Zytel® HTN53G60LRHF BK083

HIGH PERFORMANCE POLYAMIDE RESIN

Zytel® HTN high performance polyamide resins feature high retention of properties upon exposure to elevated temperature, to high moisture, and to harsh chemical environments. Polymer families and grades of Zytel® HTN are tailored to optimize performance as well as processability.

Typical applications with Zytel® HTN include demanding applications in the automotive, electrical and electronics, domestic appliances, and construction industries.

Zytel® HTN53G60LRHF BK083 is a 60% glass reinforced, lubricated, high performance polyamide resin with improved flow. It was developed for structural applications requiring excellent surface appearance using water-heated molds.

Product information

Resin Identification	PA-GF60	ISO 1043
Part Marking Code	>PA-GF60<	ISO 11469
Part Marking Code	>PA-GF60<	SAE J1344
ISO designation	ISO 16396-PA,GF60,M1CGHR,S10-220	

Rheological properties

	dry/cond.		
Molding shrinkage, parallel	0.1 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.5 / -	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	3.05E6 / 2.9E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	38400 / 32600	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.2 / 2.6	%	ISO 527-1/-2
Flexural modulus	2.77E6 / -	psi	ISO 178
Flexural strength	58700 / -	psi	ISO 178
Charpy impact strength, 23 °C	42.8 / -	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23 °C	7.61 / 7.14	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30 °C	8.09 / 7.14	ftlb/in²	ISO 179/1eA

Thermal properties

	dry/cond.		
Melting temperature, 10 °C/min	500 / *	°F	ISO 11357-1/-3
Glass transition temperature, 10 °C/min	185 / 113	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	473 / *	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	491 / *	°F	ISO 75-1/-2

Flammability

	dry/cond.		
Thickness tested	0.0591 / *	in	IEC 60695-11-10
UL recognition	yes / *		UL 94
FMVSS Class	B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80	in/min	ISO 3795 (FMVSS 302)

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	0.95 / *	%	Sim. to ISO 62
Water absorption, 2mm	3.4 / *	%	Sim. to ISO 62
Density	0.0621 / -	lb/in³	ISO 1183

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Injection

Drying Recommended	yes	
Drying Temperature	212	°F
Drying Time, Dehumidified Dryer	6 - 8	h
Processing Moisture Content	≤0.1	%
Melt Temperature Optimum	554	°F
Min. melt temperature	536	°F
Max. melt temperature	572	°F
Mold Temperature Optimum	212	°F
Min. mold temperature	194	°F
Max. mold temperature	230	°F
Hold Pressure Time (h is the max. wall thickness of the part in mm)	h^2+2	s
Ejection temperature	403	°F

Characteristics

Processing	Injection Molding
Additives	Release agent
Special characteristics	Heat stabilized or stable to heat, Laser Markable

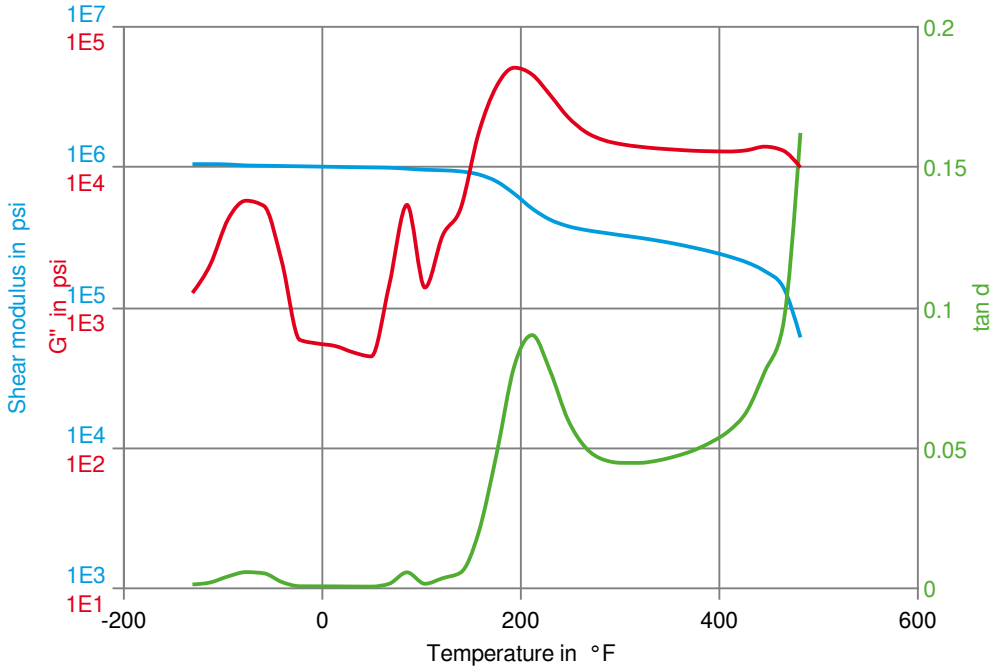
Additional information

Injection molding	During molding, use proper protective equipment and adequate ventilation. Avoid exposure to fumes and limit the hold up time and temperature of the resin in the machine. Purge degraded resin carefully with HDPE.

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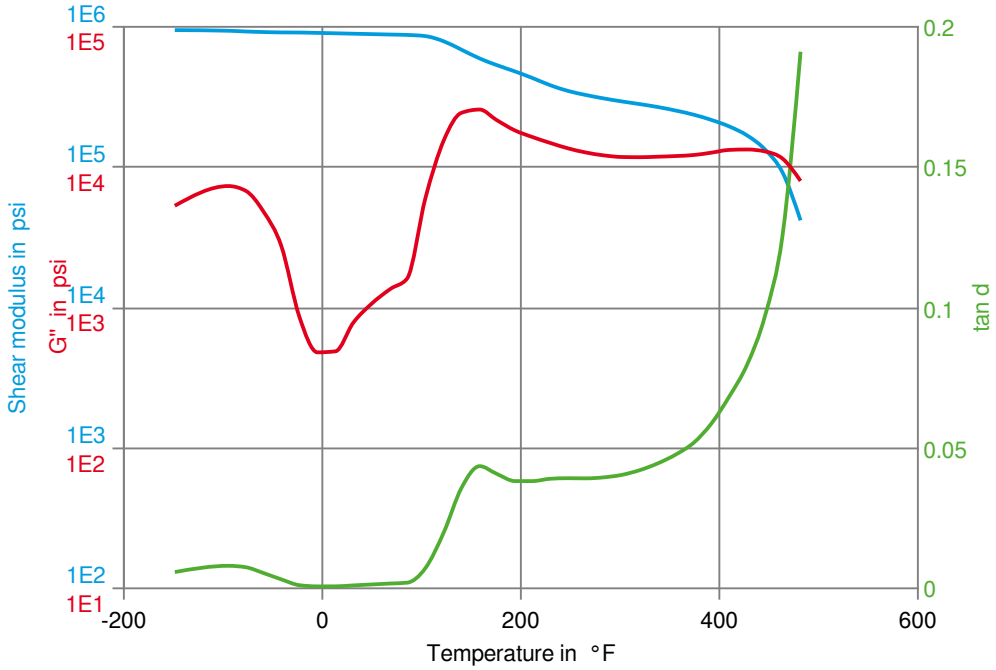
Dynamic Shear modulus-temperature (dry)



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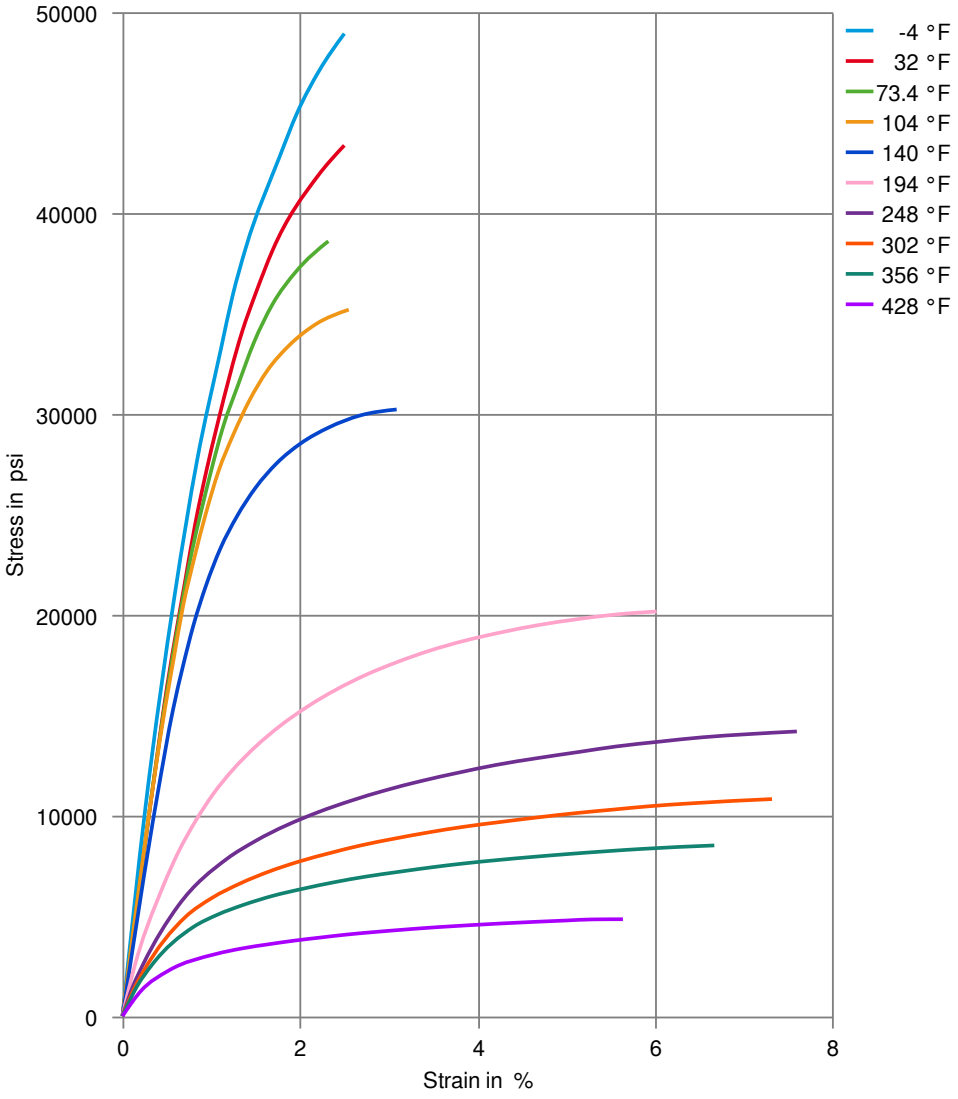
Dynamic Shear modulus-temperature (cond.)



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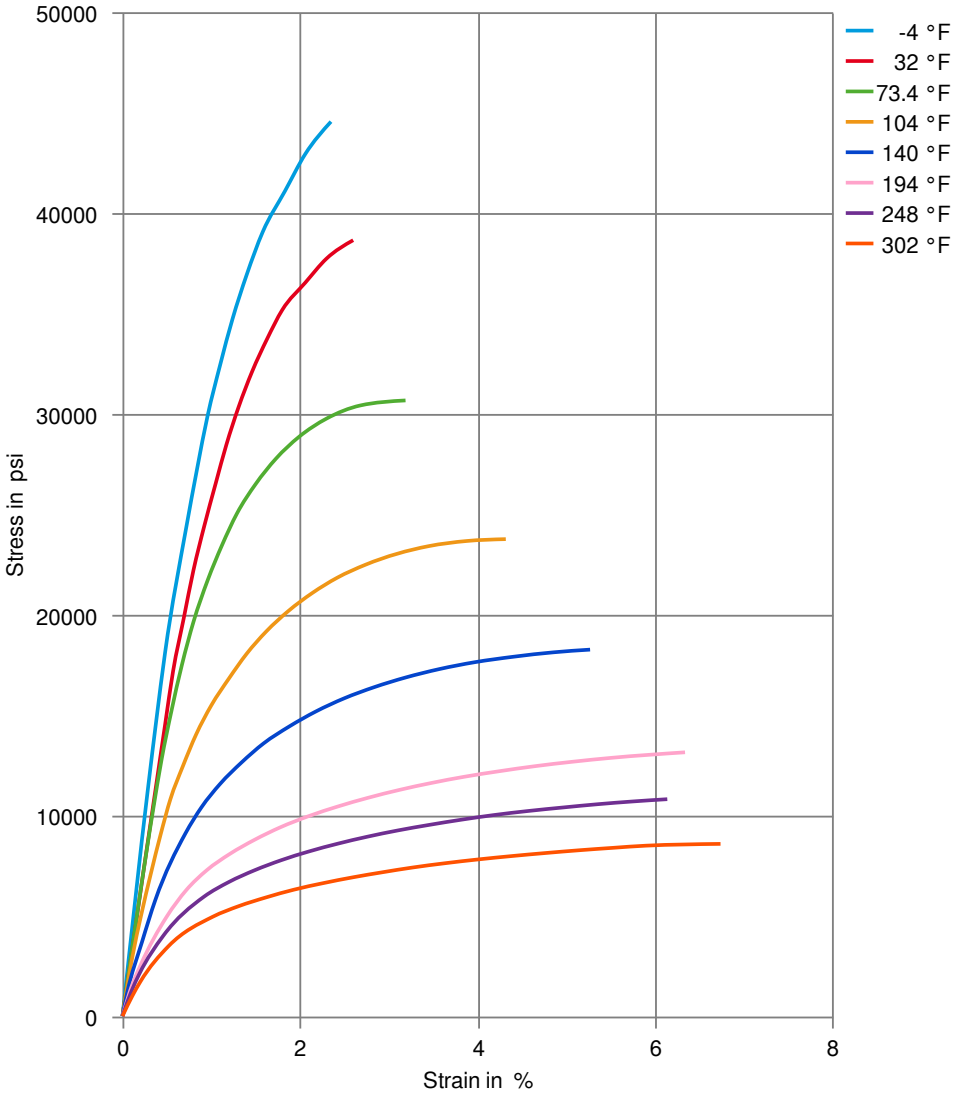
Stress-strain (dry)



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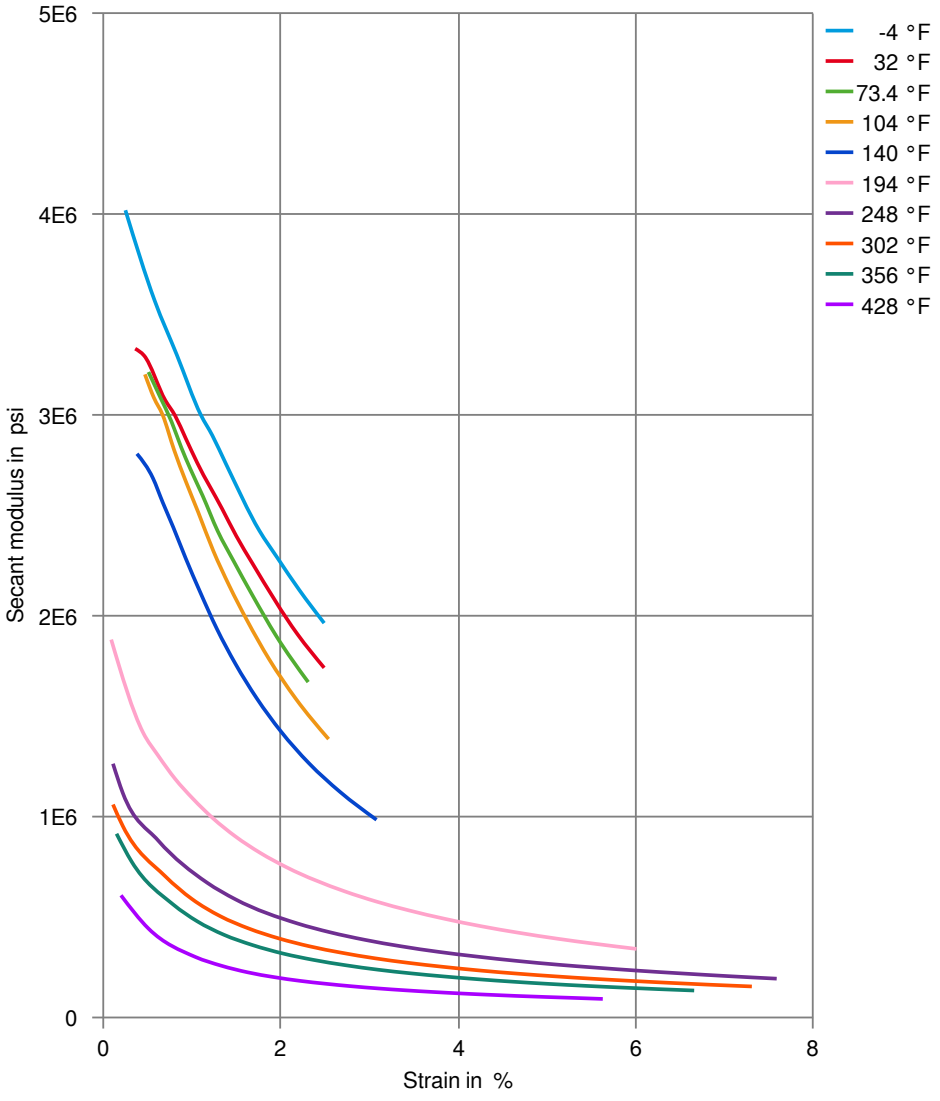
Stress-strain (cond.)



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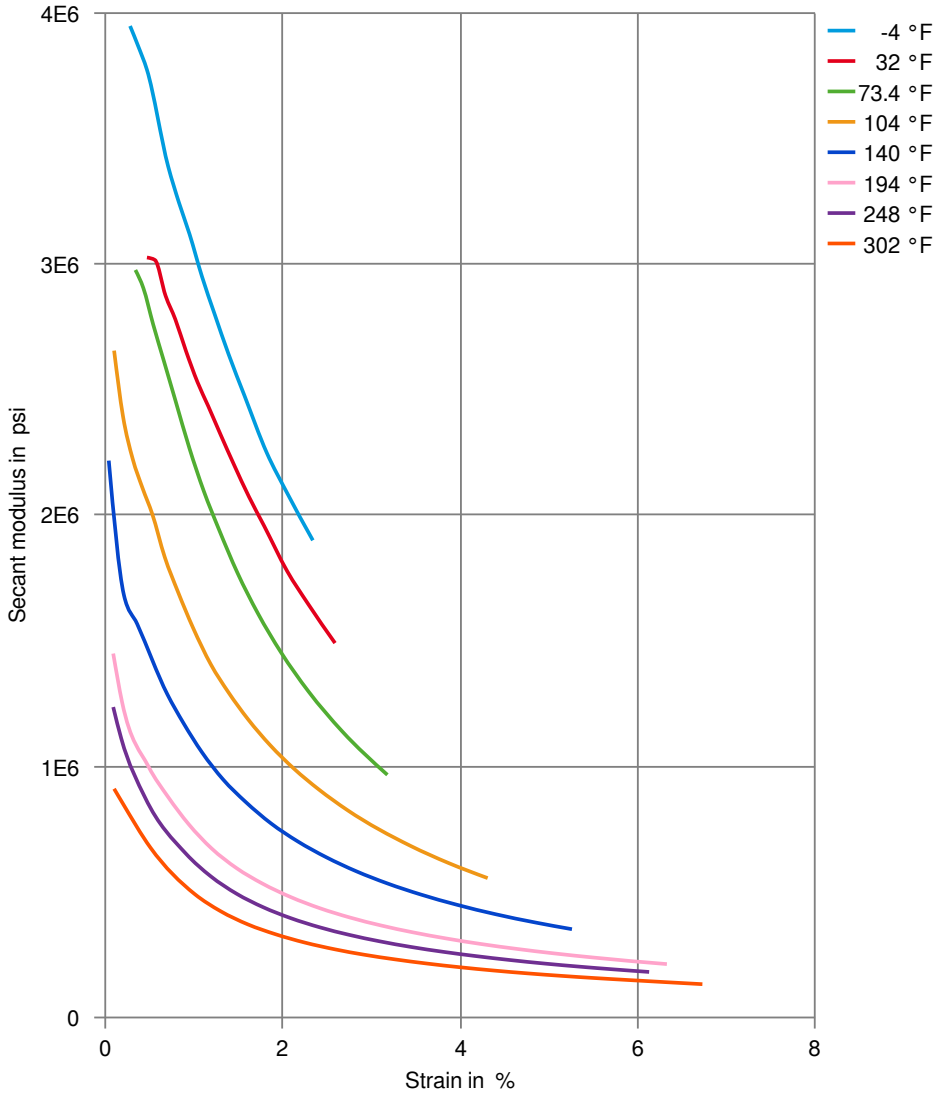
Secant modulus-strain (dry)



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Secant modulus-strain (cond.)



Revised: 2025-12-17 Source: Celanese Materials Database

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