Celanese
The chemistry inside innovation™

CELSTRAN® PP-GF40-0453 XVA 103H Blk

CELSTRAN® Long Fibre

Material code according to ISO 1043-1: PP Enhance Appearance, Heat stabilized polypropylene reinforced with 40 weight percent long glass fibers, low emission grade. 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	8900	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	123	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.9	%	ISO 527-1/-2
Flexural modulus	8600	MPa	ISO 178
Flexural strength	200	MPa	ISO 178
Charpy impact strength, 23°C	64	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	27	kJ/m²	ISO 179/1eA
Poisson's ratio	0.34[C]		

[C]: Calculated

Thermal properties

Temperature of deflection under load, 1.8 MPa	160	°C	ISO 75-1/-2

Physical/Other properties

Density	1200	kg/m³	ISO 1183

Injection

Drying Temperature	100	°C
Drying Time, Dehumidified Dryer	2	h
Processing Moisture Content	≤0.2	%
Melt Temperature Optimum	227	°C
Min. melt temperature	218	°C
Max. melt temperature	235	°C
Screw tangential speed	≤0.105	m/s
Mold Temperature Optimum	60	°C
Min. mould temperature	50	°C
Max. mould temperature	70	°C
Back pressure	0.5	MPa
Ejection temperature	109	°C

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Characteristics

Processing	Injection Moulding
Special characteristics	Heat stabilised or stable to heat, Specialty appearance, Low emissions

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
General Motors	GMW15890P-PP-GF40-Class-U	Natural
General Motors	GMW15890P-PP-GF40-Class-U	Black
General Motors	GMW17697P-PP-GF40	Black
General Motors	GMW17697P-PP-GF40	Natural
Li Auto	Q/LiA5310050	

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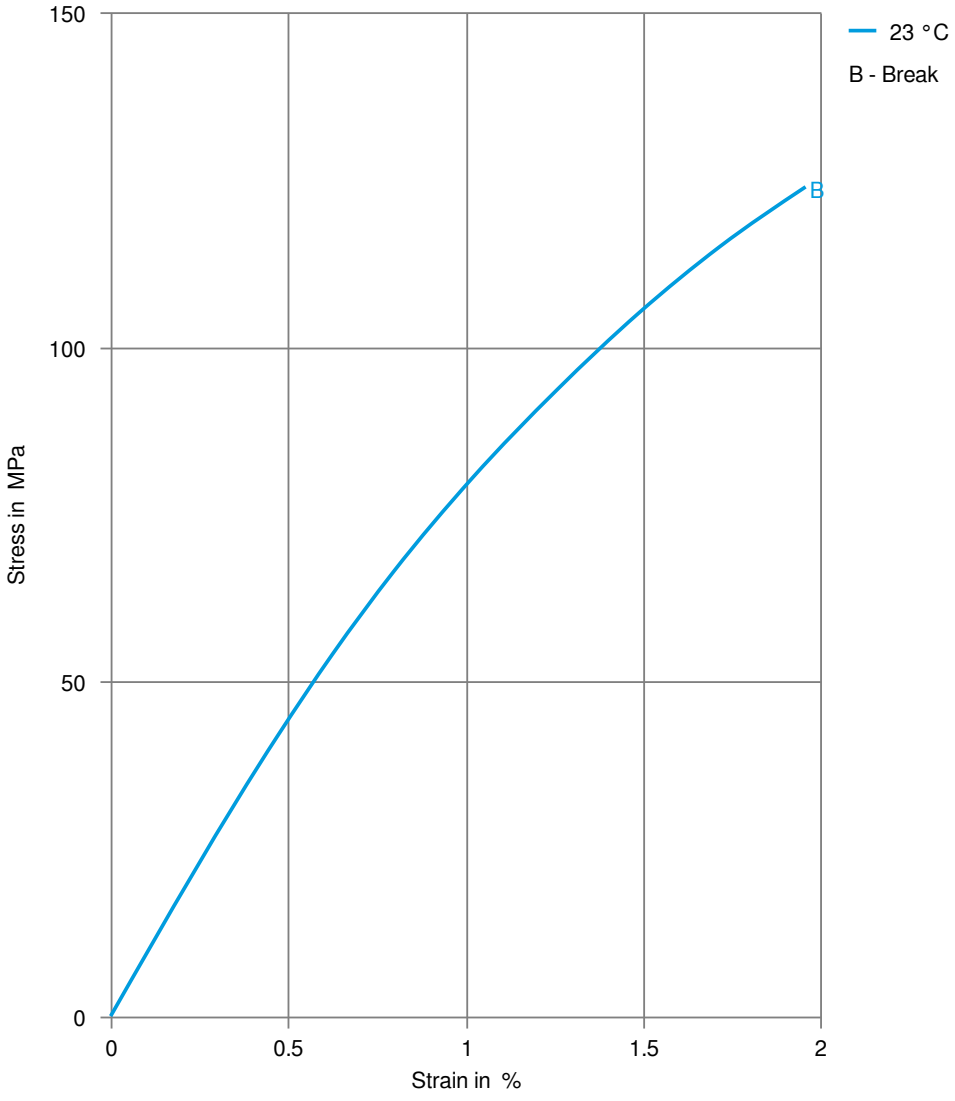
Stress-strain



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Secant modulus-strain