CELSTRAN® PP-GF40-0414 P7 (PRELIMINARY)

CELSTRAN® Long Fibre

Material code according to ISO 1043-1: PP Heat stabilized polypropylene reinforced with 40 weight percent long glass fibers. Natural. The fibers are chemically coupled to the polypropylene matrix. The pellets are cylindrical and normally as well as the embedded fibers 7 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	1.32E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	19600	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.3	%	ISO 527-1/-2
Flexural modulus	1.35E6	psi	ISO 178
Flexural strength	31900	psi	ISO 178
Charpy impact strength, 23°C	33.3	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30°C	23.8	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	14.3	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	16.6	ftlb/in²	ISO 179/1eA

Thermal properties

Melting temperature, 10°C/min	331	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	316	°F	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	273	°F	ISO 75-1/-2

Physical/Other properties

Density	0.0444	lb/in³	ISO 1183
Bulk density	0.0215	lb/in³	ISO 60

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

Revised: 2025-07-21 Source: Celanese Materials Database

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Characteristics

Processing	Injection Molding

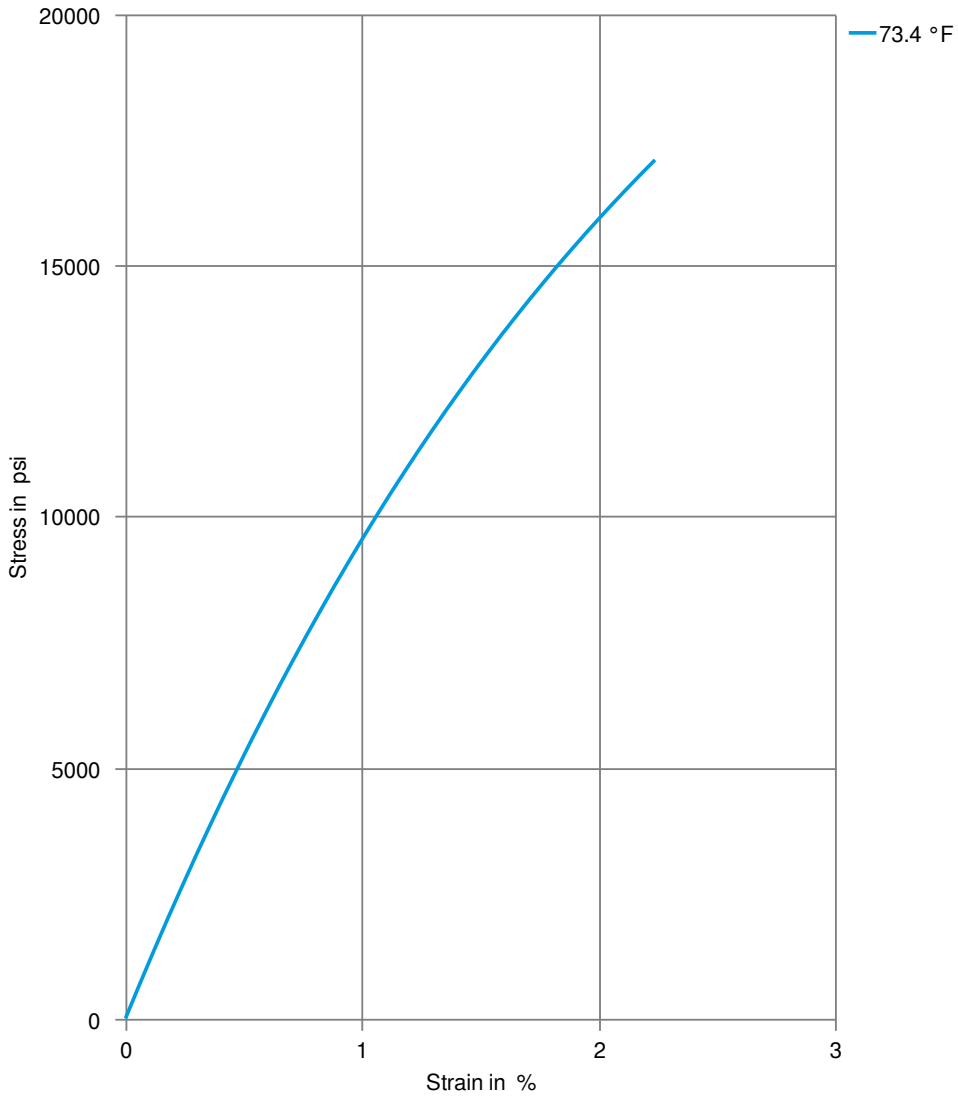
Additional information

Processing Notes

Pre-Drying

It is normally not necessary to dry CELSTRAN PP

Stress-strain

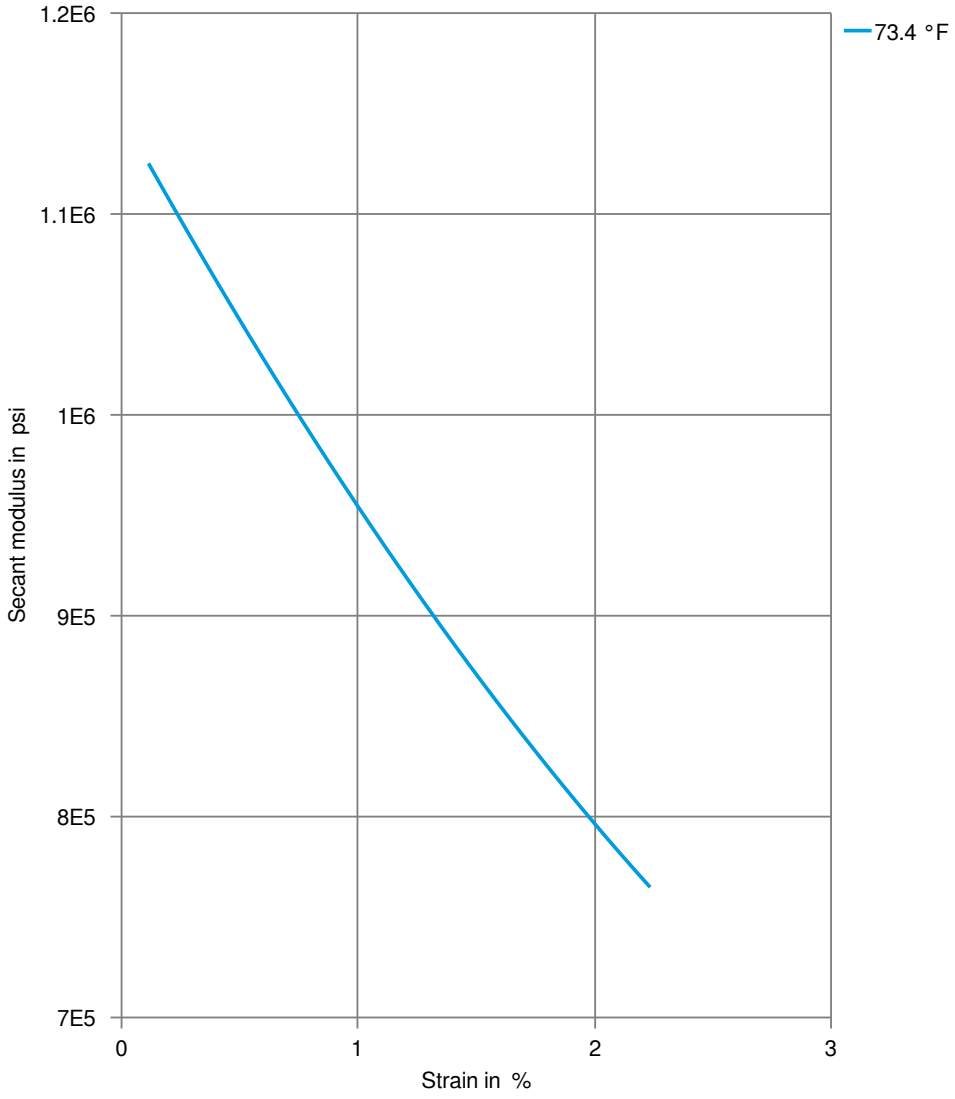


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Secant modulus-strain



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The above data are preliminary and are subject to change as additional data are developed on subsequent lots.
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