Celanese
The chemistry inside innovation™

CELSTRAN® PP-GF40-0405 P10/10

CELSTRAN® Long Fibre

Material code according to ISO 1043-1: PP UV-stabilized polypropylene reinforced with 40 weight 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. 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-LGF40	ISO 1043
Part Marking Code	>PP-LGF40<	ISO 11469

Typical mechanical properties

Tensile modulus	9200	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	130	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2	%	ISO 527-1/-2
Flexural modulus	9000	MPa	ISO 178
Flexural strength	200	MPa	ISO 178
Charpy impact strength, 23°C	62	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	60	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	25	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	30	kJ/m²	ISO 179/1eA
Poisson's ratio	0.34[C]		

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	165	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	158	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	165	°C	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	135	°C	ISO 75-1/-2

Flammability

Burning Behav. at 1.5mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
UL recognition	yes		UL 94

Physical/Other properties

Density	1210	kg/m³	ISO 1183

Injection

Back pressure	3	MPa

Characteristics

Processing	Injection Moulding, Extrusion, Sheet Extrusion, Other Extrusion, Transfer Moulding
Delivery form	Pellets
Special characteristics	U.V. stabilised or stable to weather

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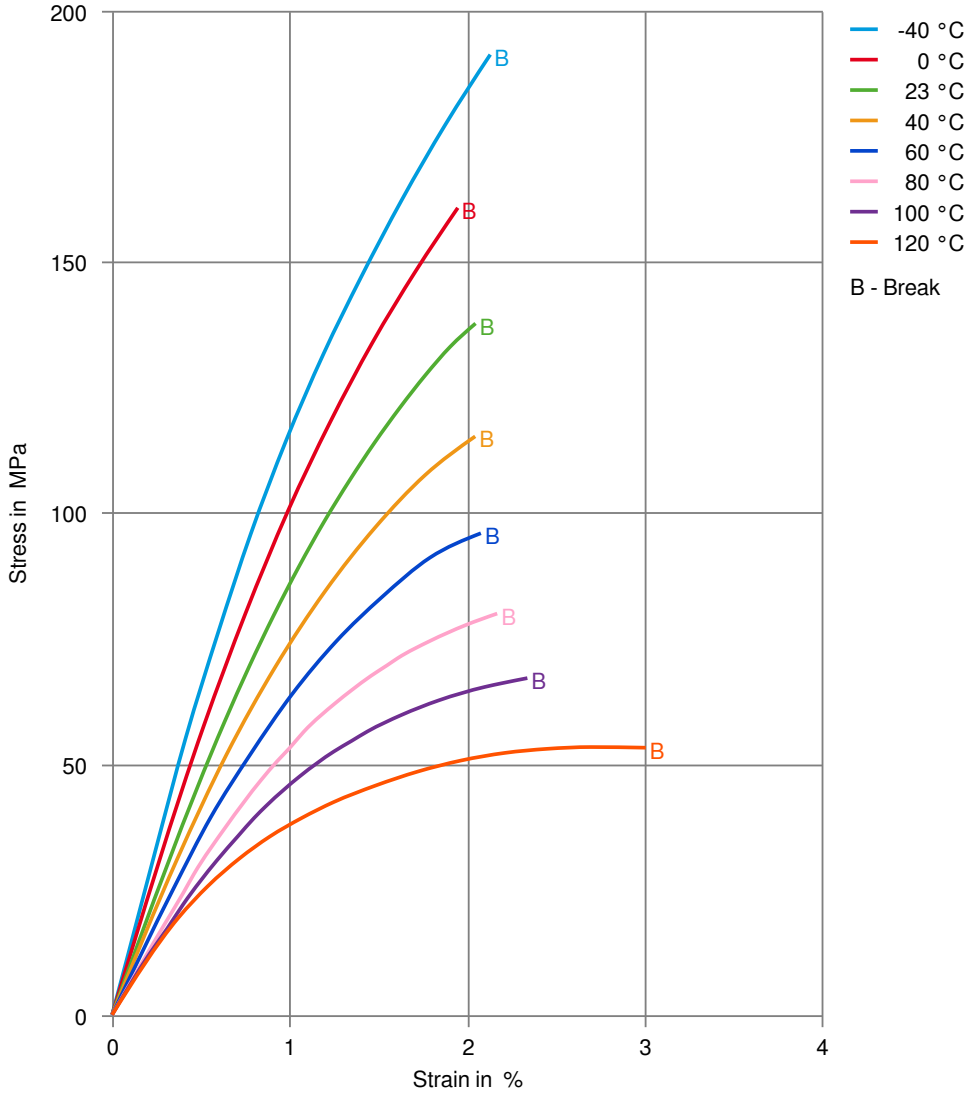
Additional information

Processing Notes

Pre-Drying

It is normally not necessary to dry CELSTRAN PP

Stress-strain



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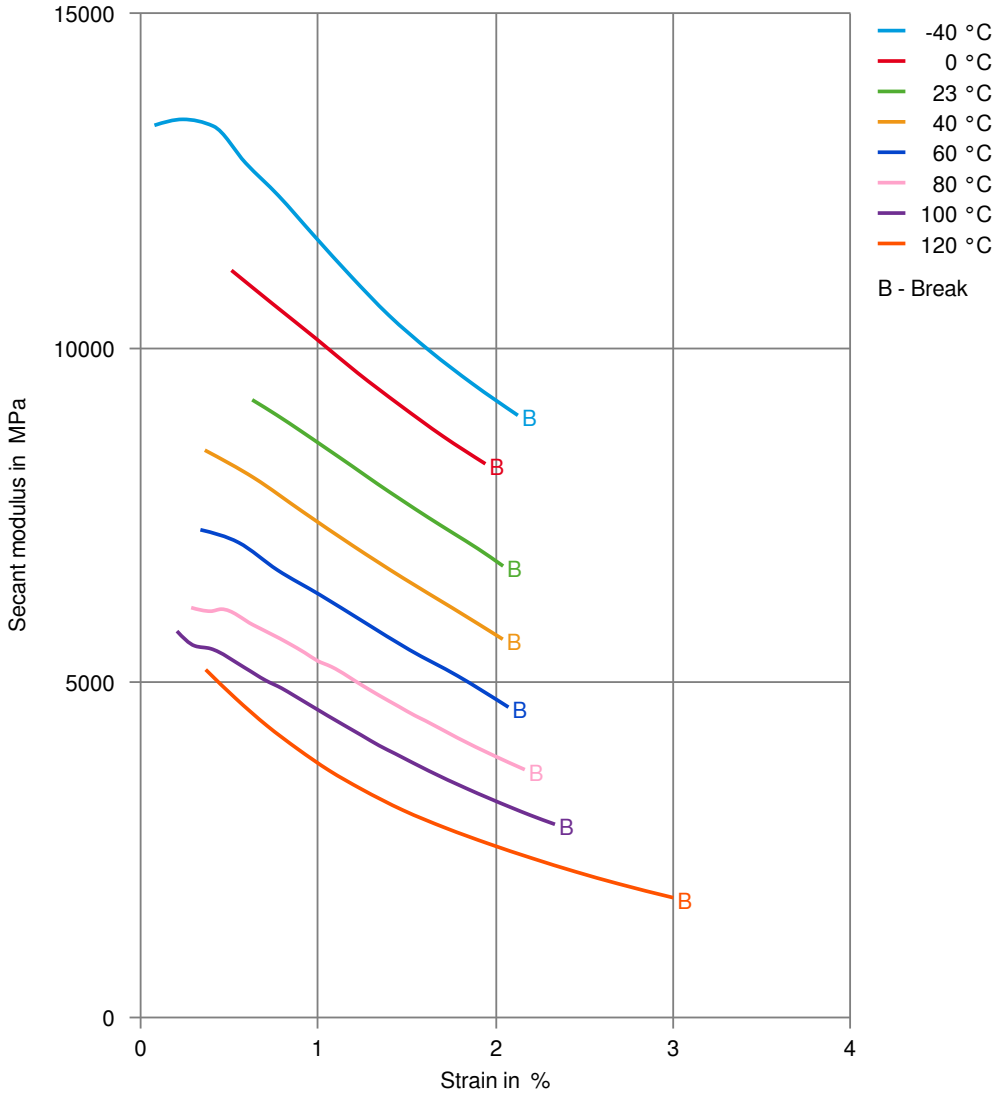
Secant modulus-strain



Revised: 2024-10-24 Source: Celanese Materials Database