DuPont™ Zytel® HTN52G35HSL BK083

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® HTN52G35HSL BK083 is a 35% glass reinforced, heat stabilized, lubricated high performance polyamide resin that can be molded in water heated molds. It is also a PPA resin.

General information	Value	Unit	Test Standard
Resin Identification	PA6T/66-GF35	-	ISO 1043
Part Marking Code	PA6T/66-GF35	-	ISO 11469
Part Marking Code	>PPA-GF35<	-	SAE J1344
Rheological properties	**dry / cond**	**Unit**	**Test Standard**
Viscosity number	110[1] / *	cm^3/g	ISO 307, 1157, 1628
Molding shrinkage, parallel	0.3 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.9 / -	%	ISO 294-4, 2577
1: formic acid 90%			
Mechanical properties	**dry / cond**	**Unit**	**Test Standard**
Tensile Modulus	11600 / -	MPa	ISO 527-1/-2
Stress at break	187 / 180	MPa	ISO 527-1/-2
Strain at break	2.3 / 2.6	%	ISO 527-1/-2
Flexural Modulus	10300 / 10300	MPa	ISO 178
Charpy impact strength			ISO 179/1eU
73°F	45 / -	kJ/m^2	
-22°F	40 / 35	kJ/m^2	
Charpy notched impact strength			ISO 179/1eA
73°F	9 / 9	kJ/m^2	
-22°F	7 / 6	kJ/m^2	
Thermal properties	**dry / cond**	**Unit**	**Test Standard**
Melting temperature, first heat	310 / *	°C	ISO 11357-1/-3
Temp. of deflection under load, 260 psi	285 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	21 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion			ISO 11359-1/-2
normal	67 / *	E-6/K	
Normal, -40-23°C	61 / *	E-6/K	
Normal, 55-160°C	80 / *	E-6/K	
Parallel, -40-23°C	21 / *	E-6/K	
RTI, electrical			UL 746B
30mil	150 / *	°C	
60mil	150 / *	°C	
120mil	150	°C	
RTI, impact			UL 746B
30mil	125	°C	
60mil	125 / *	°C	
120mil	125	°C	
RTI, strength			UL 746B
30mil	130	°C	
60mil	125 / *	°C	
120mil	150	°C	
Flammability	**dry / cond**	**Unit**	**Test Standard**
Burning Behav. at 60mil nom. thickn.	HB / *	class	IEC 60695-11-10

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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
Glow Wire Flammability Index			IEC 60695-2-12
30mil	750 / -	°C	
60mil	700 / -	°C	
120mil	850 / -	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
30mil	775 / -	°C	
60mil	725 / -	°C	
120mil	775 / -	°C	
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	44	mm/min	ISO 3795 (FMVSS 302)
Electrical properties	**dry / cond**	**Unit**	**Test Standard**
Volume resistivity	1E13 / -	Ohm*m	IEC 62631-3-1
Electric strength	34 / 33	kV/mm	IEC 60243-1
Other properties	**dry / cond**	**Unit**	**Test Standard**
Density	1460 / -	kg/m³	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	110	°C	-

Characteristics

Processing	• Injection Molding		
Special characteristics	• Heat stabilized or stable to heat		
Regional Availability	• North America • Europe	• Asia Pacific • South and Central America	• 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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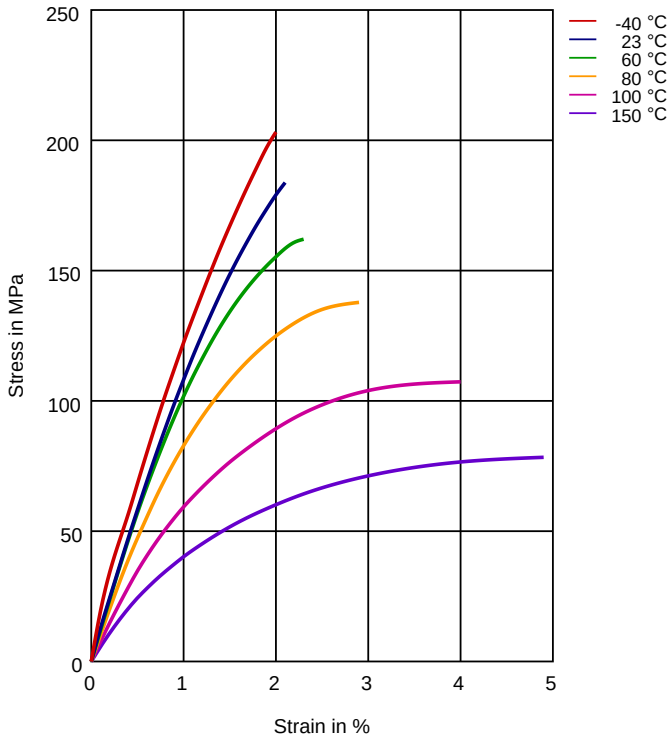
Diagrams

Stress-strain (dry)



To find out more, visit DuPont Performance Polymers or contact nearest DuPont location.

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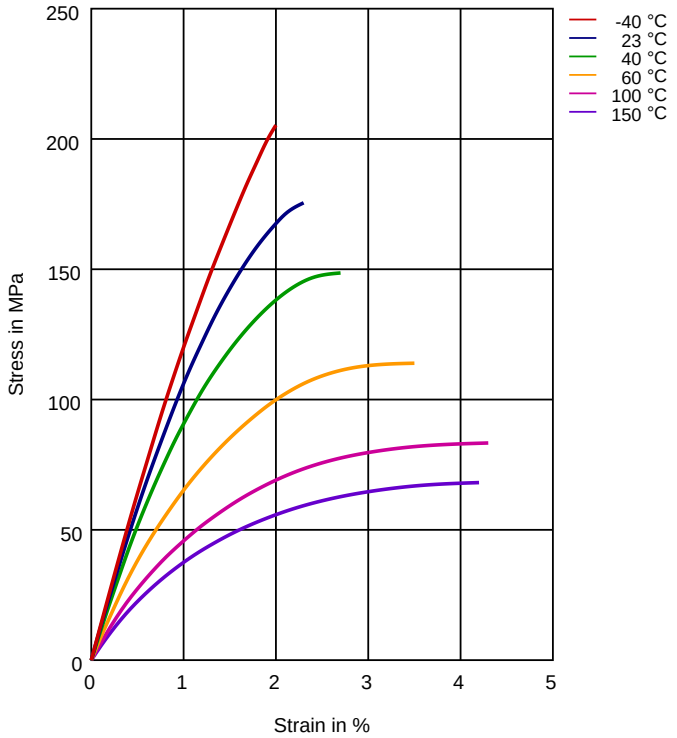
Stress-strain (cond.)



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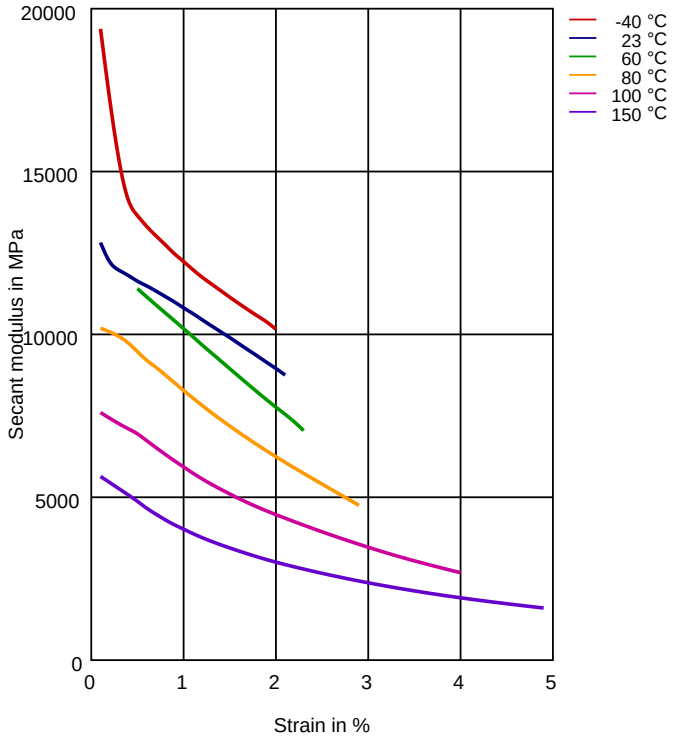
Secant modulus-strain (dry)



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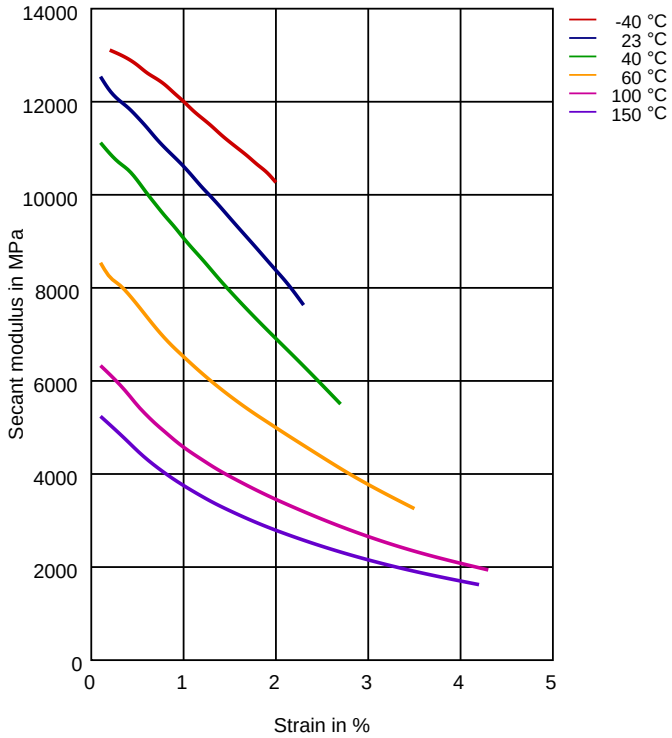
Secant modulus-strain (cond.)



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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