Zytel® HTNFE170016 BK337

HIGH PERFORMANCE POLYAMIDE RESIN

Zytel® HTNFE170016 BK337 is a glass reinforced, flame retardant, high performance polyamide with low warpage characteristics. It is also a PPA resin and uses a non-halogenated flame retardant.

Product information

Resin Identification	PA-GF54 FR(40)	ISO 1043
Part Marking Code	>PA-GF54 FR(40)<	ISO 11469
ISO designation	ISO 16396-PA,GF54 FR(40),M1CF1G,S10-190	

Rheological properties

	dry/cond.		
Molding shrinkage, parallel	0 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.1 / -	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	2.83E6 / 2.83E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	31200 / 27600	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.7 / 1.5	%	ISO 527-1/-2
Flexural modulus	2.76E6 / 2.76E6	psi	ISO 178
Flexural strength	46400 / 40600	psi	ISO 178
Charpy impact strength, 23°C	26.2 / 21.4	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30°C	23.8 / 19	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	6.18 / 6.66	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	7.14 / 6.66	ftlb/in²	ISO 179/1eA

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	536 / *	°F	ISO 11357-1/-3
Melting temperature, first heat	545 / *	°F	ISO 11357-1/-3
Glass transition temperature, 10°C/min	273 / -	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	441 / *	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), Parallel, 23-55°C(73-130°F)	0.0767 / -	E-4/°F	ASTM E 831
Coefficient of linear thermal expansion (CLTE), parallel, -40-23°C	0.065 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), parallel, 55-160°C	0.0778 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), Normal,23-55°C (73-130°F)	0.192 / -	E-4/°F	ASTM E 831
Coefficient of linear thermal expansion (CLTE), normal, -40-23°C	0.128 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal, 55-160°C	0.321 / *	E-4/°F	ISO 11359-1/-2
RTI, electrical, 0.4mm	185	°F	UL 746B
RTI, electrical, 0.75mm	185	°F	UL 746B
RTI, electrical, 1.5mm	185	°F	UL 746B

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RTI, electrical, 3.0mm	185	°F	UL 746B
RTI, impact, 0.4mm	185	°F	UL 746B
RTI, impact, 0.75mm	185	°F	UL 746B
RTI, impact, 1.5mm	185	°F	UL 746B
RTI, impact, 3.0mm	185	°F	UL 746B
RTI, strength, 0.4mm	185	°F	UL 746B
RTI, strength, 0.75mm	185	°F	UL 746B
RTI, strength, 1.5mm	185 / *	°F	UL 746B
RTI, strength, 3.0mm	185	°F	UL 746B

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	V-0 / *	class	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

Electrical properties

	dry/cond.		
Volume resistivity	>1E13 / -	Ohm.m	IEC 62631-3-1
Electric strength	864 / -	kV/in	IEC 60243-1
Comparative tracking index	600 / -		IEC 60112

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.3 / *	%	Sim. to ISO 62
Water absorption, Immersion 24h	0.18[1] / *	%	Sim. to ISO 62
Density	0.0603 / -	lb/in³	ISO 1183

[1]: 2mm thickness

Injection

Drying Recommended	yes	
Drying Temperature	212	°F
Drying Time, Dehumidified Dryer	6 - 8	h
Processing Moisture Content	≤0.1	%
Melt Temperature Optimum	586	°F
Min. melt temperature	572	°F
Max. melt temperature	599	°F
Mold Temperature Optimum	239	°F
Min. mold temperature	212	°F
Max. mold temperature	266	°F
Hold Pressure Time (h is the max. wall thickness of the part in mm)	h²+2	s
Ejection temperature	401	°F

Characteristics

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

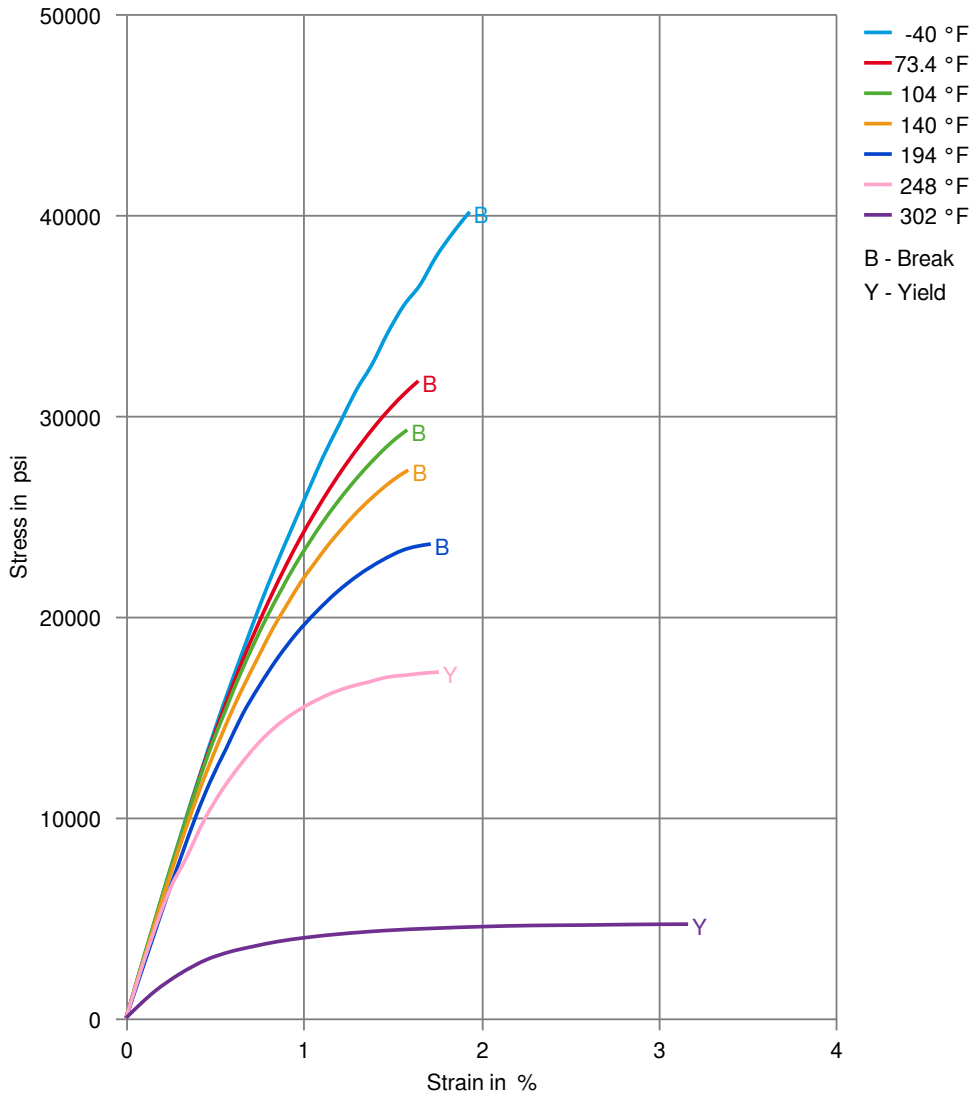
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Additional information

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.

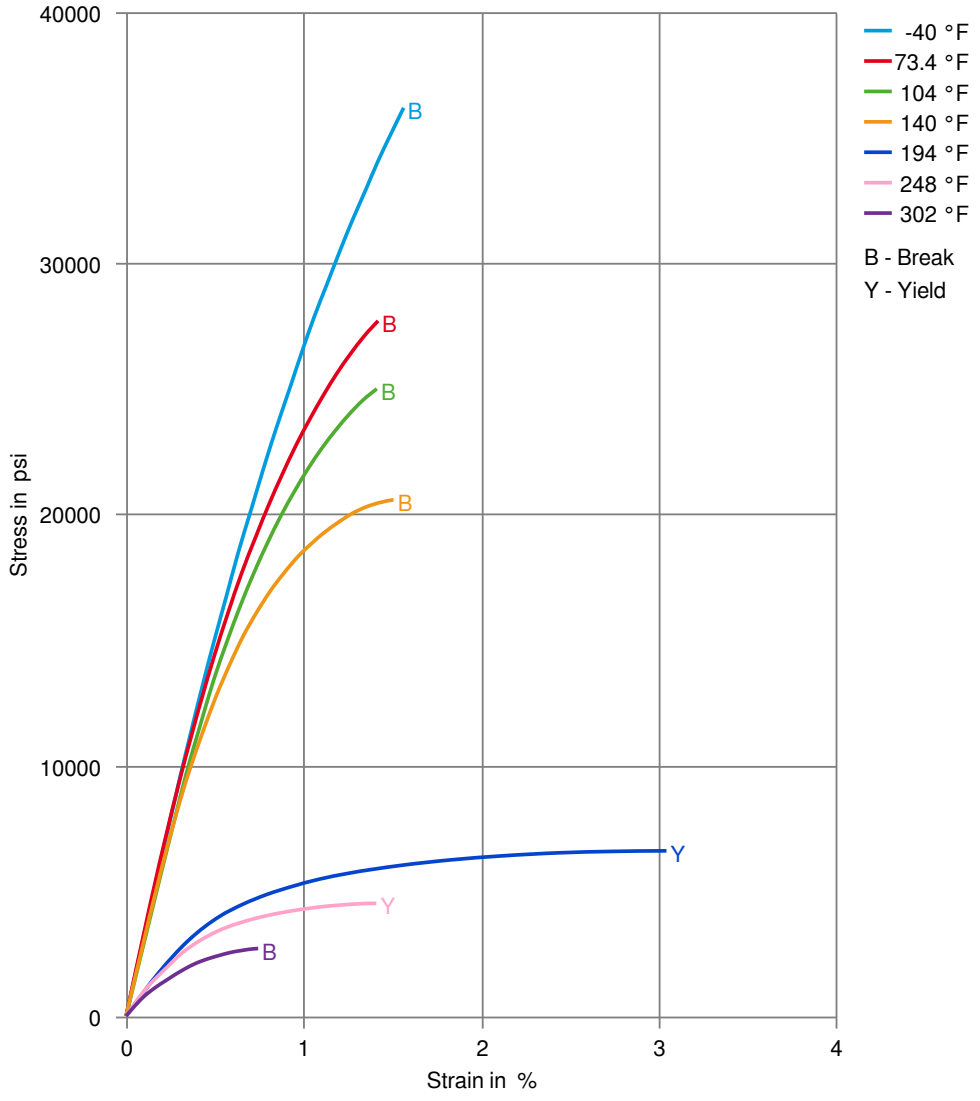
Stress-strain (dry)



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Stress-strain (cond.)

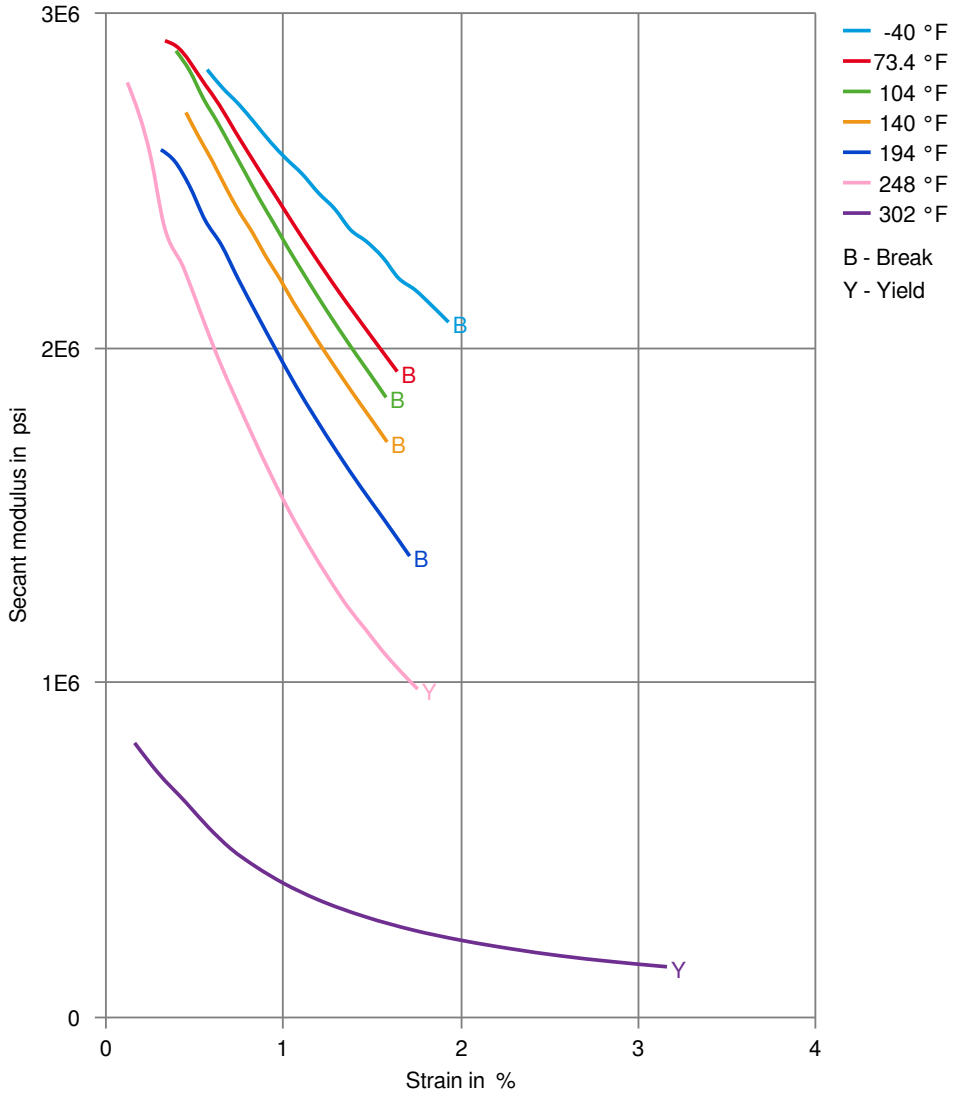


Revised: 2026-06-18 Source: Celanese Materials Database

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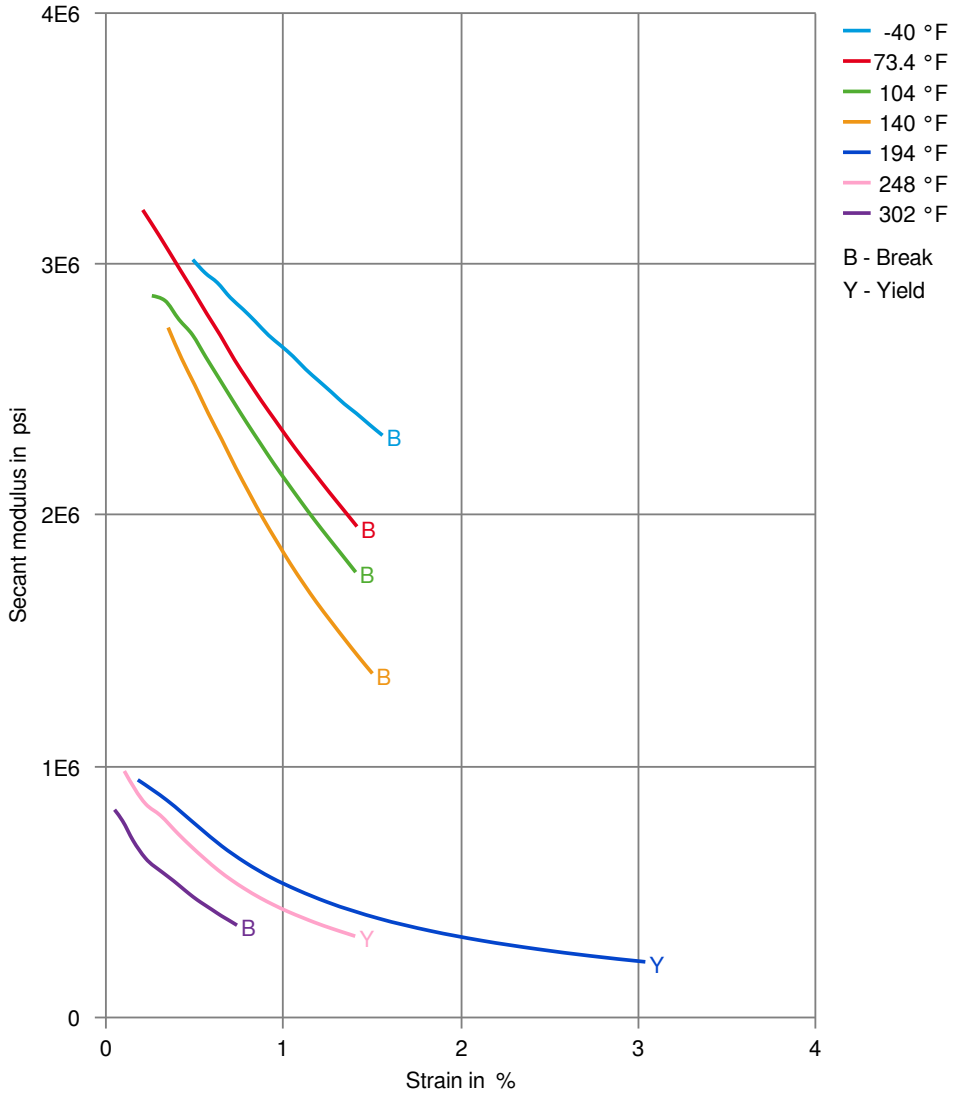
Secant modulus-strain (dry)



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Secant modulus-strain (cond.)



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