Celanese
The chemistry inside innovation™

CELSTRAN® PP-GF20-0553 BLACK

CELSTRAN® Long Fibre

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

Product information

Resin Identification	PP-LGF20		ISO 1043
Part Marking Code	>PP-LGF20<		ISO 11469

Rheological properties

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

Typical mechanical properties

Tensile modulus	4700	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	84	MPa	ISO 527-1/-2
Tensile 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
Poisson's ratio	0.36[C]		

[C]: Calculated

Thermal properties

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

Flammability

Burning Behav. at thickness h	HB[1]	class	IEC 60695-11-10
Thickness tested	1	mm	IEC 60695-11-10
FMVSS Class	B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 2 mm	13.6	mm/min	ISO 3795 (FMVSS 302)

[1]: 29 mm/min

Physical/Other properties

Density	1030	kg/m³	ISO 1183

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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

Injection

Back pressure	3	MPa
Ejection temperature	109	°C

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	High impact or impact modified, Low emissions

Additional information

Processing Notes

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.

Storage

The product can then be stored in standard conditions until processed.

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
Geely	Q/JLY J7111001A-2016(3)	
General Motors	GMW15890P-PP-GF20E	Black
General Motors	GMW15890P-PP-GF20E-Class-U	Black
General Motors	GMW17697P-PP-GF20E	Black
Mercedes-Benz	DBL5404	(5404.74)
Stellantis - Chrysler	MS-DB-21 / CPN-5149	Black
Tesla	TM-1001-102220	Nanjing
Tesla	TM-1001-202220	Nanjing

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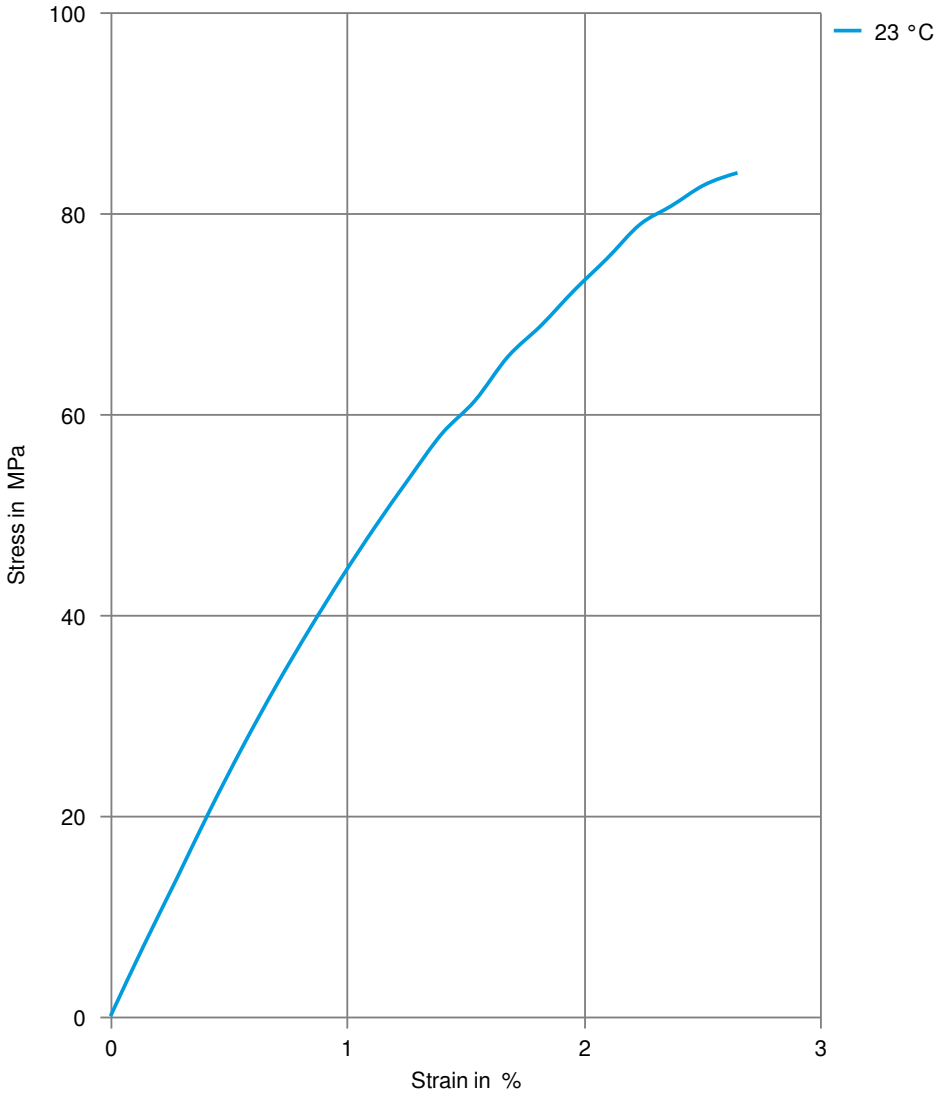
Stress-strain



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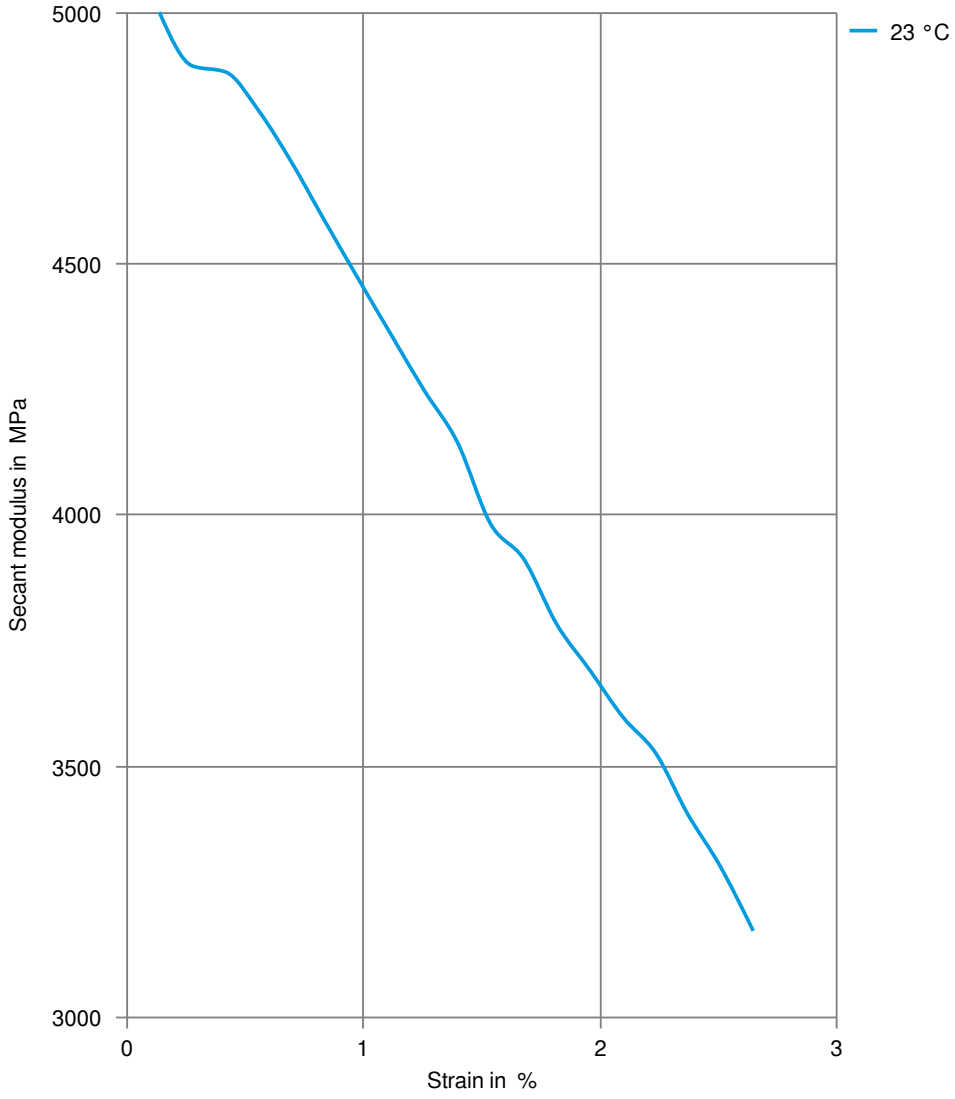
Secant modulus-strain



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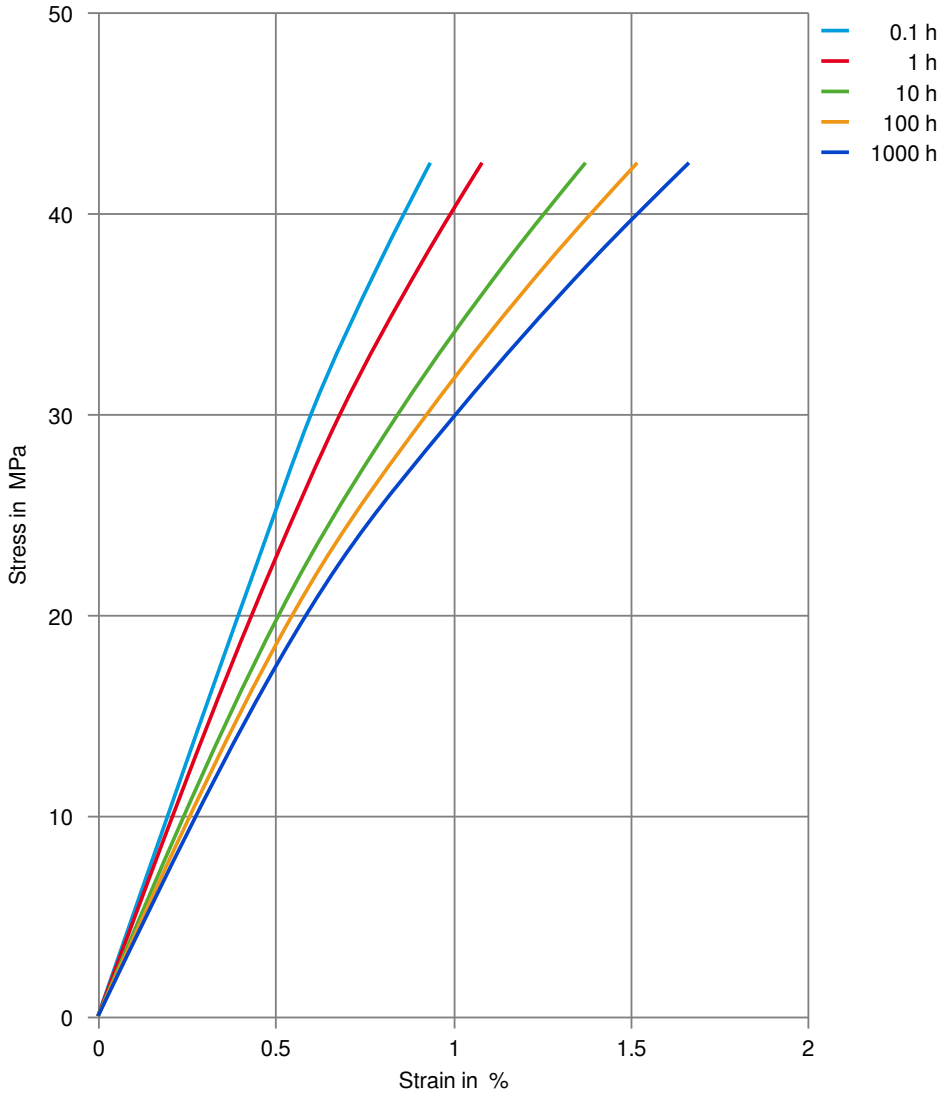
Stress-strain (isochronous) 23 °C



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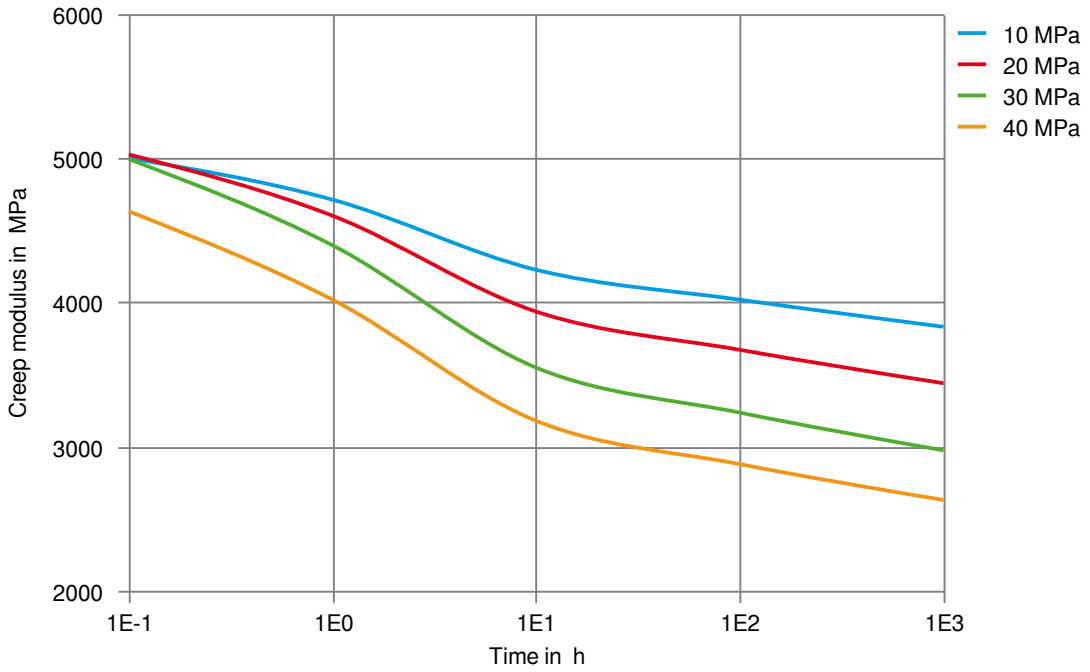
Creep modulus-time 23 °C



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