Zytel® HTNFR52G30GWNH (PRELIMINARY)

HIGH PERFORMANCE POLYAMIDE RESIN

Zytel® HTNFR52G30GWNH is a 30% glass reinforced, flame retardant high performance polyamide resin with improved Glow Wire performance. It is also a PPA resin and it uses a non-halogenated flame retardant.

Product information

Resin Identification	PA6T/66-GF30 FR(40)	ISO 1043
Part Marking Code	>PA6T/66-GF30 FR(40)<	ISO 11469
Part Marking Code	>PPA-GF30 FR<	SAE J1344
ISO designation	ISO 16396-PA6T/66,GF30 FR(40),M1F1GN,S10-110	

Typical mechanical properties

	dry/cond.		
Tensile modulus	1.67E6 / 1.6E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	20300 / 16000	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.9 / 2.1	%	ISO 527-1/-2
Flexural modulus	1.6E6 / -	psi	ISO 178
Flexural strength	29000 / -	psi	ISO 178
Charpy impact strength, 23°C	16.6 / 14.3	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30°C	14.3 / 14.3	ftlb/in²	ISO 179/1eU
Charpy impact strength, -40°C	14.3 / 14.3	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	2.85 / 2.62	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	2.62 / 2.38	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -40°C	2.38 / 2.38	ftlb/in²	ISO 179/1eA

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	590 / *	°F	ISO 11357-1/-3
Melting temperature, first heat	590 / *	°F	ISO 11357-1/-3
Glass transition temperature, 10°C/min	194 / 113	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	529 / *	°F	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	505 / *	°F	ISO 75-1/-2
Ball pressure test	500 / -	°F	IEC 60695-10-2

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.0591 / *	in	IEC 60695-11-10
UL recognition	yes / *		UL 94
Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.0157 / *	in	IEC 60695-11-10
UL recognition	yes / *		UL 94
Glow Wire Flammability Index, 0.4mm	1760 / -	°F	IEC 60695-2-12
Glow Wire Flammability Index, 1.5mm	1760 / -	°F	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	1760 / -	°F	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.4mm	1430 / -	°F	IEC 60695-2-12
Glow Wire Ignition Temperature, 1.5mm	1560 / -	°F	IEC 60695-2-13
Glow Wire Ignition Temperature, 3.0mm	1610 / -	°F	IEC 60695-2-13

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Electrical properties

	dry/cond.		
Comparative tracking index	- / 600		IEC 60112

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.2 / *	%	Sim. to ISO 62
Water absorption, 2mm	3.7 / *	%	Sim. to ISO 62
Density	0.0527 / -	lb/in³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	212	°F
Drying Time, Dehumidified Dryer	6 - 8	h
Processing Moisture Content	≤0.1	%
Min. melt temperature	608	°F
Max. melt temperature	617	°F
Min. mold temperature	194	°F
Max. mold temperature	266	°F
Hold Pressure Time (h is the max. wall thickness of the part in mm)	h^2+2	s

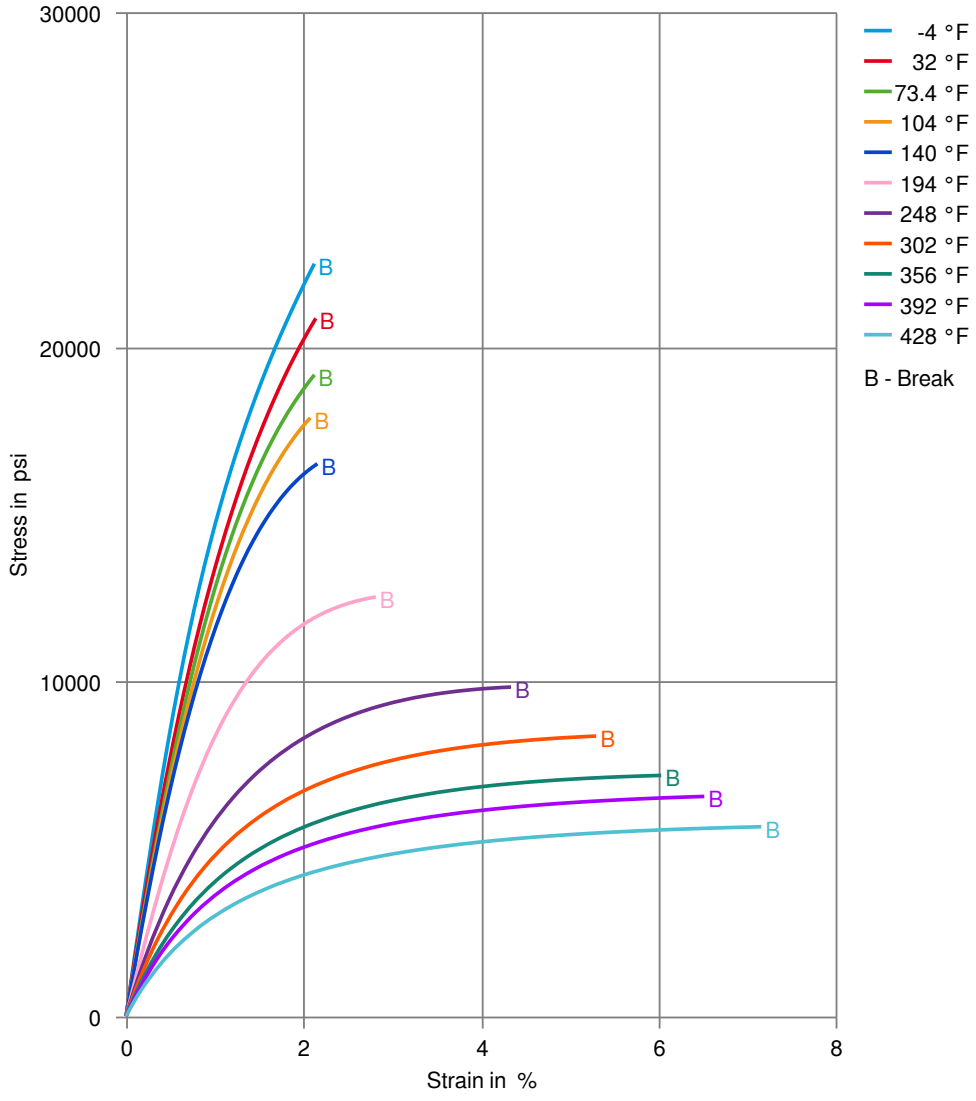
Characteristics

Processing	Injection Molding
Additives	Flame retardant, Non-halogenated/Red phosphorus free flame retardant
Special characteristics	Flame retardant, Lead-free soldering resistant

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Stress-strain (dry)

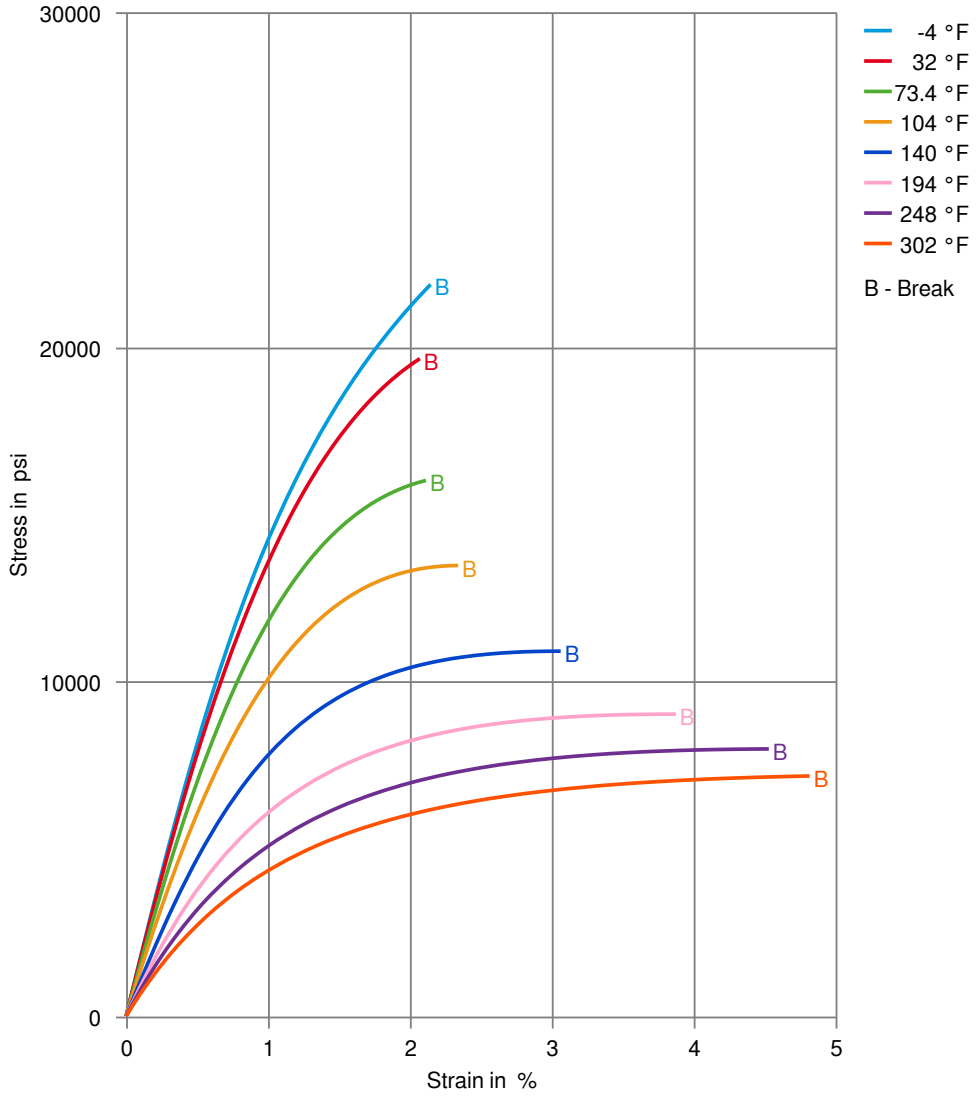


Revised: 2025-07-08 Source: Celanese Materials Database

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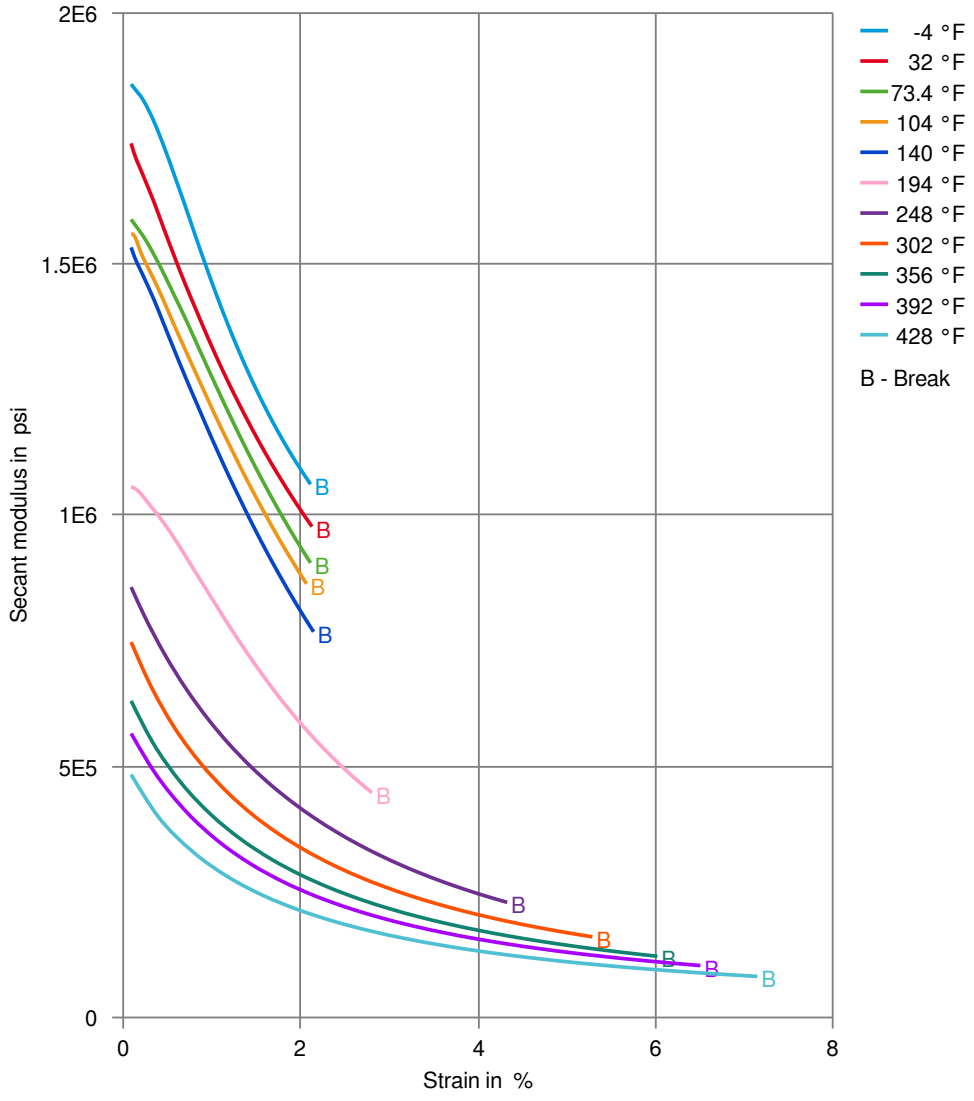
Stress-strain (cond.)



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Secant modulus-strain (dry)

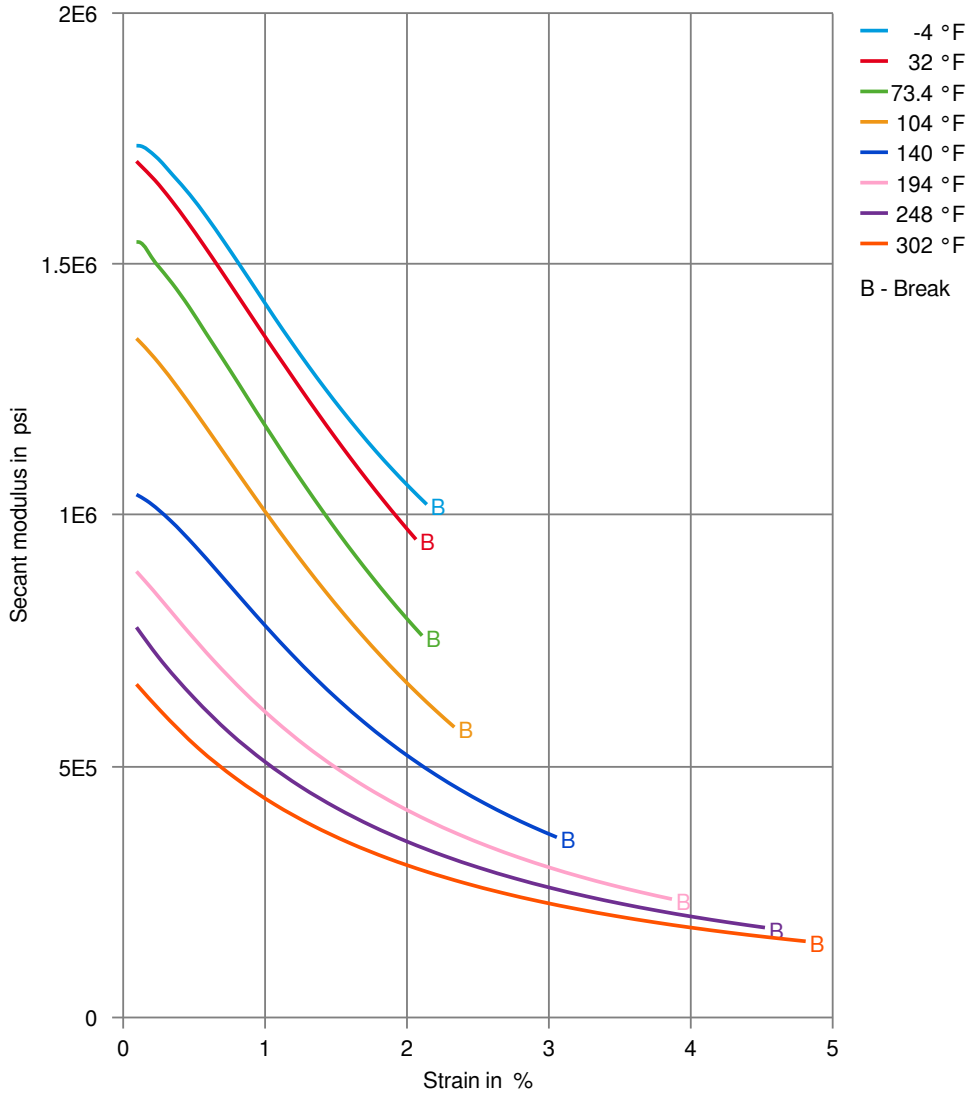


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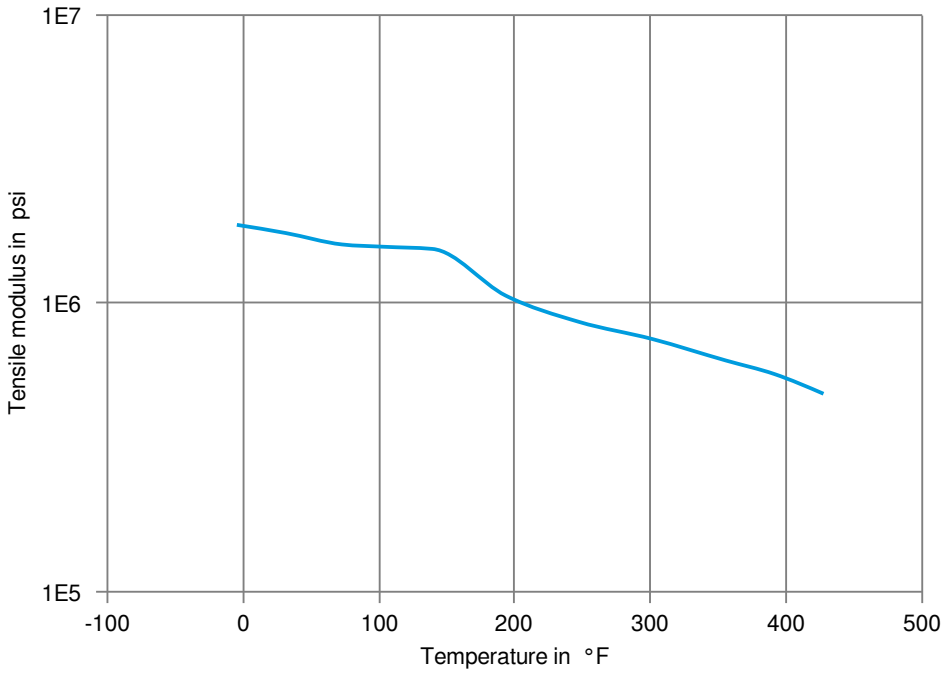
Secant modulus-strain (cond.)



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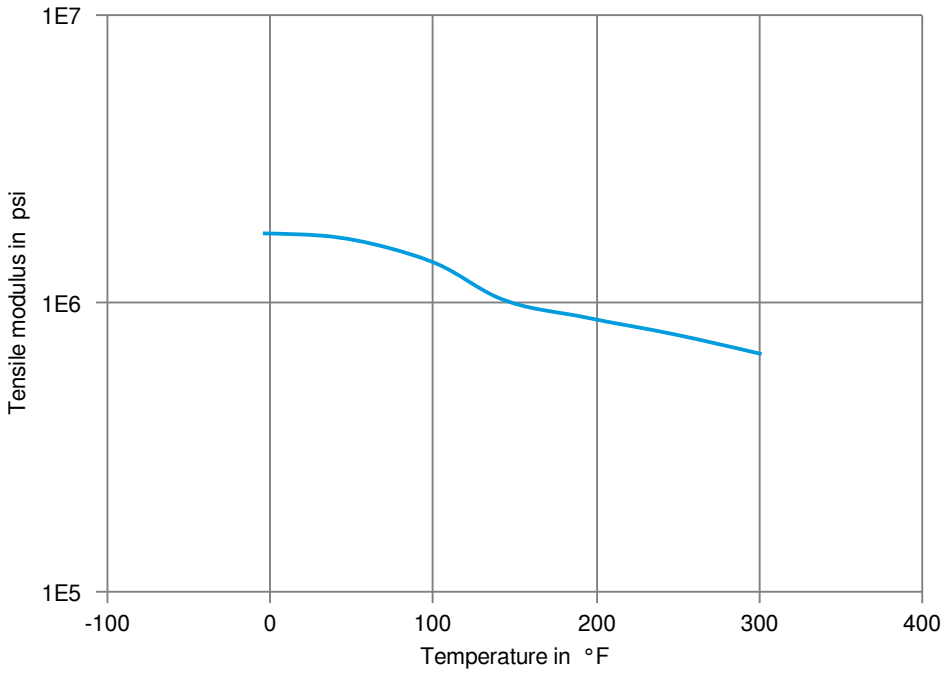
Tensile modulus-temperature (dry)



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Tensile modulus-temperature (cond.)



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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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