

DuPont™ Zytel® HTNFR42G30NH BK337 (Preliminary Data)

HIGH PERFORMANCE POLYAMIDE RESIN

Product Information

Zytel® HTNFR42G30NH BK337 is a 30% glass reinforced, flame retardant high performance polyamide resin that has been developed for connector applications with improved reflow soldering performance. It is also a PPA resin and it uses a non-halogenated flame retardant.

General information	Value	Unit	Test Standard
Resin Identification	PA-GF30FR(40)	-	ISO 1043
Part Marking Code	PA-GF30FR(40)	-	ISO 11469
Part Marking Code	>PPA-GF30FR<	-	SAE J1344
Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	0.4 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.9 / -	%	ISO 294-4, 2577
Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	11700 / -	MPa	ISO 527-1/-2
Stress at break	134 / -	MPa	ISO 527-1/-2
Strain at break	1.7 / -	%	ISO 527-1/-2
Flexural Modulus	11300 / -	MPa	ISO 178
Flexural Strength	210 / -	MPa	ISO 178
Charpy impact strength			ISO 179/1eU
73 °F	35 / -	kJ/m ²	
-22 °F	35 / -	kJ/m ²	
Charpy notched impact strength			ISO 179/1eA
73 °F	7 / -	kJ/m ²	
-22 °F	6 / -	kJ/m ²	
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, first heat	314 / *	°C	ISO 11357-1/-3
Temp. of deflection under load, 260 psi, annealed	277 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	20 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion			ISO 11359-1/-2
normal	51 / *	E-6/K	
Normal, -40-23 °C	43 / *	E-6/K	
Normal, 55-160 °C	84 / *	E-6/K	
Parallel, -40-23 °C	17 / *	E-6/K	
Parallel, 55-160 °C	20 / *	E-6/K	
RTI, electrical			UL 746B
15mil	130	°C	
120mil	130	°C	
RTI, impact			UL 746B
15mil	115	°C	
120mil	120	°C	
RTI, strength			UL 746B
15mil	125	°C	
120mil	130	°C	
Flammability	dry / cond	Unit	Test Standard
Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.4 / *	mm	IEC 60695-11-10
UL recognition	yes / *	-	UL 94
Glow Wire Flammability Index			IEC 60695-2-12
15mil	960 / -	°C	
60mil	960 / -	°C	
120mil	960 / -	°C	

To find out more, visit [DuPont Performance Polymers](#) or contact nearest DuPont location.

North America

Asia Pacific

Europe/Middle East/Africa

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Glow Wire Ignition Temperature			
15mil	750 / -	°C	IEC 60695-2-12
60mil	800 / -	°C	IEC 60695-2-13
120mil	825 / -	°C	IEC 60695-2-13
Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	1E16 / -	Ohm*m	IEC 62631-3-1
Electric strength	33 / -	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	-	IEC 60112
Dielectric Constant, 23°C			ASTM D 2520 B
1 GHz	3.7 / -	-	
10 GHz	3.8 / -	-	
Dissipation Factor, 23°C			ASTM D 2520 B
1 GHz	116 / -	E-4	
10 GHz	100 / -	E-4	
Other properties	dry / cond	Unit	Test Standard
Density	1470 / -	kg/m ³	ISO 1183
Biobased carbon content	21	%	ISO 16620-2
Injection	Value	Unit	Test Standard
Drying Recommended	yes	-	-
Drying Temperature	≥100	°C	-
Drying Time, Dehumidified Dryer	6 - 8	h	-
Processing Moisture Content	≤0.1	%	-
Min. melt temperature	325	°C	-
Max. melt temperature	335	°C	-
Min. mold temperature	110	°C	-
Max. mold temperature	130	°C	-

Characteristics			
Processing	• Injection Molding		
Delivery form	• Pellets		
Additives	• Release agent		
Regional Availability	• North America	• Asia Pacific	• Near East/Africa
	• Europe	• South and Central America	• Global

Processing Texts

Injection molding

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

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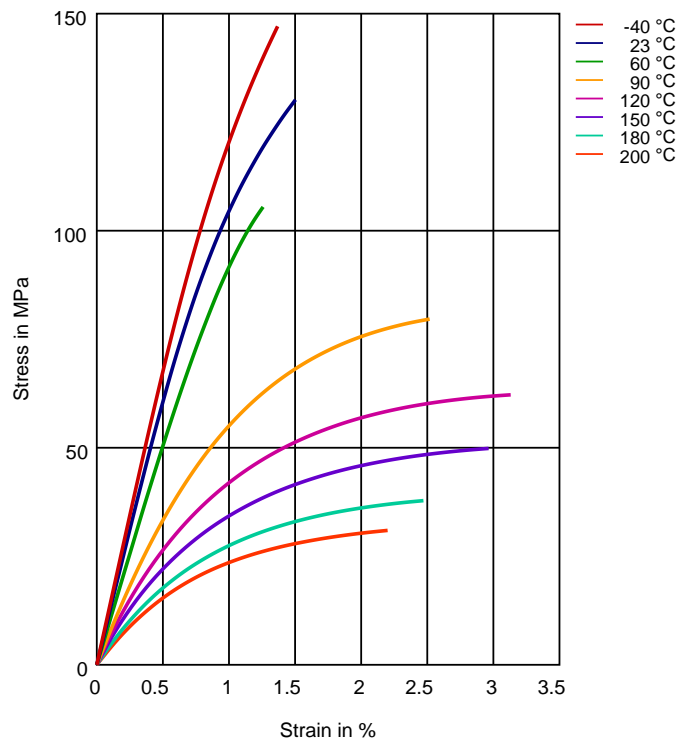


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Diagrams

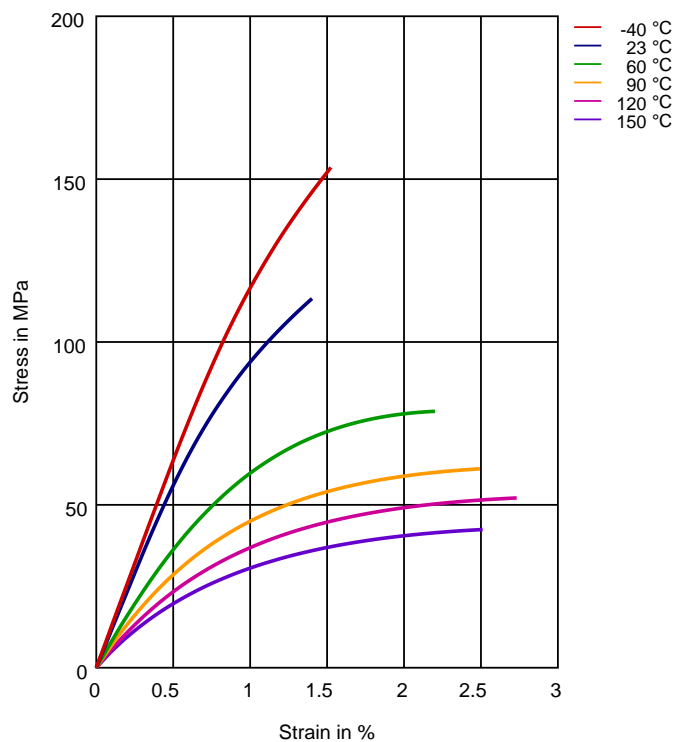
Stress-strain (dry)



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Stress-strain (cond.)



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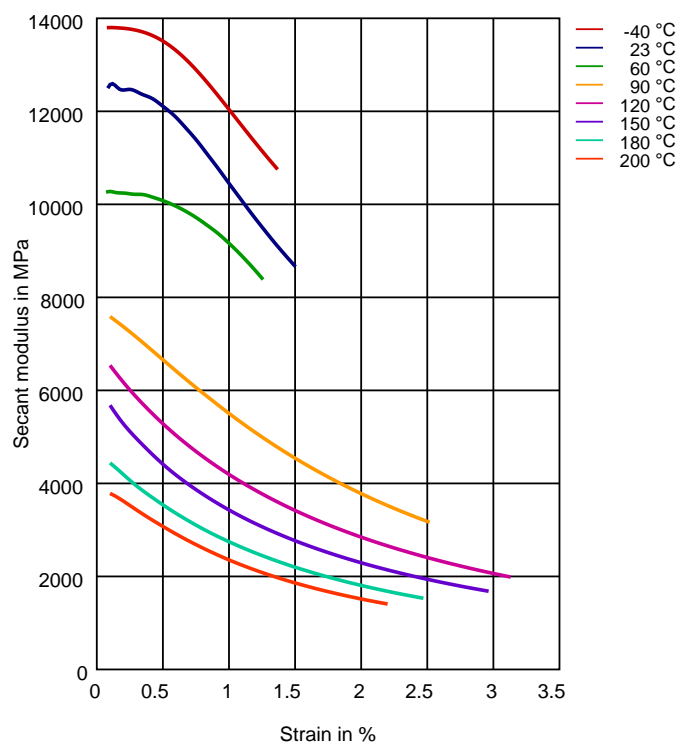
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HIGH PERFORMANCE POLYAMIDE RESIN

Secant modulus-strain (dry)



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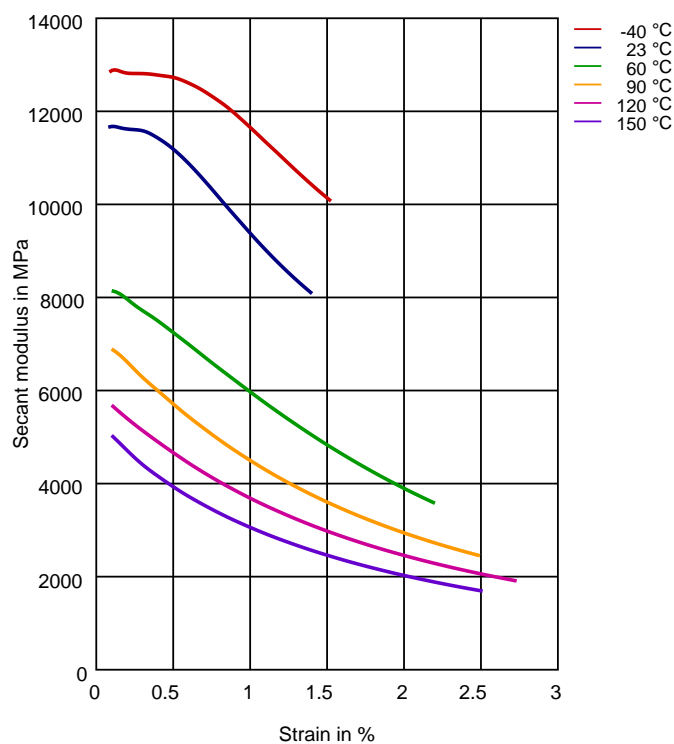
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HIGH PERFORMANCE POLYAMIDE RESIN

Secant modulus-strain (cond.)



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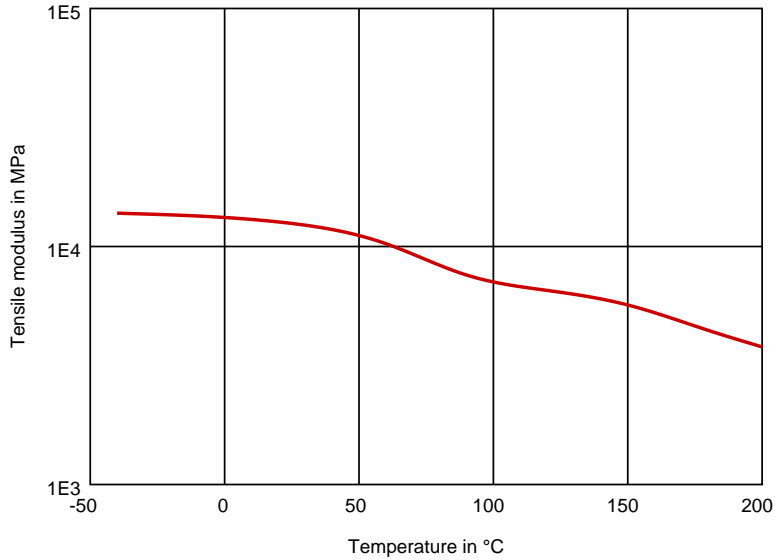
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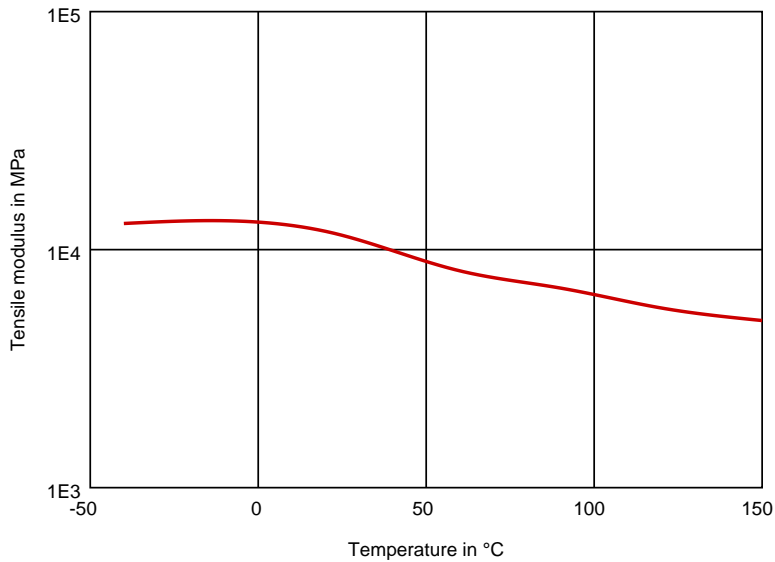
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Tensile modulus-temperature (dry)



Tensile modulus-temperature (cond.)



The above data are preliminary and are subject to change as additional data are developed on subsequent lots.

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Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 160 mil (Hytrel® measured at 80 mil), IEC Electrical properties measured at 80 mil, all ASTM properties measured at 120 mil, and test temperatures are 73°F unless otherwise stated.

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