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	1.29E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	17800	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.9	%	ISO 527-1/-2
Flexural modulus	1.25E6	psi	ISO 178
Flexural strength	29400	psi	ISO 178
Charpy impact strength, 23 °C	30.4	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23 °C	12.8	ftlb/in²	ISO 179/1eA

Thermal properties

Temperature of deflection under load, 1.8 MPa	320	°F	ISO 75-1/-2

Physical/Other properties

Density	0.0433	lb/in³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	194	°F
Drying Time, Dehumidified Dryer	2 - 3	h
Processing Moisture Content	≤0.2	%
Melt Temperature Optimum	482	°F
Min. melt temperature	446	°F
Max. melt temperature	518	°F
Max. screw tangential speed	≤0.1	m/s
Mold Temperature Optimum	140	°F
Min. mold temperature	104	°F
Max. mold temperature	158	°F
Back pressure	72.5	psi
Ejection temperature	228	°F

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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	

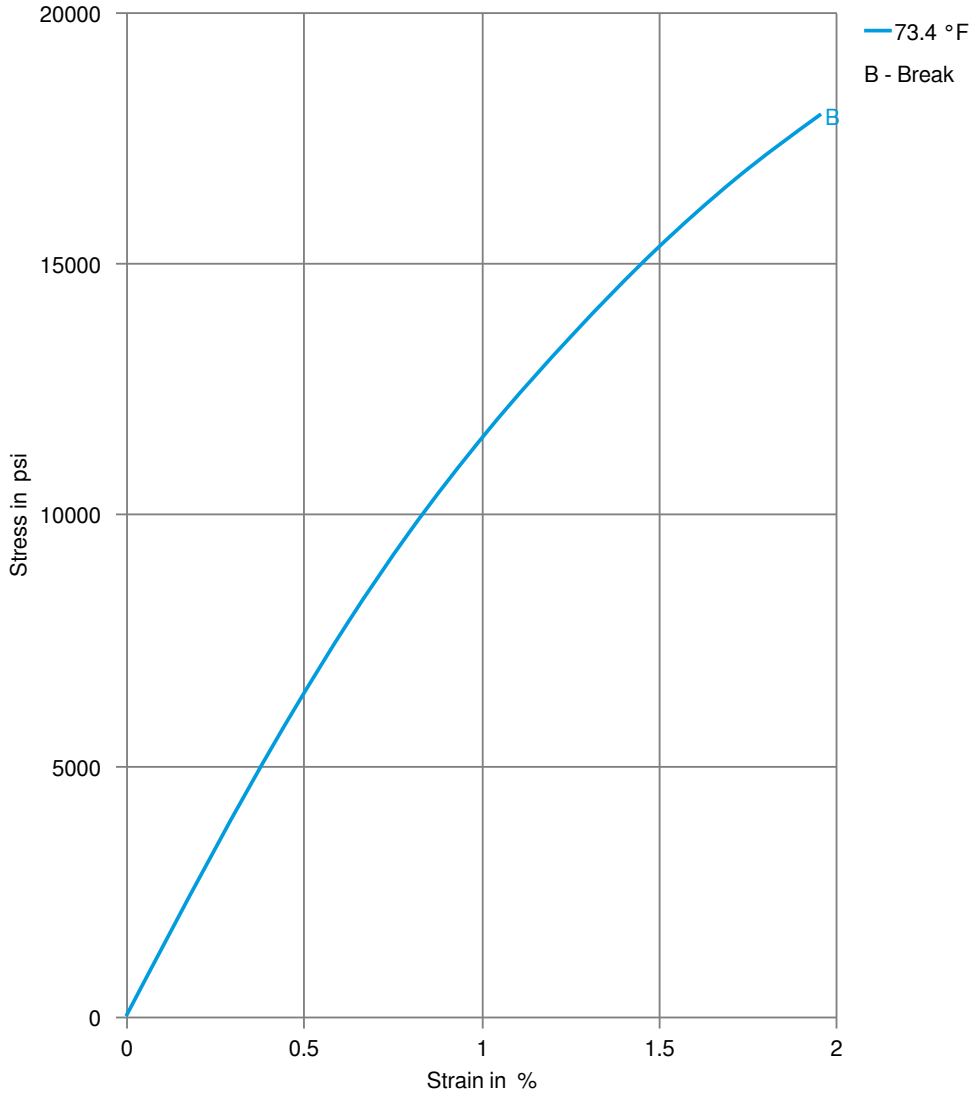
Characteristics

Processing	Injection Molding
Special characteristics	Heat stabilized or stable to heat, Specialty appearance, Low emissions

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Stress-strain

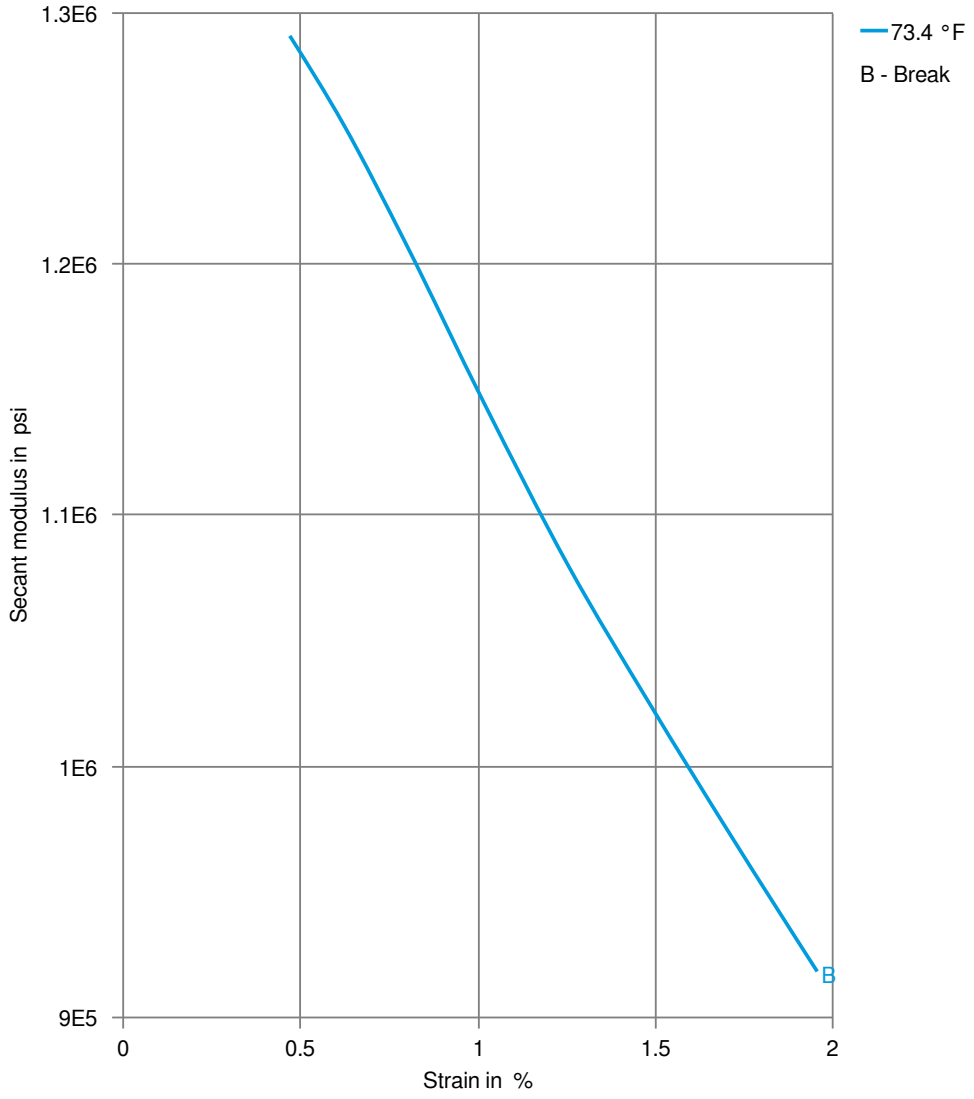


Revised: 2025-07-10 Source: Celanese Materials Database

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Secant modulus-strain



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