

DuPont™ Zytel® HTN54G35HSLR BK031

HIGH PERFORMANCE POLYAMIDE RESIN

Product Information

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® HTN54G35HSLR BK031 is a 35% glass reinforced, toughened, heat stabilized high performance polyamide resin. It is also a PPA resin.

General information	Value	Unit	Test Standard
Resin Identification	PA-IGF35	-	ISO 1043
Part Marking Code	PA-IGF35	-	ISO 11469
Part Marking Code	>PPA-IGF35<	-	SAE J1344
Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	0.2 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.5 / -	%	ISO 294-4, 2577
Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	10500 / 10800	MPa	ISO 527-1/-2
Stress at break	180 / 166	MPa	ISO 527-1/-2
Strain at break	3 / 2.7	%	ISO 527-1/-2
Flexural Modulus	9300 / 9500	MPa	ISO 178
Flexural Strength	280 / -	MPa	ISO 178
Charpy impact strength			ISO 179/1eU
73 °F	85 / 70	kJ/m ²	
-40 °F	75 / 65	kJ/m ²	
Charpy notched impact strength			ISO 179/1eA
73 °F	12 / 11	kJ/m ²	
-22 °F	10 / 9	kJ/m ²	
-40 °F	9 / 9	kJ/m ²	
Izod notched impact strength, 73 °F	12 / -	kJ/m ²	ISO 180/1A
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, first heat	300 / *	°C	ISO 11357-1/-3
Temp. of deflection under load			ISO 75-1/-2
260 psi	255 / *	°C	
65 psi	283 / *	°C	
Coeff. of linear therm. expansion, parallel	20 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion			ISO 11359-1/-2
normal	68 / *	E-6/K	
Normal, -40-23 °C	65 / *	E-6/K	
Parallel, -40-23 °C	20 / *	E-6/K	
RTI, electrical			UL 746B
30mil	150 / *	°C	
60mil	150 / *	°C	
120mil	150	°C	
RTI, impact			UL 746B
30mil	105	°C	
60mil	120 / *	°C	
120mil	130	°C	
RTI, strength			UL 746B
30mil	115	°C	
60mil	130 / *	°C	
120mil	140	°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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Flammability	dry / cond	Unit	Test Standard
Burning Behav. at 60mil nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
UL recognition	yes / *	-	UL 94
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
UL recognition	yes / *	-	UL 94
FMVSS Class	SE	-	ISO 3795 (FMVSS 302)
Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	1E13 / -	Ohm*m	IEC 62631-3-1
Electric strength	43 / 42	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	-	IEC 60112
Other properties	dry / cond	Unit	Test Standard
Humidity absorption, 80mil	1.8 / *	%	Sim. to ISO 62
Density	1420 / -	kg/m ³	ISO 1183
Injection	Value	Unit	Test Standard
Drying Recommended	yes	-	-
Drying Temperature	≥100	°C	-
Drying Time, Dehumidified Dryer	6 - 8	h	-
Processing Moisture Content	≤0.1	%	-
Melt Temperature Optimum	325	°C	-
Min. melt temperature	320	°C	-
Max. melt temperature	330	°C	-
Min. mold temperature	90	°C	-
Max. mold temperature	130	°C	-

Characteristics			
Processing	<ul style="list-style-type: none"> • Injection Molding 		
Special characteristics	<ul style="list-style-type: none"> • Heat stabilized or stable to heat 		
Regional Availability	<ul style="list-style-type: none"> • North America • Europe 	<ul style="list-style-type: none"> • Asia Pacific • South and Central America 	<ul style="list-style-type: none"> • Near East/Africa • Global

Processing Texts

Injection molding

During molding, use proper protective equipment and adequate ventilation. Avoid exposure to fumes and limit the hold up time and temperature of the resin in the machine. Purge degraded resin carefully with HDPE.

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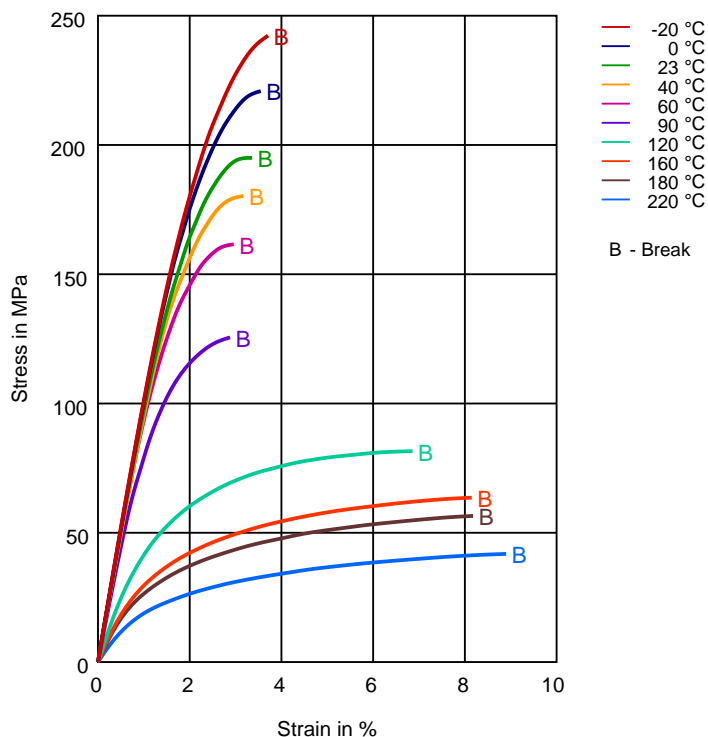


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Diagrams

Stress-strain (dry)



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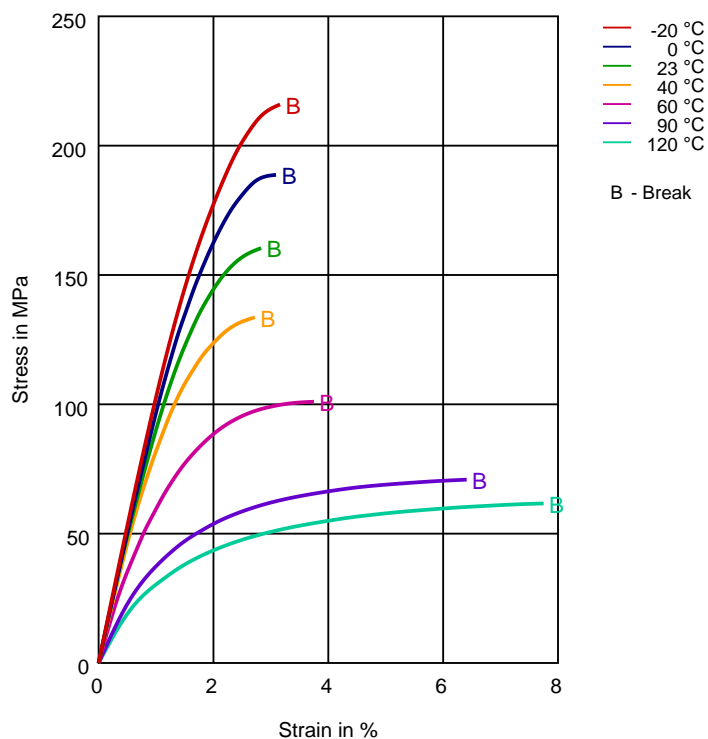
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HIGH PERFORMANCE POLYAMIDE RESIN

Stress-strain (cond.)



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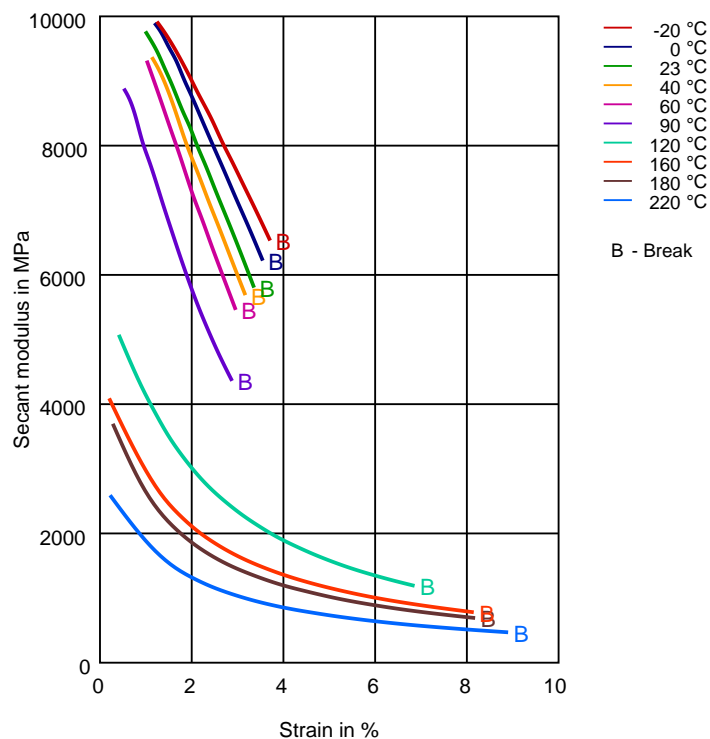
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HIGH PERFORMANCE POLYAMIDE RESIN

Secant modulus-strain (dry)



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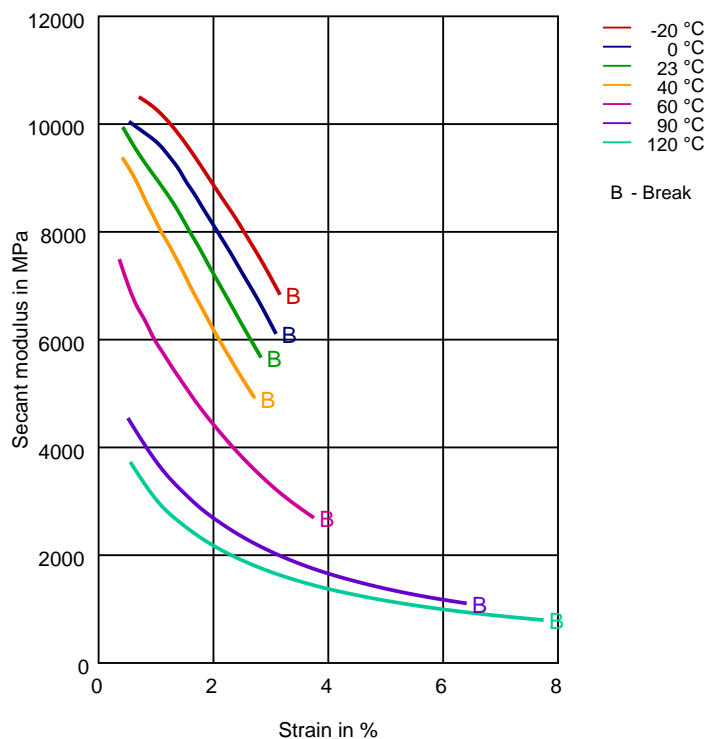
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HIGH PERFORMANCE POLYAMIDE RESIN

Secant modulus-strain (cond.)



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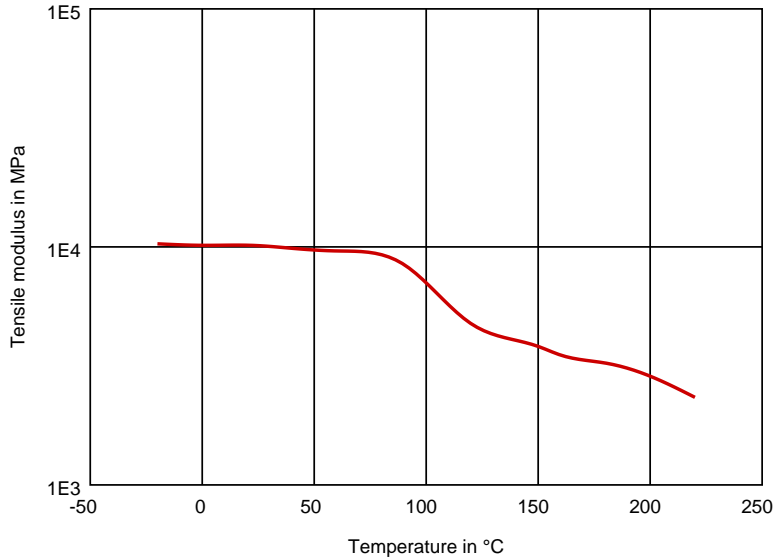
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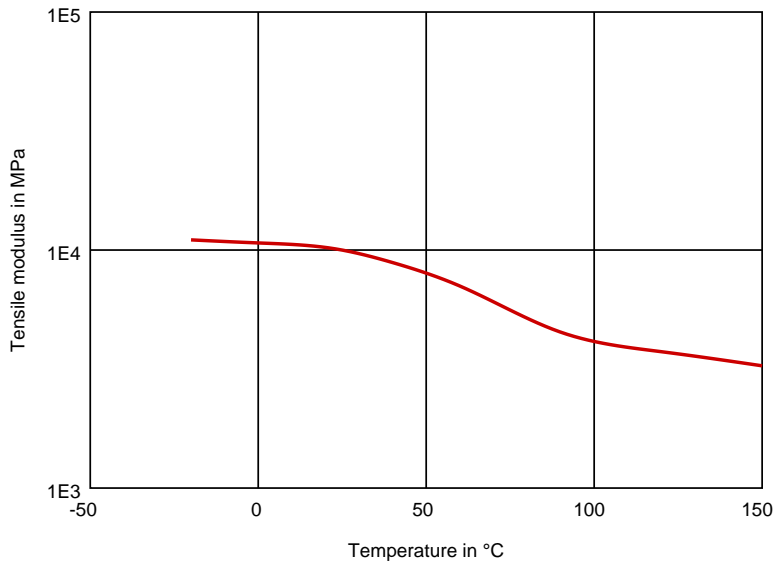
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Tensile modulus-temperature (dry)



Tensile modulus-temperature (cond.)



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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