CELSTRAN® PP-GF20-0553 XVA 103H Black

CELSTRAN® Long Fibre

Material code according to ISO 1043-1: PP Enhance Appearance, Heat stabilized polypropylene reinforced with 20 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-LGF20		ISO 1043
Part Marking Code	>PP-LGF20<		ISO 11469

Rheological properties

Molding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Molding shrinkage range, parallel	0.2 - 0.3	%	ISO 294-4, 2577
Molding shrinkage, normal	0.8	%	ISO 294-4, 2577
Molding shrinkage range, normal	0.6 - 0.8	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	715000	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	12000	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.5	%	ISO 527-1/-2
Flexural modulus	728000	psi	ISO 178
Flexural strength	20600	psi	ISO 178
Charpy impact strength, 23°C	23.3	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30°C	21.4	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	8.85	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	9.51	ftlb/in²	ISO 179/1eA
Poisson's ratio	0.45		

Thermal properties

Temperature of deflection under load, 1.8 MPa	316	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.24	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.7	E-4/°F	ISO 11359-1/-2

Physical/Other properties

Density	0.0372	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	446	°F
Min. melt temperature	392	°F

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Max. melt temperature	464	°F
Max. screw tangential speed	≤0.1	m/s
Mold Temperature Optimum	122	°F
Min. mold temperature	86	°F
Max. mold temperature	158	°F
Ejection temperature	243	°F

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
General Motors	GMW15890P-PP-GF20E-Class-U	Black
General Motors	GMW17697P-PP-GF20E	Black

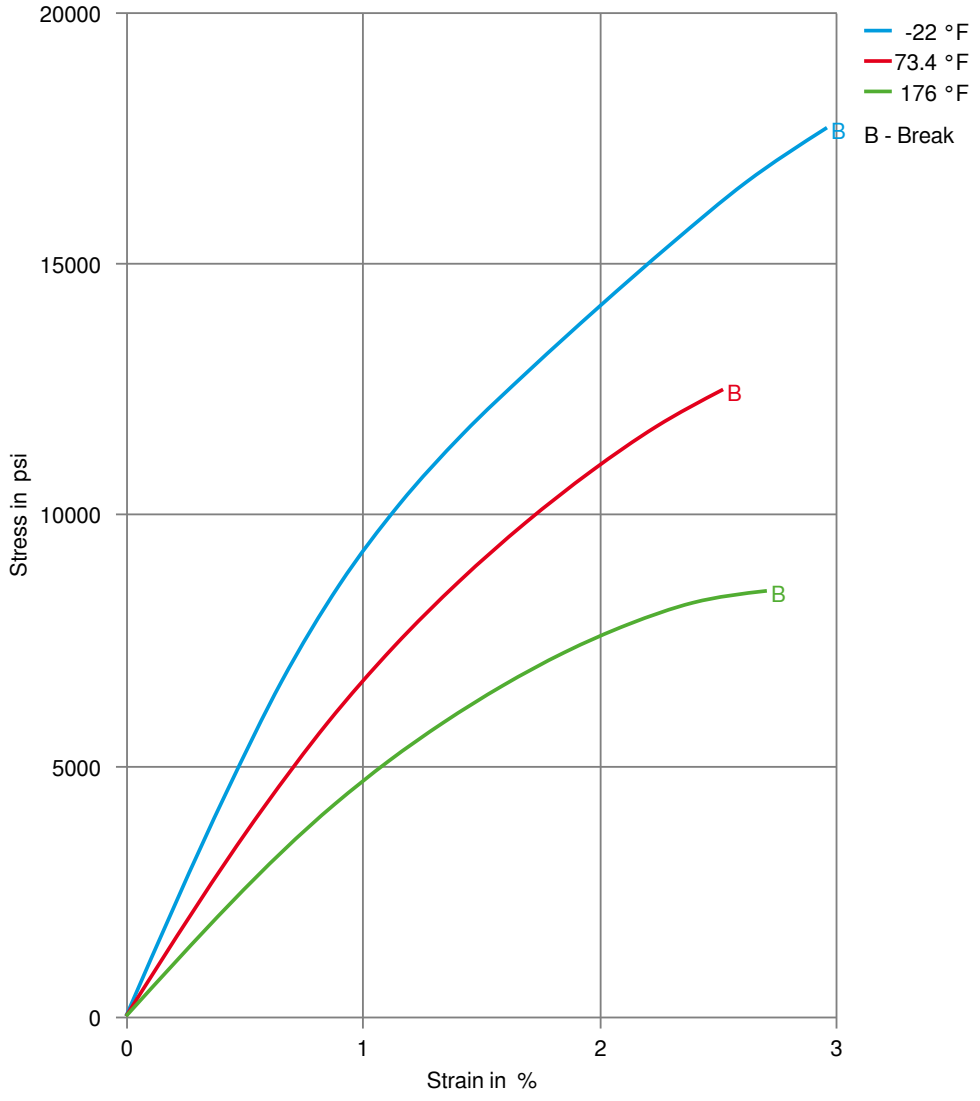
Characteristics

Processing	Injection Molding
Special characteristics	Specialty appearance, Low emissions

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Stress-strain

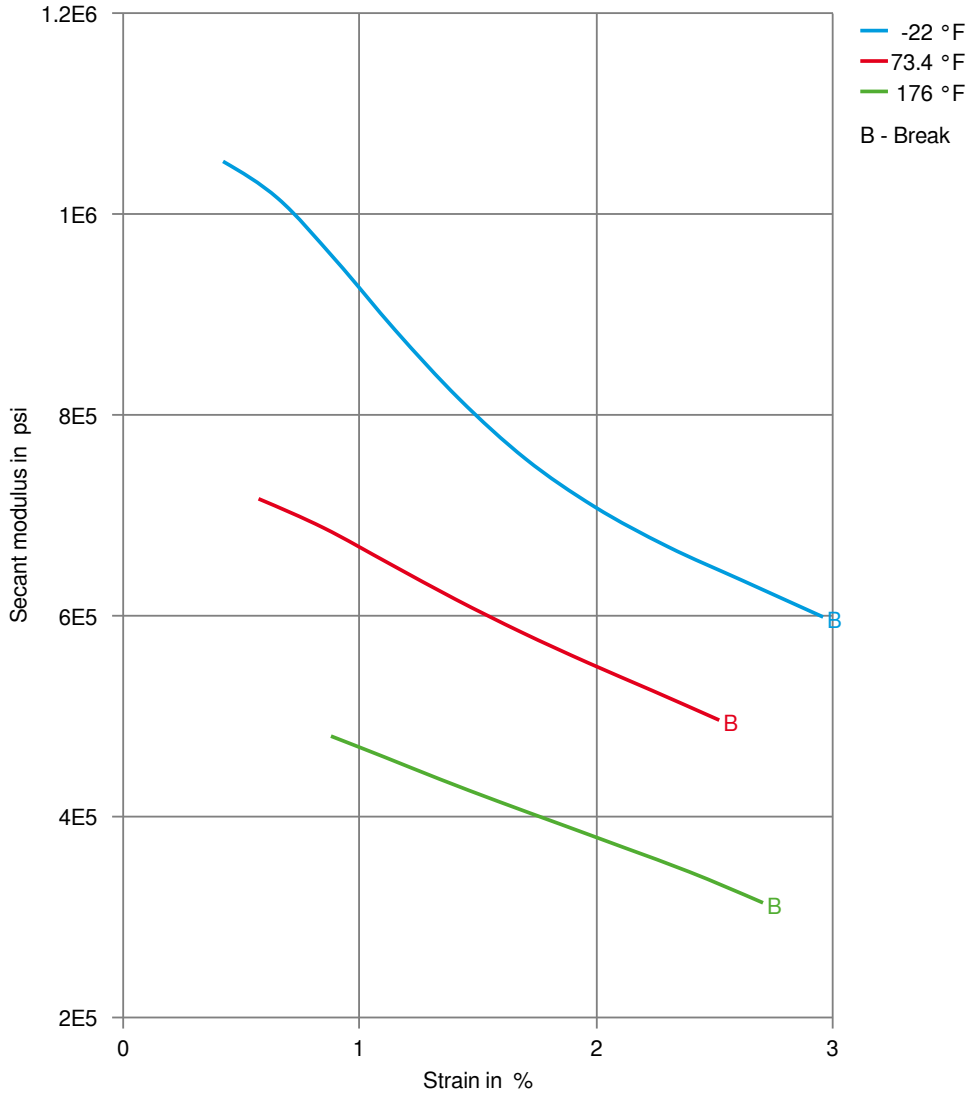


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Secant modulus-strain



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