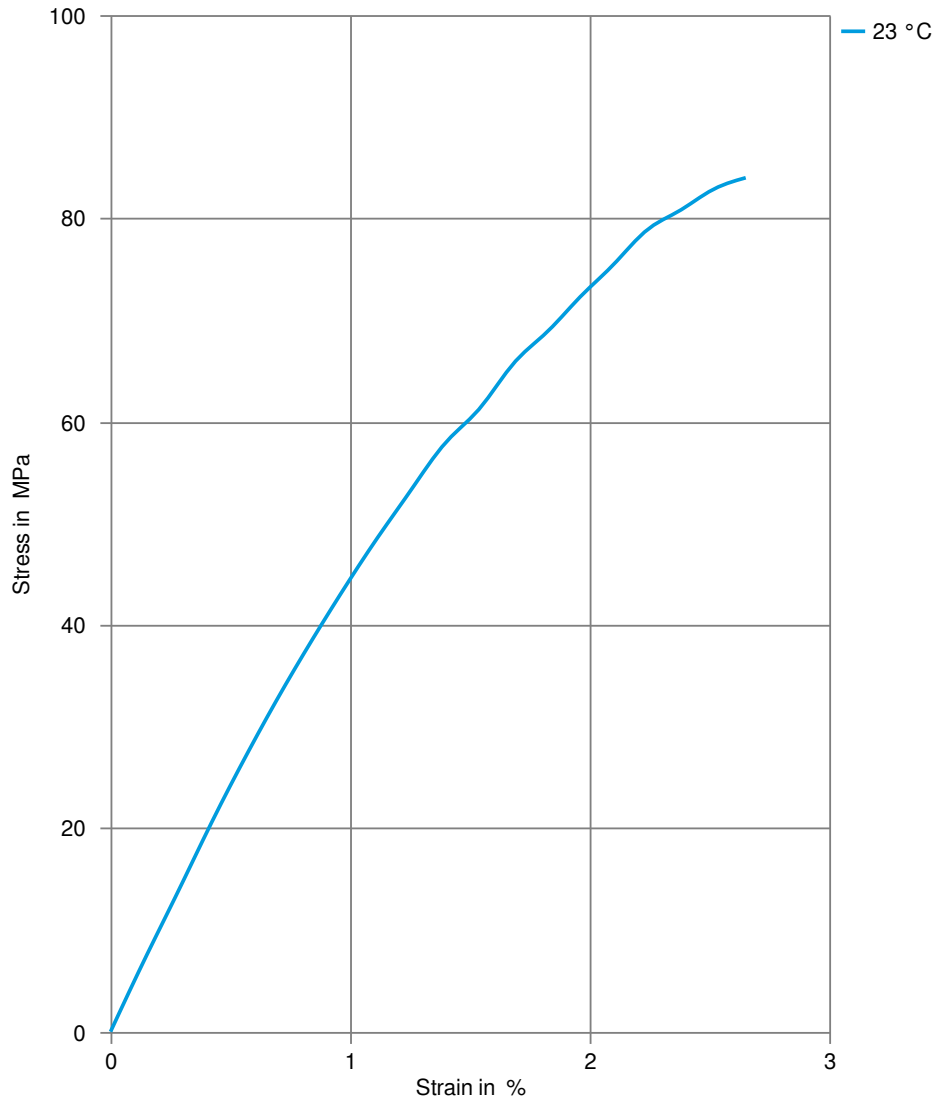
Injection

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	



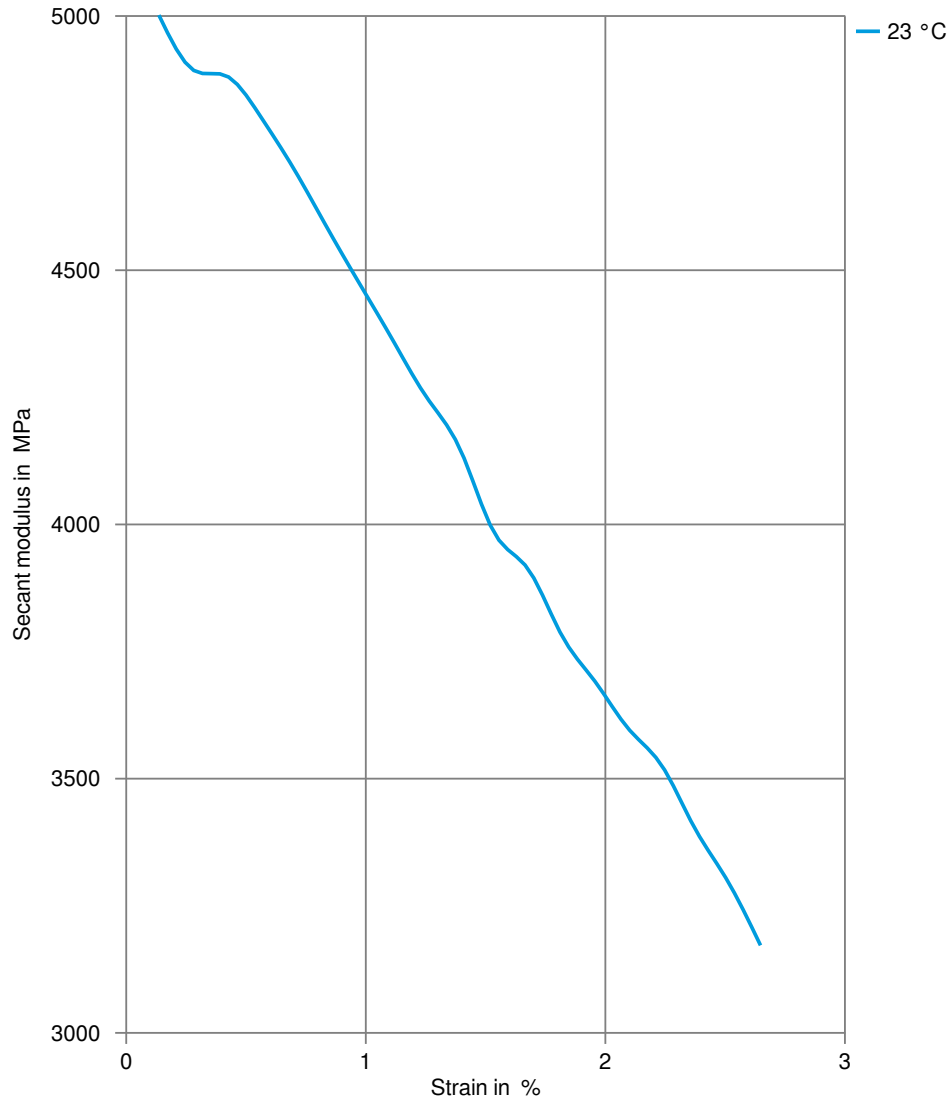
CELSTRAN® PP-GF20-0553 Black

Stress-strain



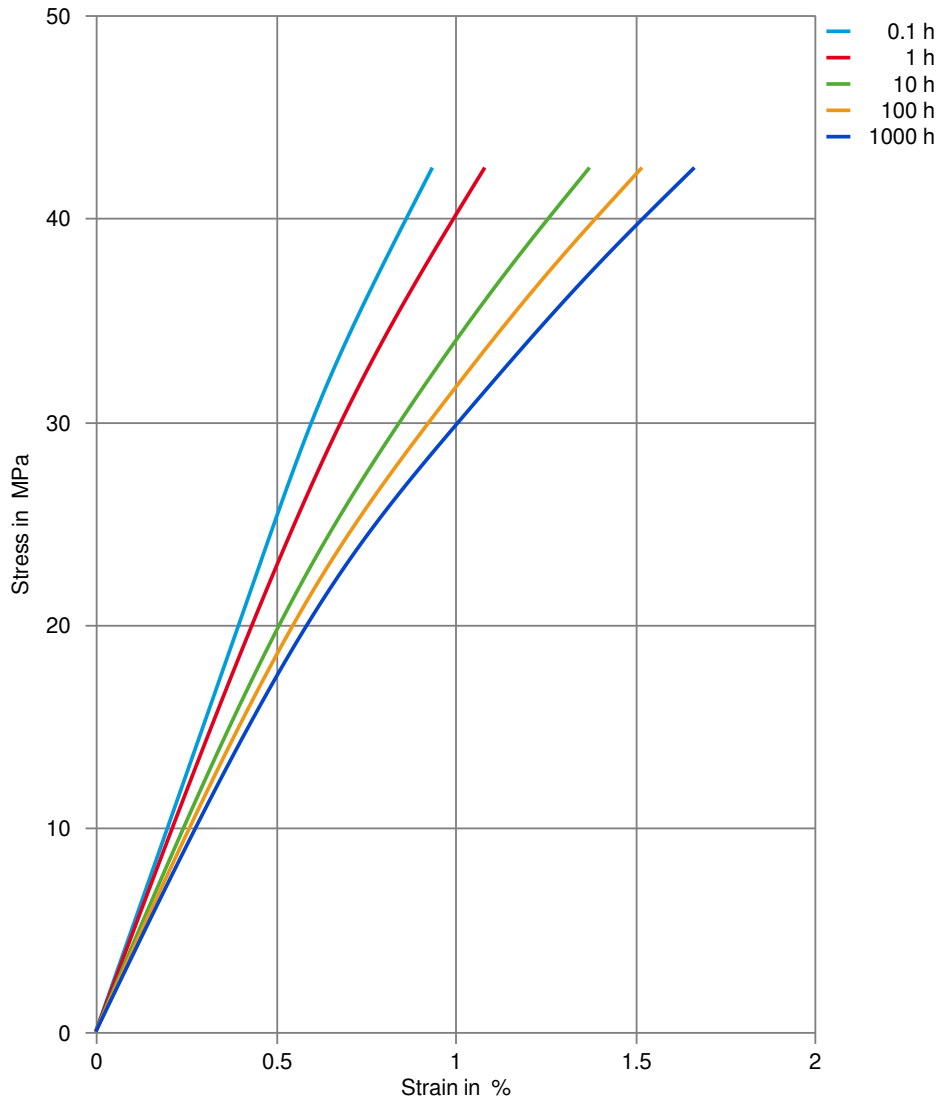
CELSTRAN® PP-GF20-0553 Black

Secant modulus-strain



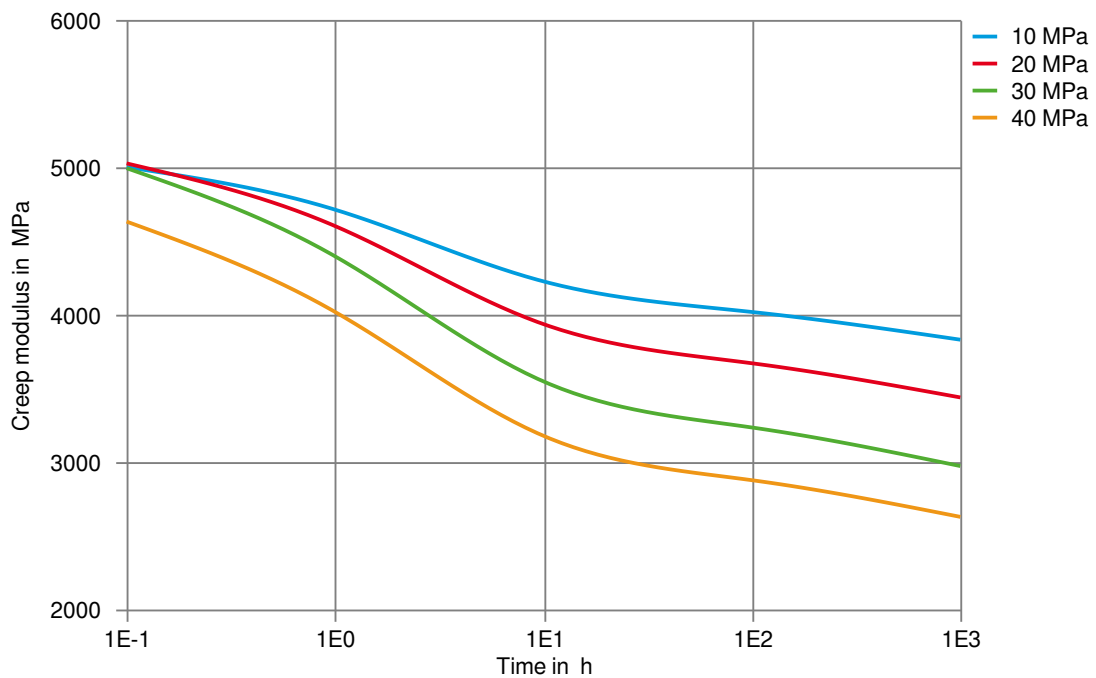
CELSTRAN® PP-GF20-0553 Black

Stress-strain (isochronous) 23°C



CELSTRAN® PP-GF20-0553 Black

Creep modulus-time 23°C



CELSTRAN® PP-GF20-0553 Black

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.

Other Approvals

Other Approvals

OEM	Specification	Additional Information
Stellantis - Chrysler	CPN 5149	
Mercedes-Benz Group (Daimler)	DBL 5404	(5404.74)
Geely	Q/JLY J7111001A	2016
GM	GMW15890P-PP-GF20E	Black
Tesla	TM-1001-102220, 202220	Nanjing, Winona

