Zytel® HTNFR52G30NH BK337

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® HTNFR52G30NH BK337 is a 30% glass reinforced, flame retardant high performance polyamide resin. 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),M1CF1GR,S10-100	
TGA curve	available	ISO 11358-1

Rheological properties

	dry/cond.		
Molding shrinkage, parallel	0.3 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1 / -	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	1.52E6 / 1.52E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	21800 / 18100	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.2 / 2	%	ISO 527-1/-2
Flexural modulus	1.45E6 / 1.45E6	psi	ISO 178
Flexural strength	33400 / 29000	psi	ISO 178
Charpy impact strength, 23°C	21.4 / 19	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30°C	19 / 16.6	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	3.81 / 3.33	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	3.33 / 3.33	ftlb/in²	ISO 179/1eA
Hardness, Rockwell, M-scale	95 / -		ISO 2039-2
Hardness, Rockwell, R-scale	120 / -		ISO 2039-2

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
Ball pressure test	554 / -	°F	IEC 60695-10-2
Coefficient of linear thermal expansion (CLTE), parallel	0.11 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), parallel, -40-23°C	0.111 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), parallel, 55-160°C	0.1 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.306 / *	E-4/°F	ISO 11359-1/-2

Zytel® HTNFR52G30NH BK337

HIGH PERFORMANCE POLYAMIDE RESIN

Coefficient of linear thermal expansion (CLTE), normal, -40-23°C	0.3 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal, 55-160°C	0.506 / *	E-4/°F	ISO 11359-1/-2
RTI, electrical, 0.4mm	284	°F	UL 746B
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	0.0157 / *	in	IEC 60695-11-10
UL recognition	yes / *		UL 94
Oxygen index	37 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index, 0.75mm	1760 / -	°F	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	1760 / -	°F	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.75mm	1340 / -	°F	IEC 60695-2-13
Glow Wire Ignition Temperature, 0.4mm	1290 / -	°F	IEC 60695-2-12
Glow Wire Ignition Temperature, 3.0mm	1430 / -	°F	IEC 60695-2-13
FMVSS Class	DNI		ISO 3795 (FMVSS 302)
Railway classification	R23 / -		EN 45545-2
Railway classification rating	HL2 / -		EN 45545-2

Electrical properties

	dry/cond.		
Relative permittivity, 100Hz	4.3 / -		IEC 62631-2-1
Relative permittivity, 1MHz	4 / -		IEC 62631-2-1
Dissipation factor, 100Hz	70 / -	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	130 / -	E-4	IEC 62631-2-1
Volume resistivity	>1E13 / -	Ohm.m	IEC 62631-3-1
Surface resistivity	* / >1E15	Ohm	IEC 62631-3-2
Electric strength	838 / -	kV/in	IEC 60243-1
Comparative tracking index	600 / -		IEC 60112
Comparative tracking index, 23°C	0 / -	PLC	UL 746A
Electric Strength, Short Time, 2mm	660 / -	V/mil	IEC 60243-1
Dielectric Constant, 1 GHz	3.7 / -		ASTM D 2520 B
Dielectric Constant, 23°C, 10 GHz	3.8 / -		ASTM D 2520 B / IPC-TM-650
Dissipation Factor, 1 GHz	120 / -	E-4	ASTM D 2520 B
Dissipation Factor, 23°C, 10 GHz	100 / -	E-4	ASTM D 2520 B / IPC-TM-650

Zytel® HTNFR52G30NH BK337

HIGH PERFORMANCE POLYAMIDE RESIN

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.6 / *	%	Sim. to ISO 62
Water absorption, 2mm	3.9 / *	%	Sim. to ISO 62
Density	0.052 / -	lb/in³	ISO 1183

Emissions

Emission of organic compounds	10	µgC/g	VDA 277
Odor test	3.5	class	VDA 270

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)	h²+2	s

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
Renault-Nissan	UB21c, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	UB25c, No Spec, Special Part Approval, See Your CE Account Manager.	
Stellantis	B62 0300 / 61/223E-219M/C4	01378_19_02660

Characteristics

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

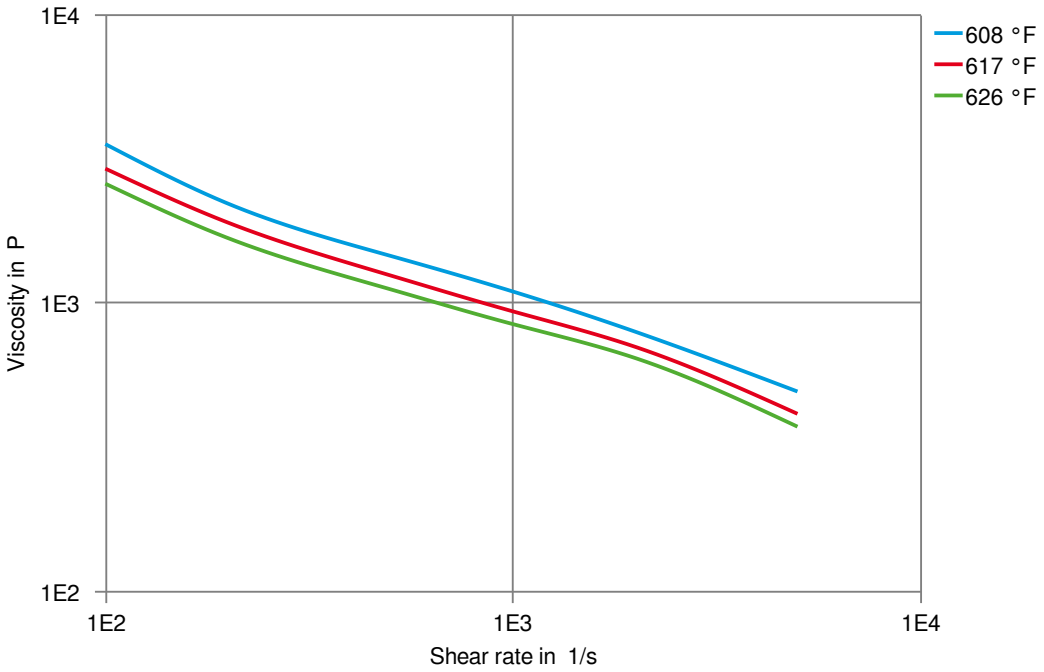
Additional information

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.

Zytel® HTNFR52G30NH BK337

HIGH PERFORMANCE POLYAMIDE RESIN

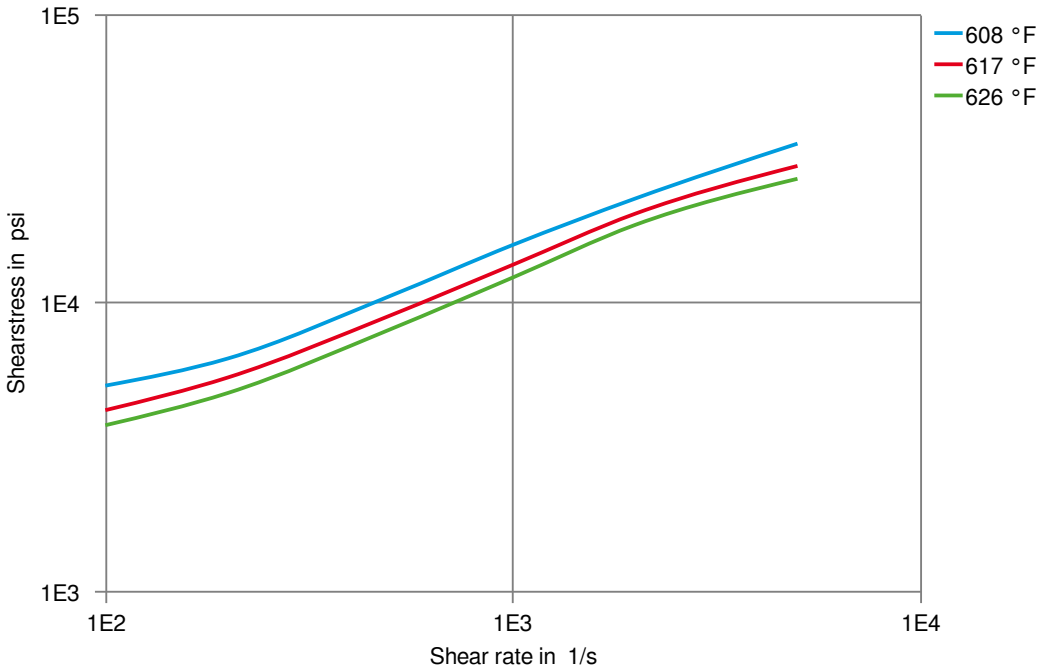
Viscosity-shear rate



Zytel® HTNFR52G30NH BK337

HIGH PERFORMANCE POLYAMIDE RESIN

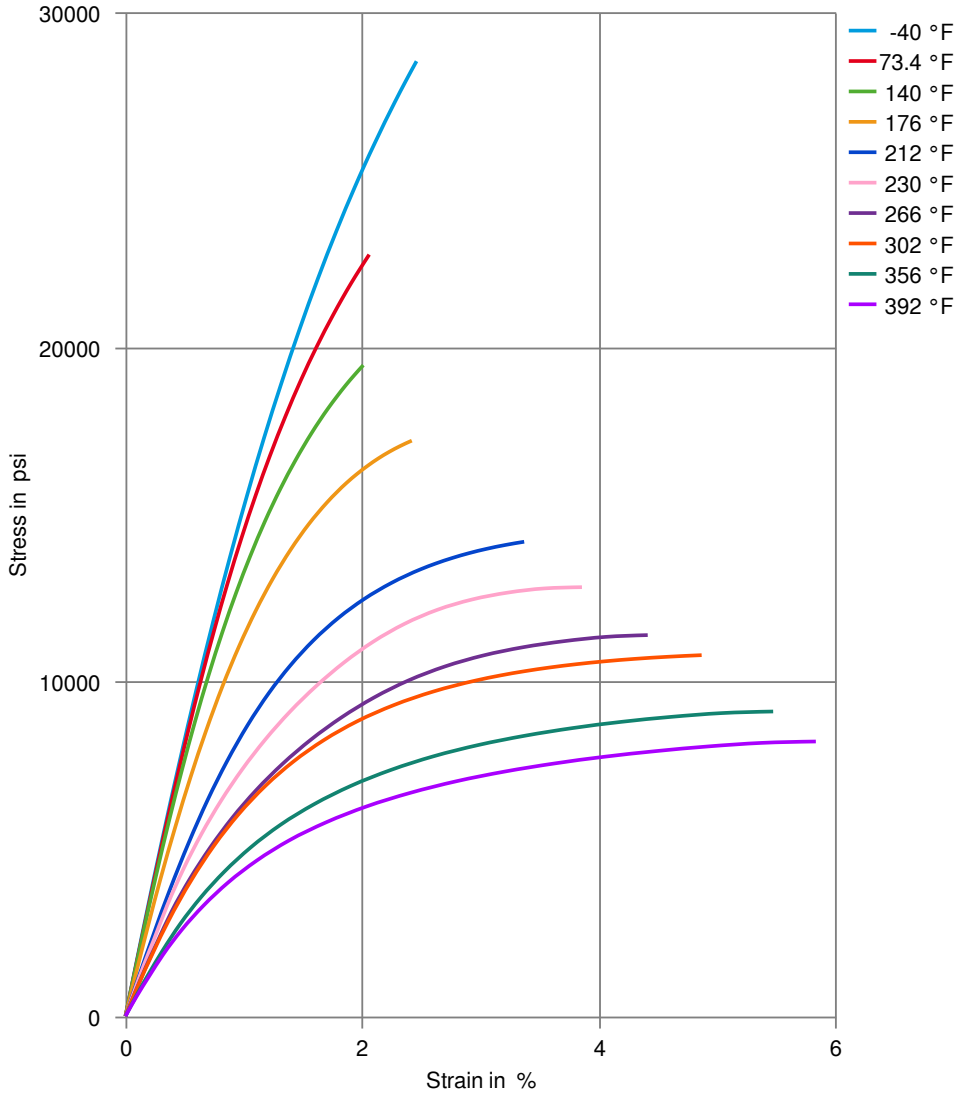
Shearstress-shear rate



Zytel® HTNFR52G30NH BK337

HIGH PERFORMANCE POLYAMIDE RESIN

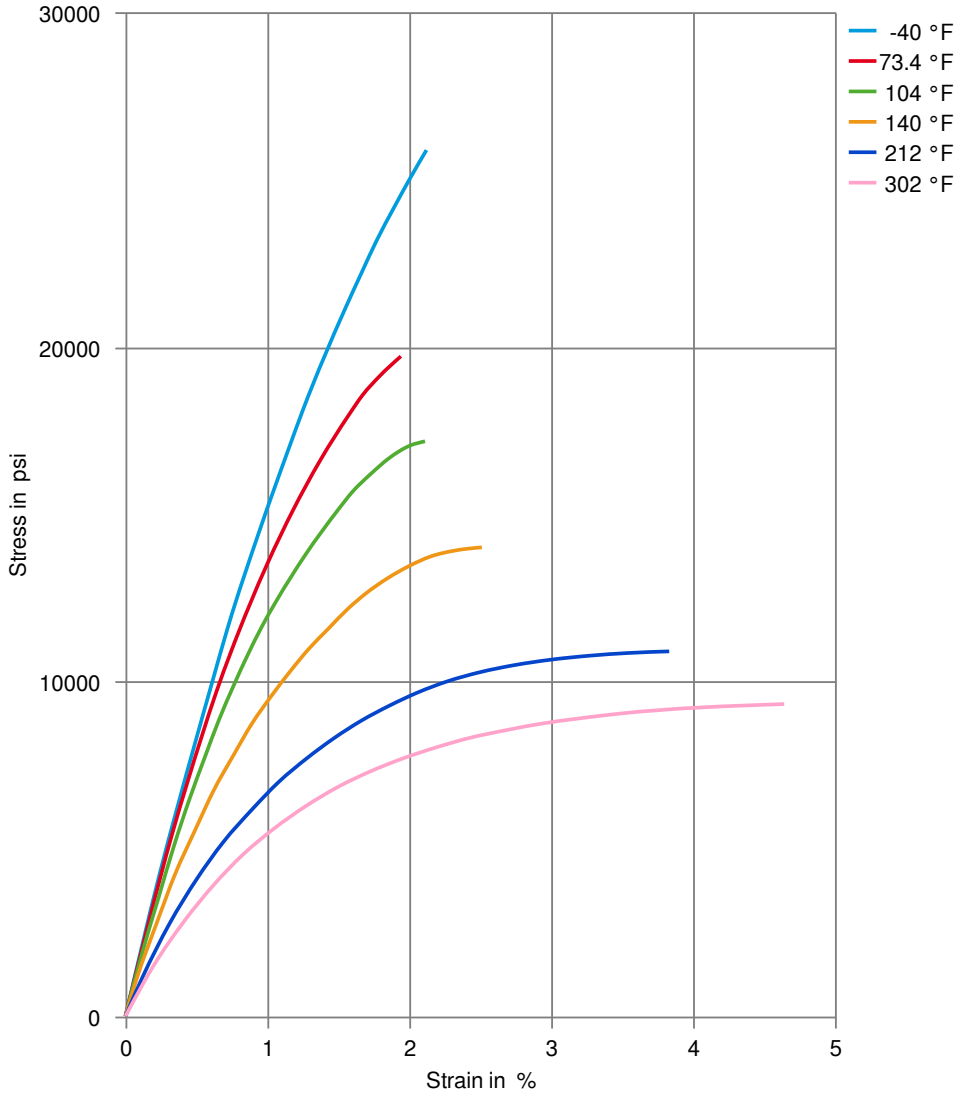
Stress-strain (dry)



Zytel® HTNFR52G30NH BK337

HIGH PERFORMANCE POLYAMIDE RESIN

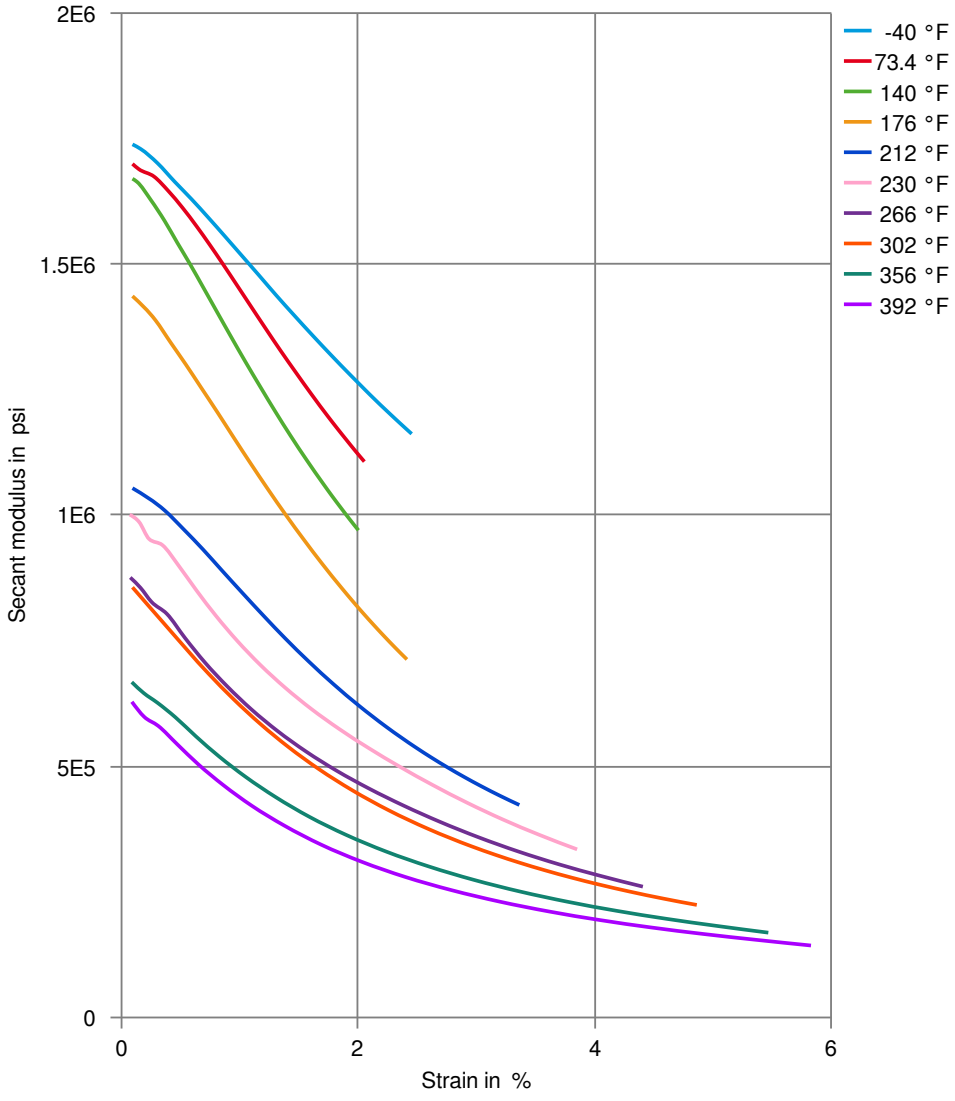
Stress-strain (cond.)



Zytel® HTNFR52G30NH BK337

HIGH PERFORMANCE POLYAMIDE RESIN

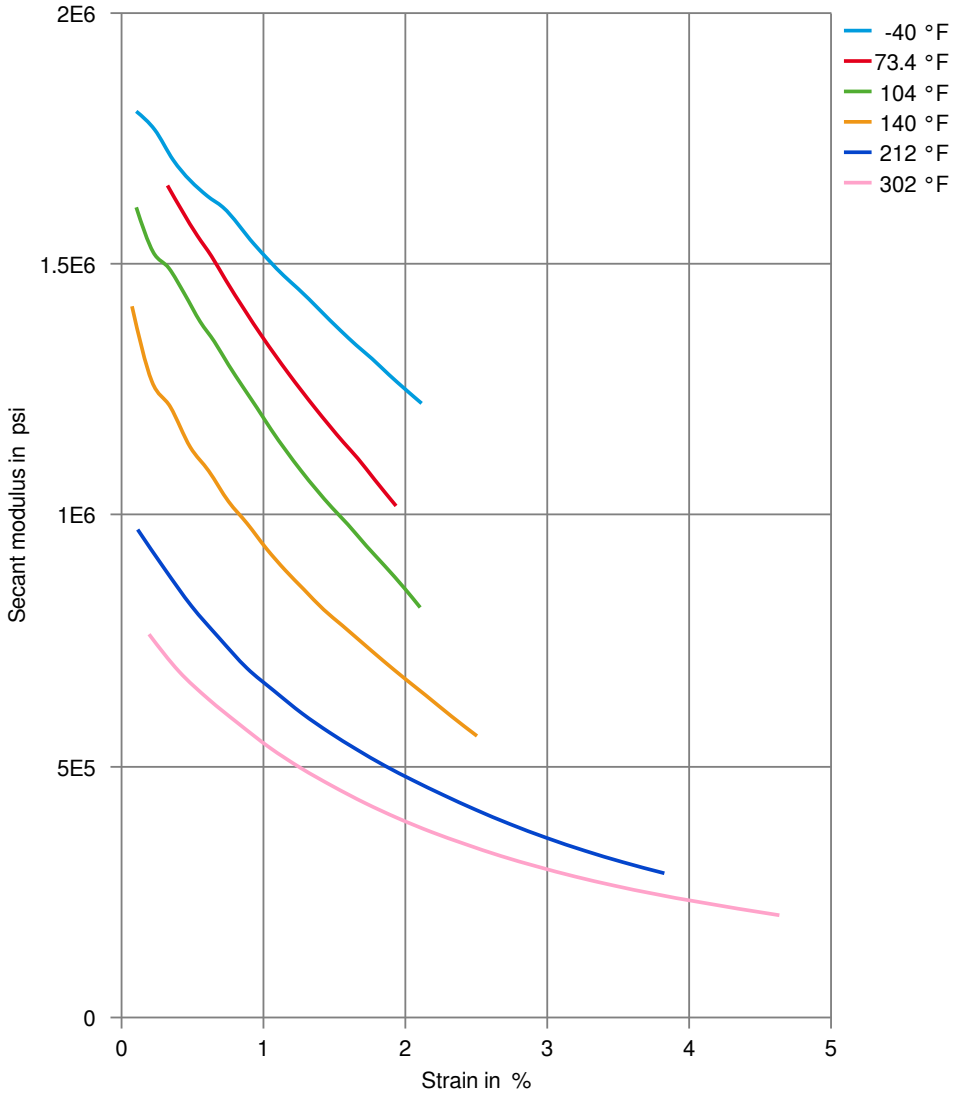
Secant modulus-strain (dry)



Zytel® HTNFR52G30NH BK337

HIGH PERFORMANCE POLYAMIDE RESIN

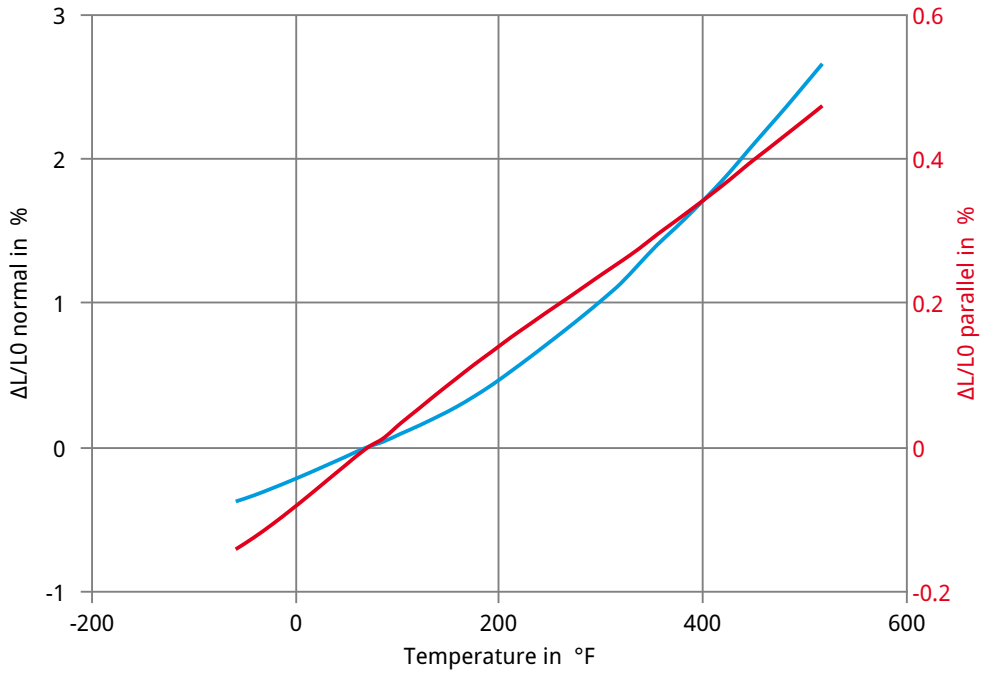
Secant modulus-strain (cond.)



Zytel® HTNFR52G30NH BK337

HIGH PERFORMANCE POLYAMIDE RESIN

Thermal expansion



Revised: 2026-08-12 Source: Celanese Materials Database

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values. Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products.
Copyright © 2026 Celanese or its affiliates. All rights reserved.
Celanese®, registered C-ball design and all other trademarks identified herein with ®, TM, SM, unless otherwise noted, are trademarks of Celanese or its affiliates.