

# DuPont™ Zytel® HTN55G55TLW BK773 (Preliminary Data)

## 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® HTN55G55TLW BK773 is a 55% glass reinforced high performance polyamide resin with improved toughness and low warpage, developed for structural applications where good flow is needed in thin sections. It is also a PPA resin.**

General information	Value	Unit	Test Standard
Resin Identification	PA-IGF55	-	ISO 1043
Part Marking Code	PA-IGF55	-	ISO 11469
Part Marking Code	>PPA-GF55<	-	SAE J1344
Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	0.1 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.2 / -	%	ISO 294-4, 2577
Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	21000 / 19000	MPa	ISO 527-1/-2
Stress at break	260 / 240	MPa	ISO 527-1/-2
Strain at break	1.8 / 1.8	%	ISO 527-1/-2
Flexural Modulus	17900 / -	MPa	ISO 178
Flexural Strength	380 / -	MPa	ISO 178
Charpy impact strength			ISO 179/1eU
73 °F	80 / -	kJ/m <sup>2</sup>	
-22 °F	60 / -	kJ/m <sup>2</sup>	
Charpy notched impact strength			ISO 179/1eA
73 °F	21 / -	kJ/m <sup>2</sup>	
-22 °F	25 / -	kJ/m <sup>2</sup>	
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, first heat	296 / *	°C	ISO 11357-1/-3
Temp. of deflection under load, 260 psi	244 / *	°C	ISO 75-1/-2
Flammability	dry / cond	Unit	Test Standard
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
Glow Wire Flammability Index			IEC 60695-2-12
30mil	725 / -	°C	
60mil	725 / -	°C	
120mil	960 / -	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
30mil	750 / -	°C	
60mil	750 / -	°C	
120mil	850 / -	°C	
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<100	mm/min	ISO 3795 (FMVSS 302)
Other properties	dry / cond	Unit	Test Standard
Humidity absorption, 80mil	1.2 / *	%	Sim. to ISO 62
Density	1680 / -	kg/m <sup>3</sup>	ISO 1183



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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	300	°C	-
Max. melt temperature	315	°C	-
Min. mold temperature	70	°C	-
Max. mold temperature	130	°C	-

### Characteristics

Processing	<ul style="list-style-type: none"><li>• Injection Molding</li></ul>
Delivery form	<ul style="list-style-type: none"><li>• Pellets</li></ul>
Additives	<ul style="list-style-type: none"><li>• Release agent</li></ul>
Special characteristics	<ul style="list-style-type: none"><li>• Heat stabilized or stable to heat</li></ul>
Regional Availability	<ul style="list-style-type: none"><li>• Asia Pacific</li></ul>

### Processing Texts

#### Injection molding

Lower end of mold temperature range should be used for parts that are ≤ 1 mm.

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.

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

#### North America

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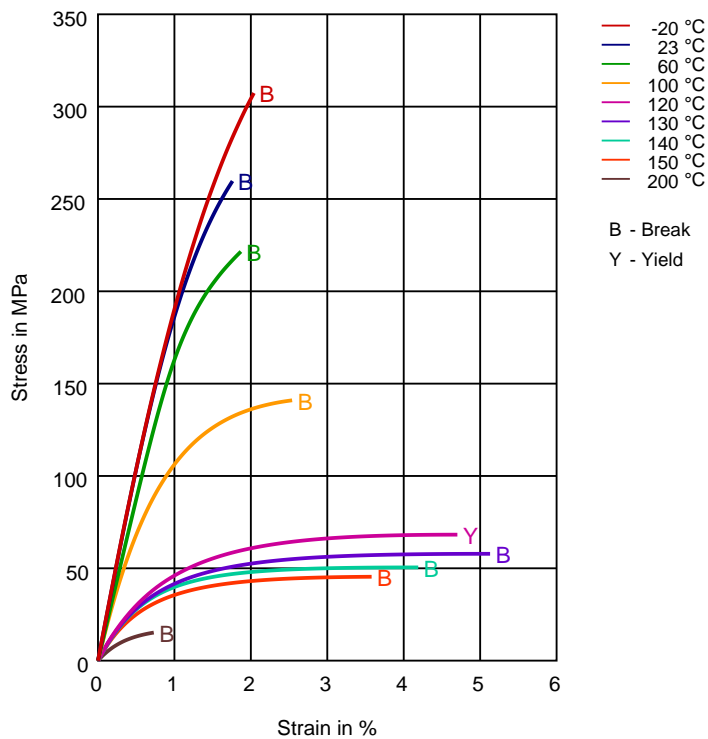


# DuPont™ Zytel® HTN55G55TLW BK773 (Preliminary Data)

## HIGH PERFORMANCE POLYAMIDE RESIN

Diagrams

Stress-strain (dry)



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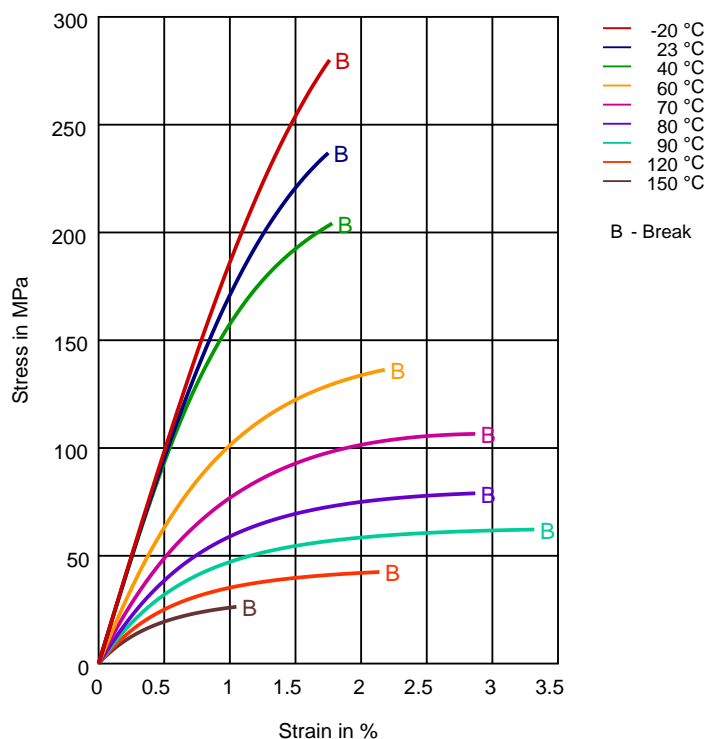
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## HIGH PERFORMANCE POLYAMIDE RESIN

Stress-strain (cond.)



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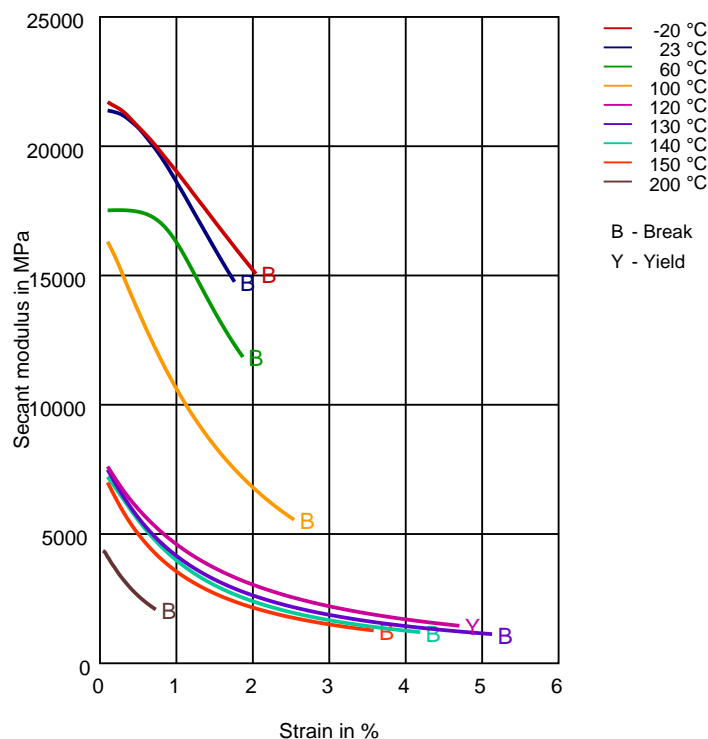
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# DuPont™ Zytel® HTN55G55TLW BK773 (Preliminary Data)

## HIGH PERFORMANCE POLYAMIDE RESIN

Secant modulus-strain (dry)



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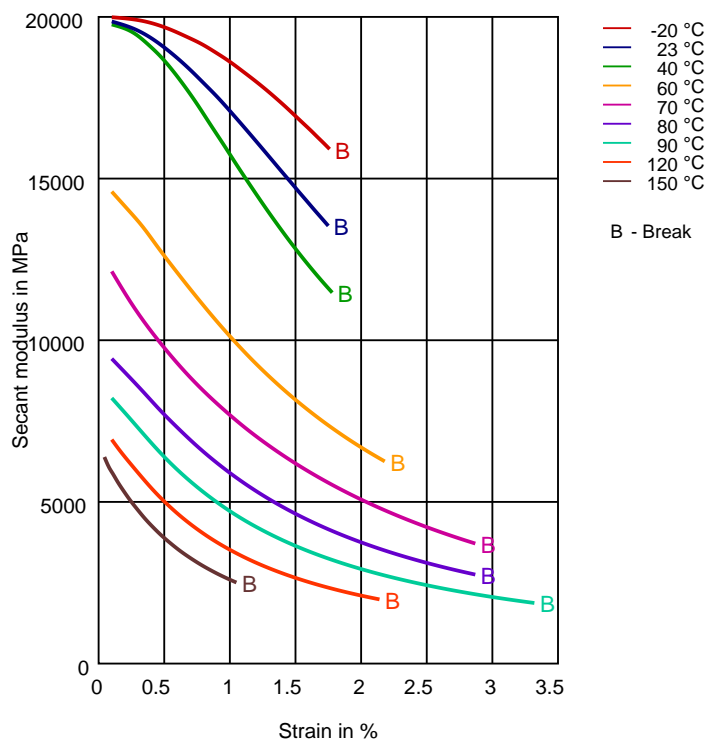
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## HIGH PERFORMANCE POLYAMIDE RESIN

Secant modulus-strain (cond.)



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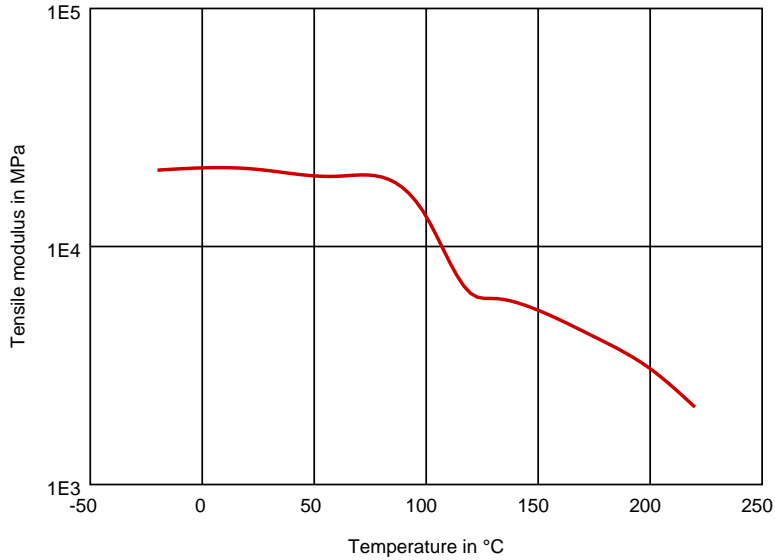
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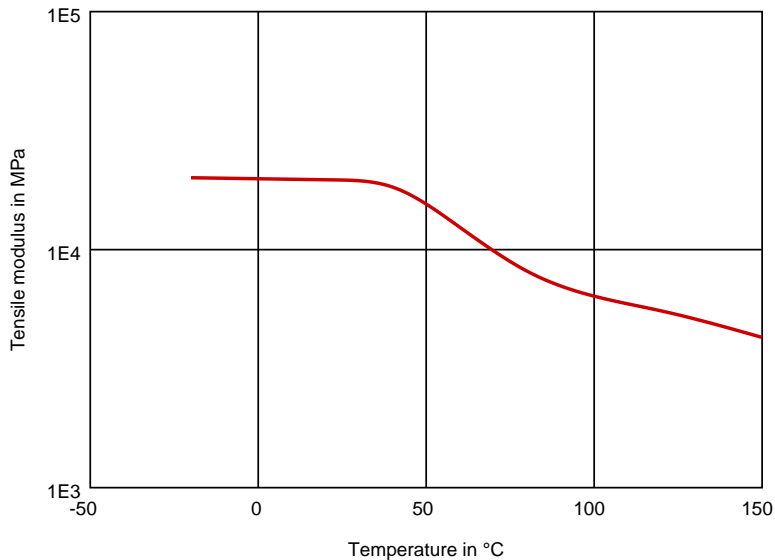
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## HIGH PERFORMANCE POLYAMIDE RESIN

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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