Zytel® HTNFR52G35NHF BK337

HIGH PERFORMANCE POLYAMIDE RESIN

Zytel® HTNFR52G35NHF BK337 is a 35% Glass Reinforced, Flame Retardant, Non-Halogenated, PPA, High Performance Polyamide with Improved Flow

Product information

Resin Identification	PA(6T/66)-GF35 FR(40)	ISO 1043
Part Marking Code	>PA(6T/66)-GF35 FR(40)<	ISO 11469
Part Marking Code	>PPA-GF35 FR<	SAE J1344
ISO designation	ISO 16396-PA6T/66,GF35 FR(40),M1CF1G,S10-120	
TGA curve	available	ISO 11358-1

Rheological properties

	dry/cond.		
Molding shrinkage, parallel	0.3 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.9 / -	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	1.86E6 / -	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	19600 / -	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.4 / -	%	ISO 527-1/-2
Flexural modulus	1.62E6 / -	psi	ISO 178
Flexural strength	29000 / -	psi	ISO 178
Charpy notched impact strength, 23 °C	3.81 / -	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30 °C	3.81 / -	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	541 / *	°F	ISO 75-1/-2
RTI, electrical, 0.75mm	284	°F	UL 746B
RTI, electrical, 1.5mm	284	°F	UL 746B
RTI, electrical, 3.0mm	284	°F	UL 746B
RTI, impact, 0.75mm	239	°F	UL 746B
RTI, impact, 1.5mm	239	°F	UL 746B
RTI, impact, 3.0mm	248	°F	UL 746B
RTI, strength, 0.75mm	257	°F	UL 746B
RTI, strength, 1.5mm	257 / *	°F	UL 746B
RTI, strength, 3.0mm	266	°F	UL 746B

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	0.0295 / *	in	IEC 60695-11-10
UL recognition	yes / *		UL 94

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Oxygen index	33 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index, 0.75mm	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, 0.75mm	1430 / -	°F	IEC 60695-2-13
Glow Wire Ignition Temperature, 1.5mm	1430 / -	°F	IEC 60695-2-13
Glow Wire Ignition Temperature, 3.0mm	1560 / -	°F	IEC 60695-2-13
FMVSS Class	B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80	in/min	ISO 3795 (FMVSS 302)

Electrical properties

	dry/cond.		
Relative permittivity, 100Hz	4.3 / -		IEC 62631-2-1
Relative permittivity, 1MHz	3.9 / -		IEC 62631-2-1
Dissipation factor, 100Hz	50 / -	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	110 / -	E-4	IEC 62631-2-1
Electric strength	787 / -	kV/in	IEC 60243-1
Comparative tracking index	600 / -		IEC 60112
Comparative tracking index, 23 °C	0 / -	PLC	UL 746A
Dielectric Constant, 1 GHz	3.9 / -		ASTM D 2520 B
Dielectric Constant, 23 °C, 10 GHz	3.9 / -		ASTM D 2520 B / IPC-TM-650
Dissipation Factor, 1 GHz	110 / -	E-4	ASTM D 2520 B
Dissipation Factor, 23 °C, 10 GHz	104 / -	E-4	ASTM D 2520 B / IPC-TM-650

Physical/Other properties

	dry/cond.		
Density	0.0538 / -	lb/in³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	212	°F
Drying Time, Dehumidified Dryer	6 - 8	h
Processing Moisture Content	≤0.1	%
Melt Temperature Optimum	613	°F
Min. melt temperature	608	°F
Max. melt temperature	617	°F
Mold Temperature Optimum	230	°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
Ejection temperature	498	°F

Characteristics

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

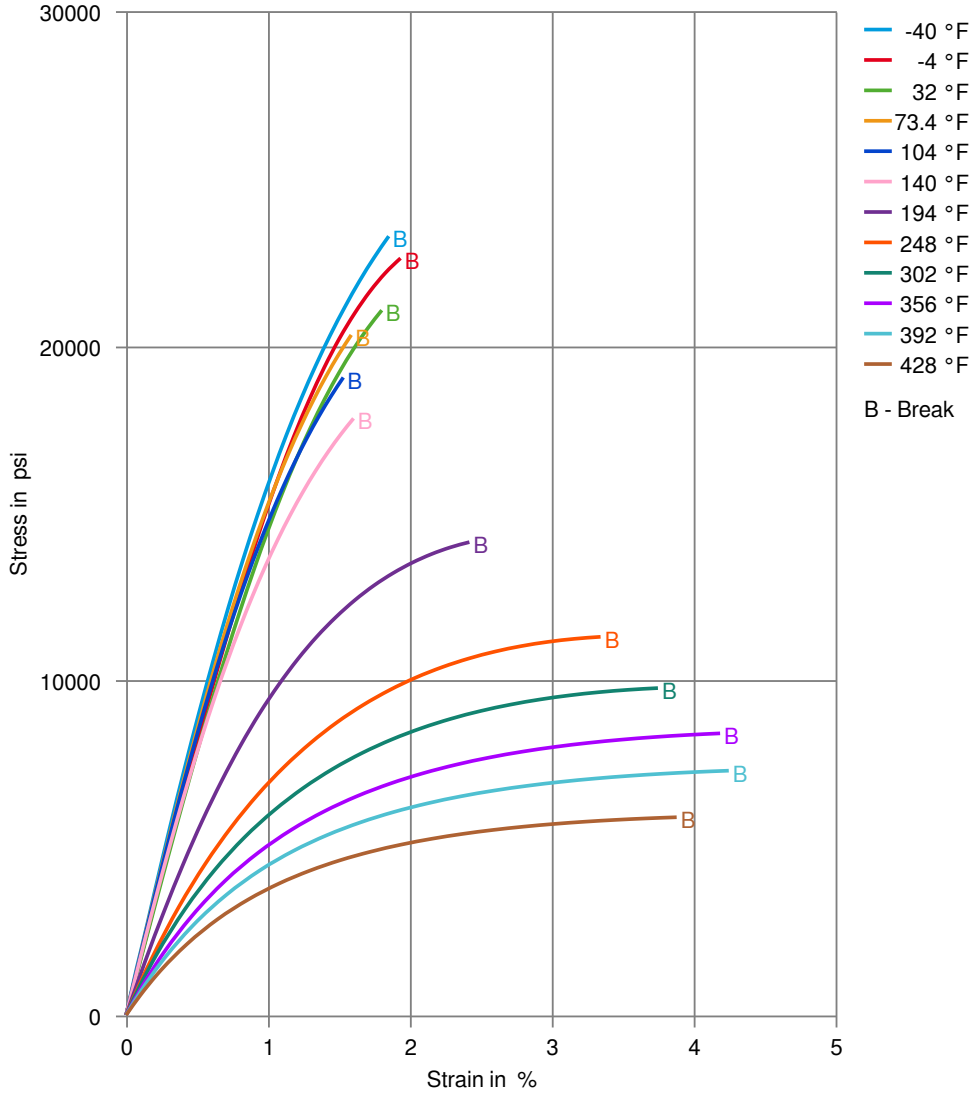
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Additional information

Injection molding	For molding machine components, use corrosion resistant and wear resistant steel. For details please contact our representative. Limit the residence time of the resin in the machine. Use proper protective equipment and adequate ventilation.

Stress-strain (dry)

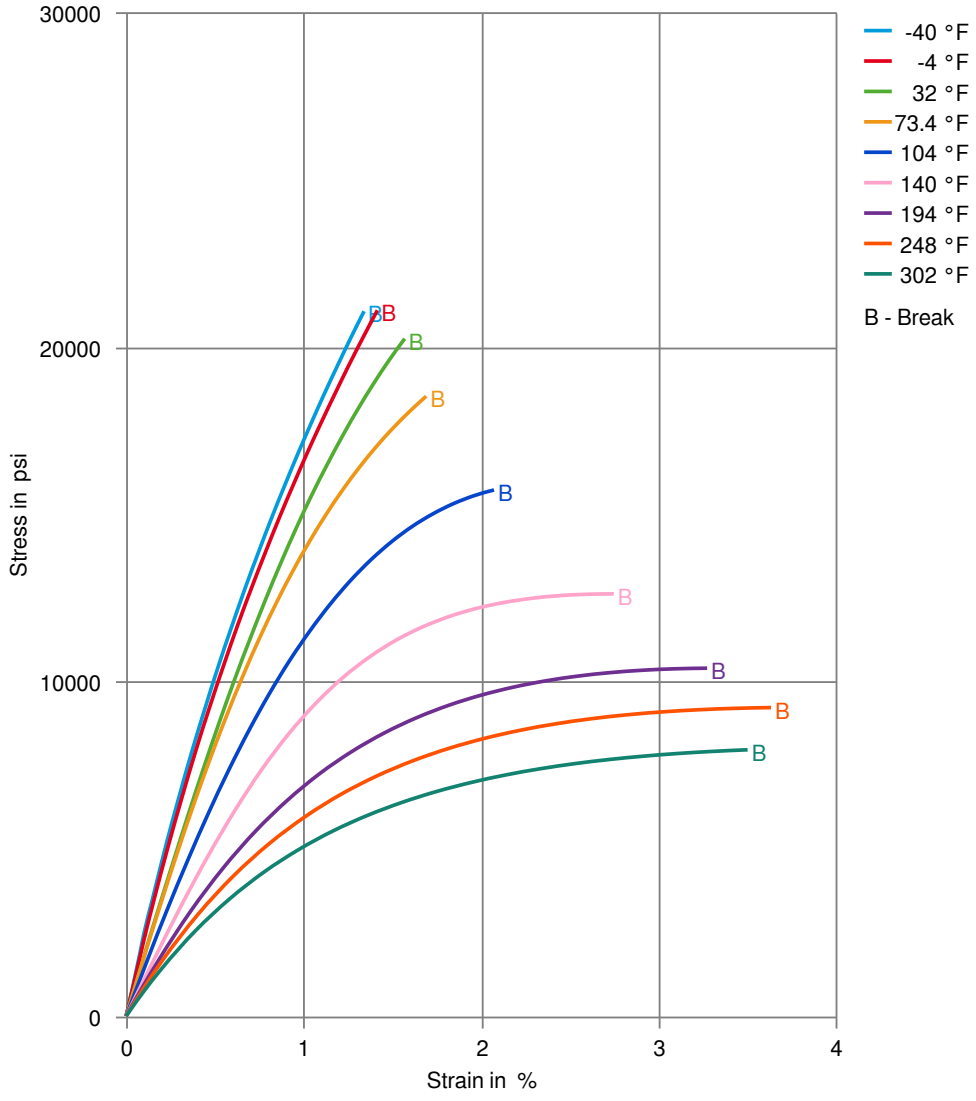


Revised: 2025-08-04 Source: Celanese Materials Database

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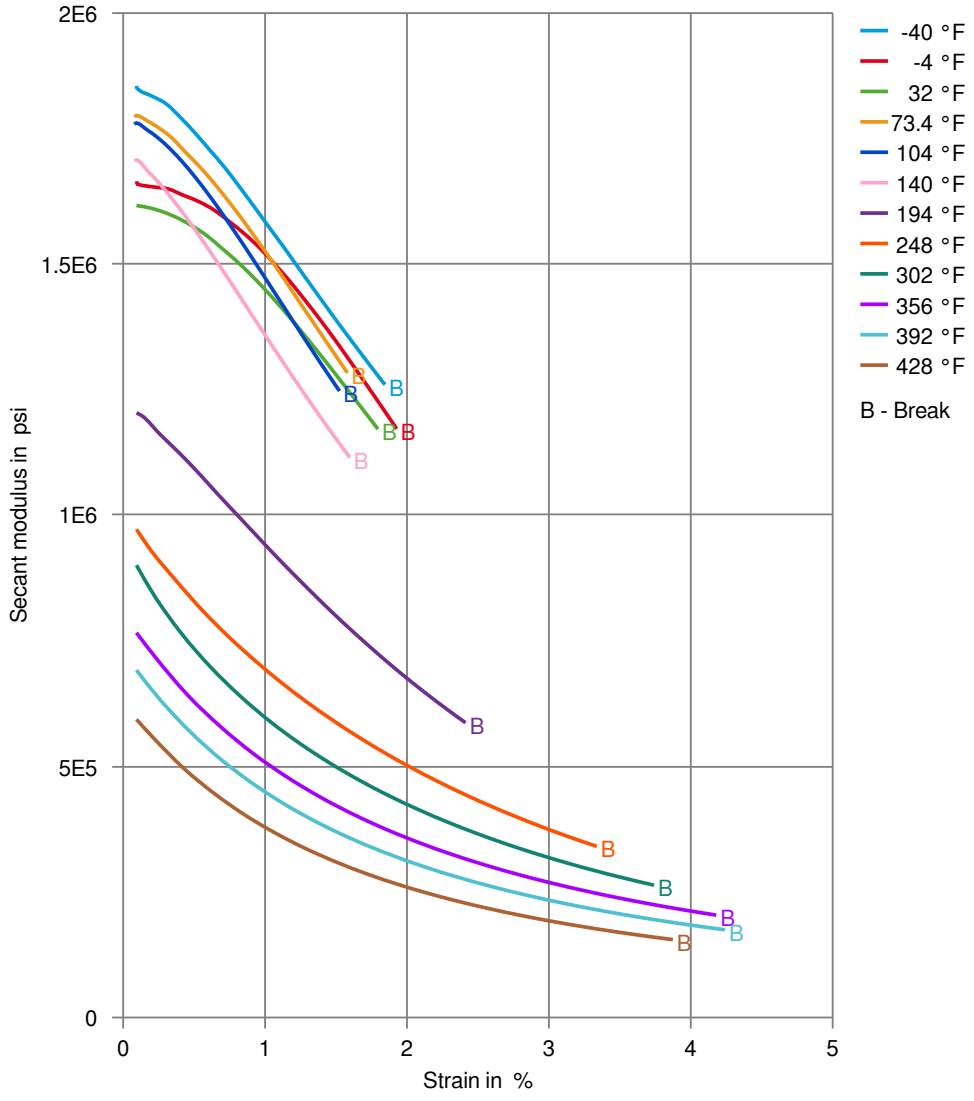
Stress-strain (cond.)



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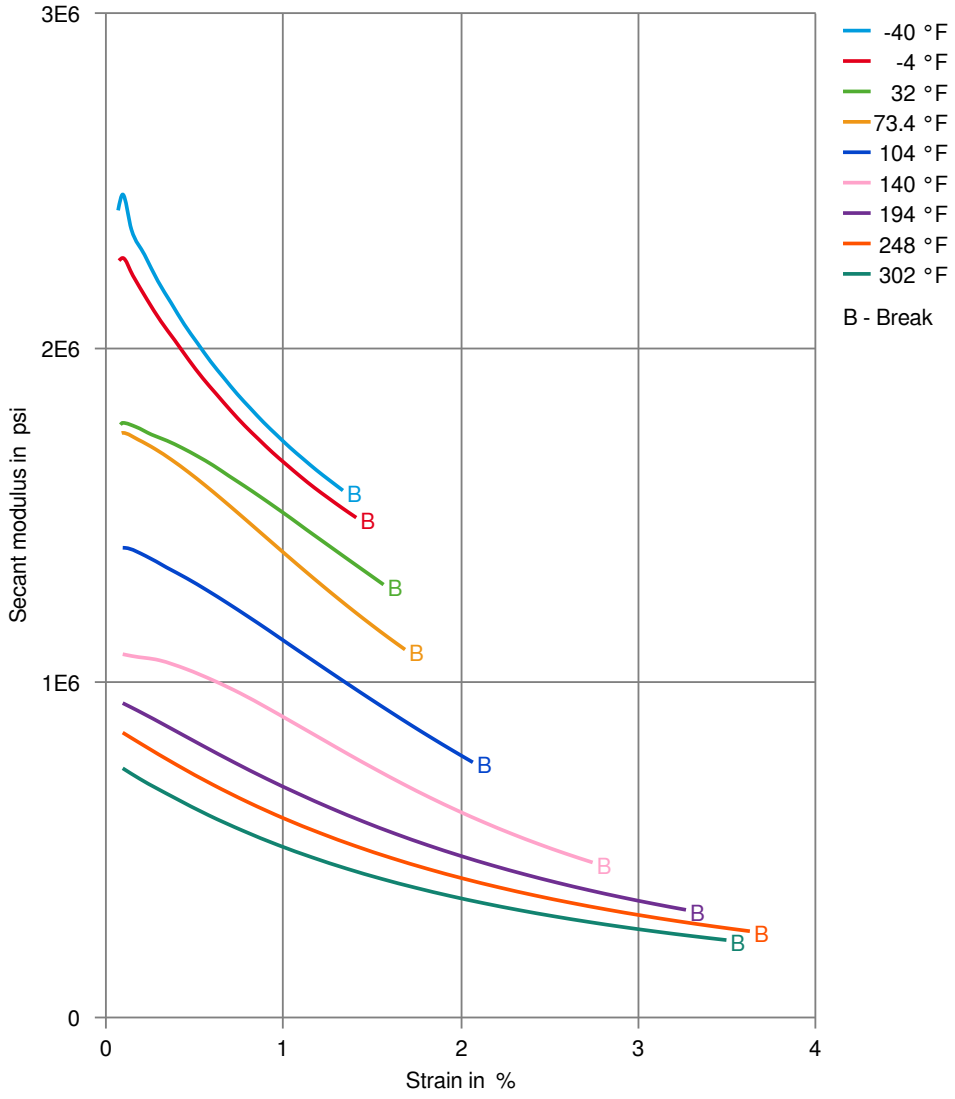
Secant modulus-strain (dry)



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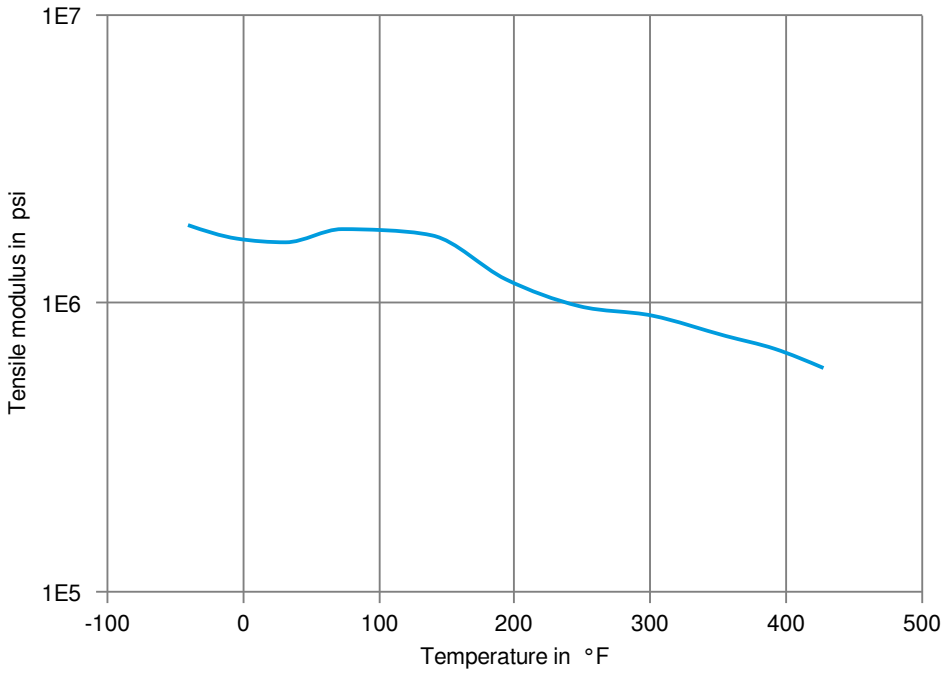
Secant modulus-strain (cond.)



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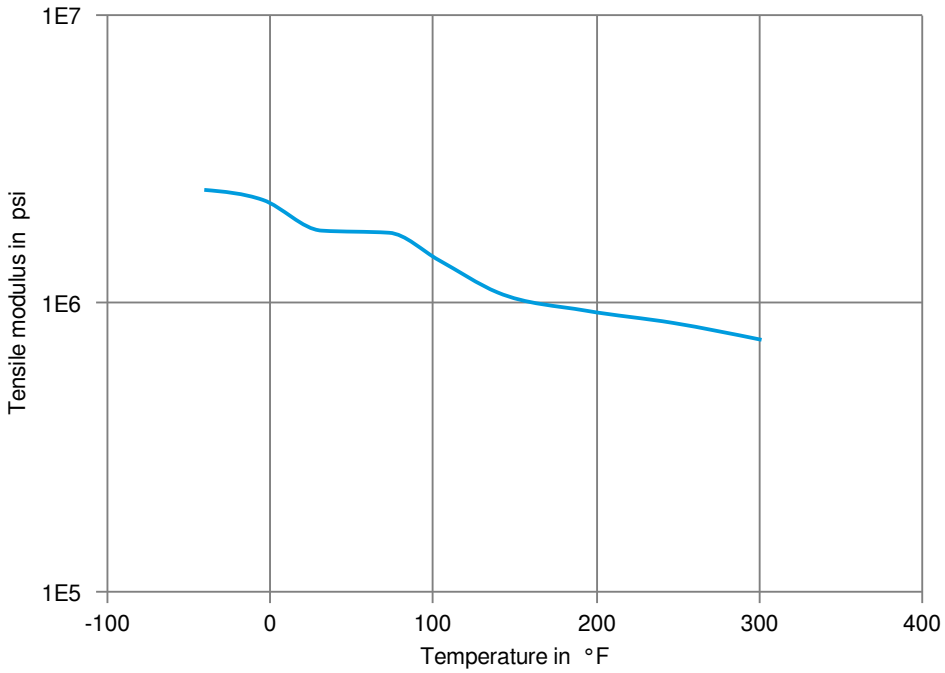
Tensile modulus-temperature (dry)



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Tensile modulus-temperature (cond.)



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