CELSTRAN® PP-GF50-0405 HF BLACK

CELSTRAN® Long Fibre

Material code according to ISO 1043-1: PP Polypropylene with 50 weight percent ash content, long glass fibers reinforced, low emission. Concentrate, 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-LGF50	ISO 1043
Part Marking Code	>PP-LGF50<	ISO 11469

Typical mechanical properties

Tensile modulus	1.77E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	21500	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.8	%	ISO 527-1/-2
Flexural modulus	1.74E6	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	31.4	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	14.3	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	17.1	ftlb/in²	ISO 179/1eA
Poisson's ratio	0.35		

Thermal properties

Melting temperature, 10°C/min	334	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	318	°F	ISO 75-1/-2

Physical/Other properties

Density	0.0484	lb/in³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	194	°F
Drying Time, Dehumidified Dryer	2	h
Processing Moisture Content	≤0.2	%
Melt Temperature Optimum	518	°F
Min. melt temperature	482	°F
Max. melt temperature	554	°F
Max. screw tangential speed	≤0.1	m/s
Mold Temperature Optimum	158	°F
Min. mold temperature	140	°F
Max. mold temperature	176	°F
Back pressure	435	psi

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Characteristics

Processing	Injection Molding
Special characteristics	Heat stabilized or stable to heat, High Flow

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.

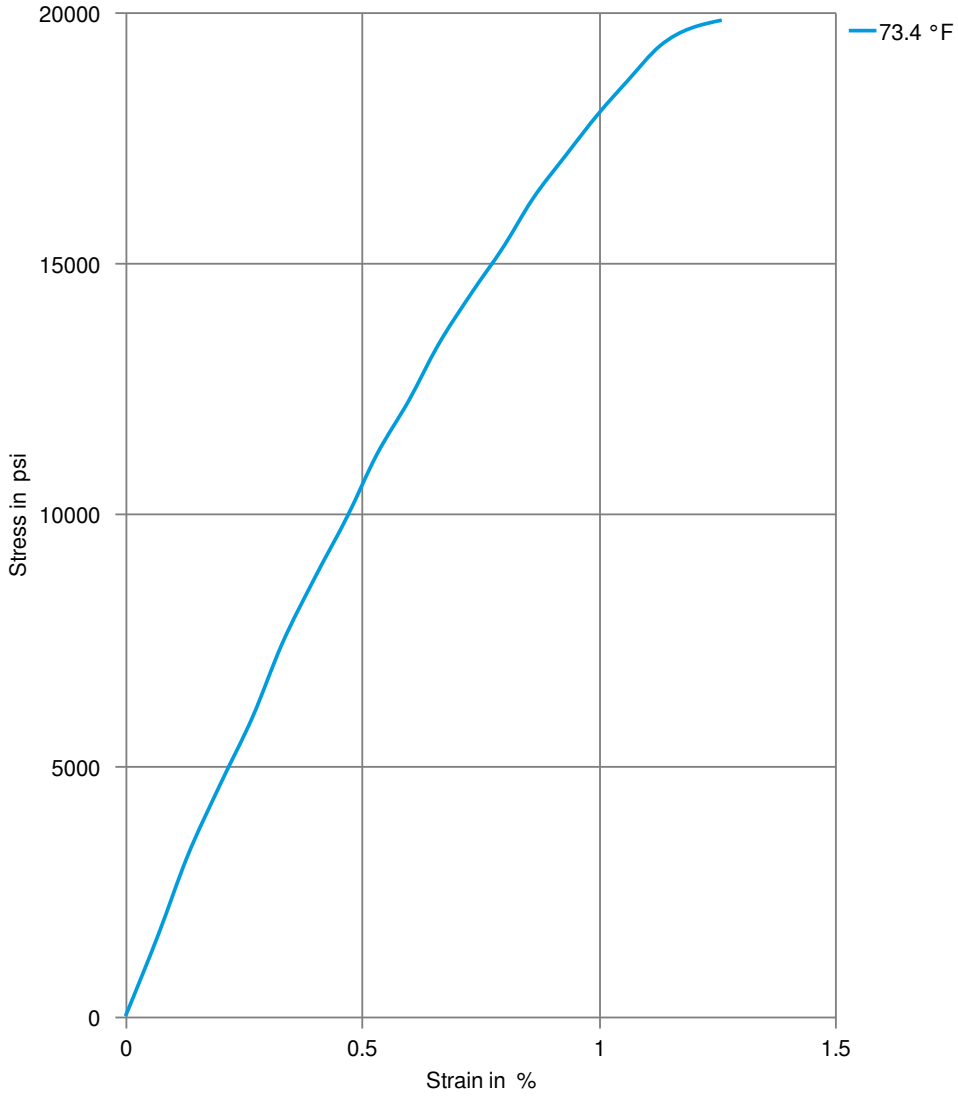
Storage

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

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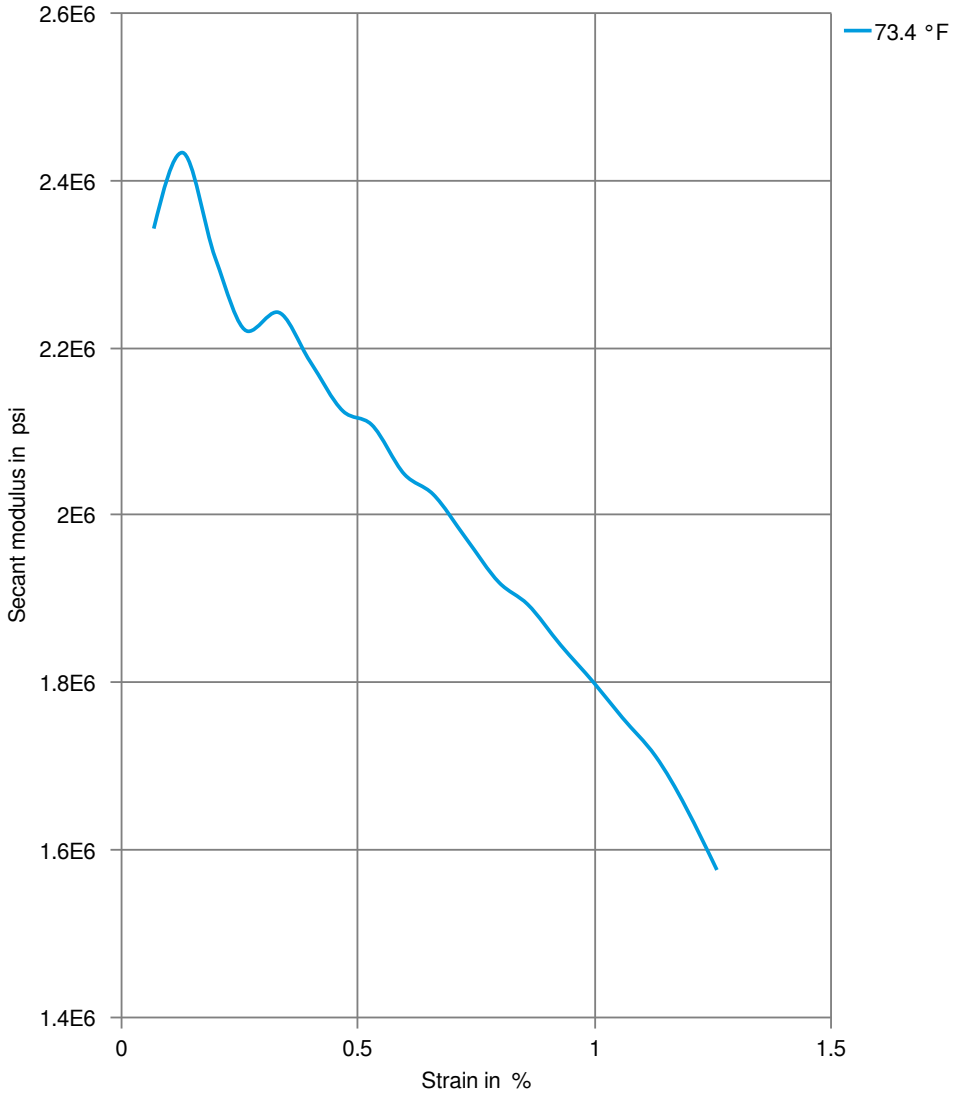
Stress-strain



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Secant modulus-strain



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