Celanese
The chemistry inside innovation™

CELSTRAN® PP-GF20-0453 P10/10

CELSTRAN® Long Fibre

Material code according to ISO 1043-1: PP Polypropylene homopolymer reinforced with 20weight percent long glass fibers. Black. The fibers are chemically coupled to the polypropylene matrix. The pellets are cylindrical and normally as well as the embedded fibers 11 mm long. (-0453 = low emission-grade). 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

Typical mechanical properties

Tensile modulus	4400	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	85	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.4	%	ISO 527-1/-2
Flexural modulus	4900	MPa	ISO 178
Flexural strength	120	MPa	ISO 178
Charpy impact strength, 23°C	45	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	24	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	12	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	15	kJ/m²	ISO 179/1eA
Poisson's ratio	0.36[C]		

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	166	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	159	°C	ISO 75-1/-2

Physical/Other properties

Density	1030	kg/m³	ISO 1183

Injection

Back pressure	3	MPa

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	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. A circulating air drying cabinet can be used for this

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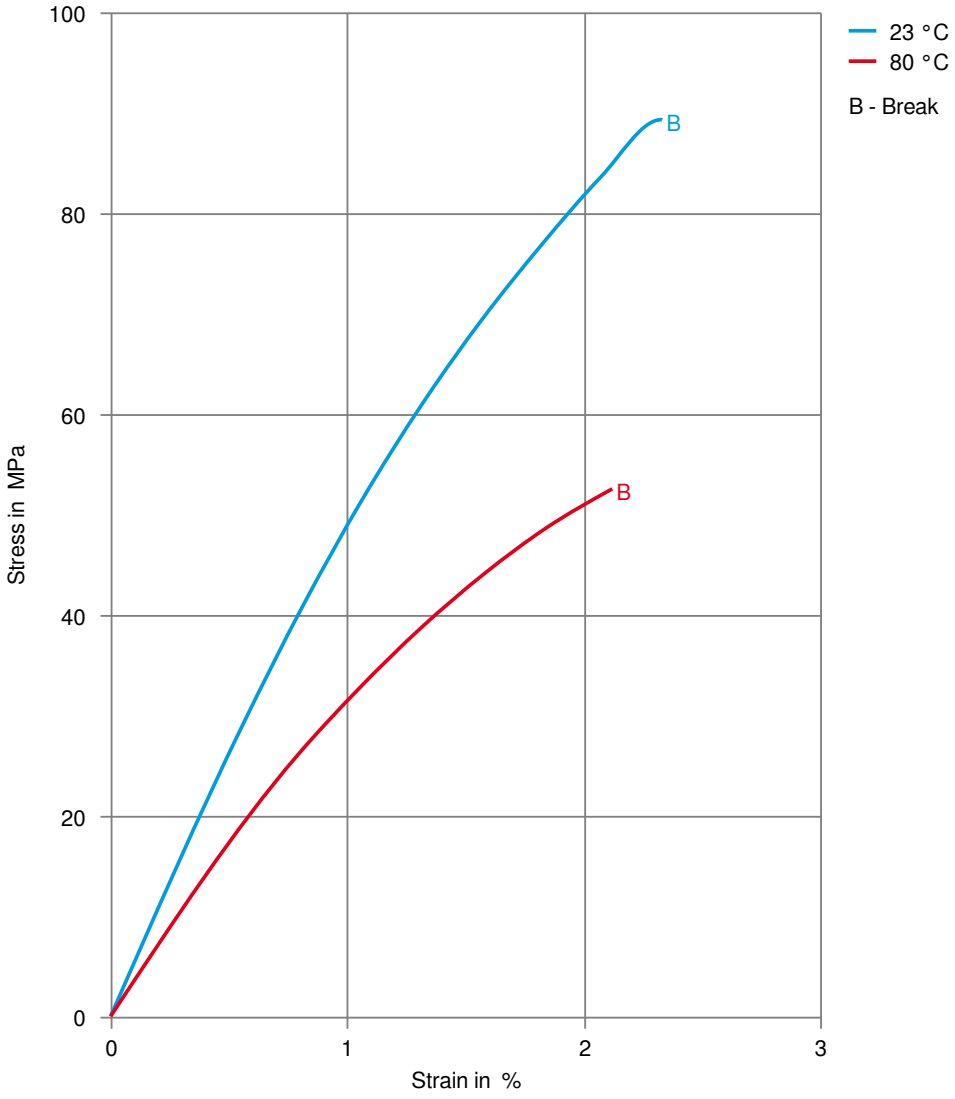
Storage

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

Stress-strain



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Secant modulus-strain