



Zytel® HTN92G35DH2 BK083

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® HTN92G35DH2 BK083 is a 35% glass reinforced high performance polyamide resin using DuPont SHIELD Technology, with high flow and excellent retention of properties after aging at elevated temperatures in air. It is also a PPA resin.

Product information

Resin Identification	PA6T/66-GF35	ISO 1043
Part Marking Code	>PA6T/66-GF35<	ISO 11469
Part Marking Code	>PPA-GF35<	SAE J1344
ISO designation	ISO 16396-PA6T/66,GF35,M1CGHR,S12-120	

Rheological properties

	dry/cond.		
Melt volume-flow rate	60/*	cm ³ /10min	ISO 1133
Temperature	325/*	°C	ISO 1133
Load	2.16/*	kg	ISO 1133
Viscosity number	115/*	cm ³ /g	ISO 307, 1157, 1628
Moulding shrinkage, parallel	0.2/-	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.9/-	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile Modulus	12000/10000	MPa	ISO 527-1/-2
Stress at break	200/160	MPa	ISO 527-1/-2
Strain at break	2.4/2.6	%	ISO 527-1/-2
Flexural Modulus	10000/-	MPa	ISO 178
Flexural Strength	270/-	MPa	ISO 178
Tensile creep modulus, 1h	*/10000	MPa	ISO 899-1
Tensile creep modulus, 1000h	*/8500	MPa	ISO 899-1
Charpy impact strength, 23°C	55/50	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	50/45	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	10/10	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -40°C	10/10	kJ/m ²	ISO 179/1eA
Poisson's ratio	0.33/0.34	-	



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Thermal properties

	dry/cond.		
Melting temperature, first heat	310/*	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	283/*	°C	ISO 75-1/-2
CLTE, Parallel, -40-23°C	19/*	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, parallel	30/*	E-6/K	ISO 11359-1/-2
CLTE, Normal, -40-23°C	63/*	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	80/*	E-6/K	ISO 11359-1/-2

Flammability

FMVSS Class	B -	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80 mm/min	ISO 3795 (FMVSS 302)

Electrical properties

	dry/cond.		
Volume resistivity	>1E13/1E13	Ohm.m	IEC 62631-3-1
Surface resistivity	*/1E13	Ohm	IEC 62631-3-2
Electric strength	32/-	kV/mm	IEC 60243-1
Comparative tracking index	600/-	-	IEC 60112

Other properties

	dry/cond.		
Density	1440/-	kg/m ³	ISO 1183

Injection

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. mould temperature	90 °C
Max. mould temperature	110 °C

Characteristics

Additives	Release agent
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Additional Information

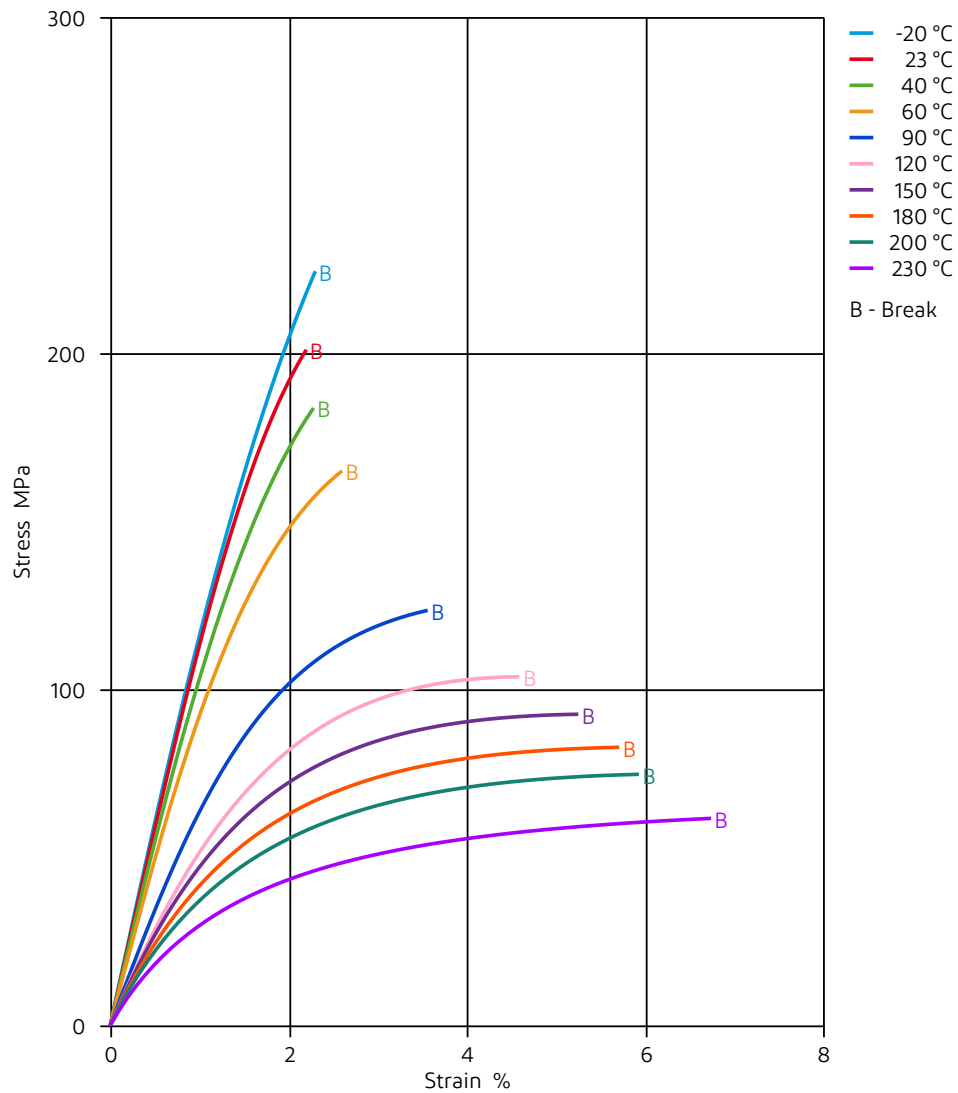
Injection molding	During molding, use proper protective equipment and adequate ventilation. Avoid exposure to fumes and limit the hold up time and temperature of the resin in the machine. Purge degraded resin carefully with HDPE.
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Stress-strain (dry)

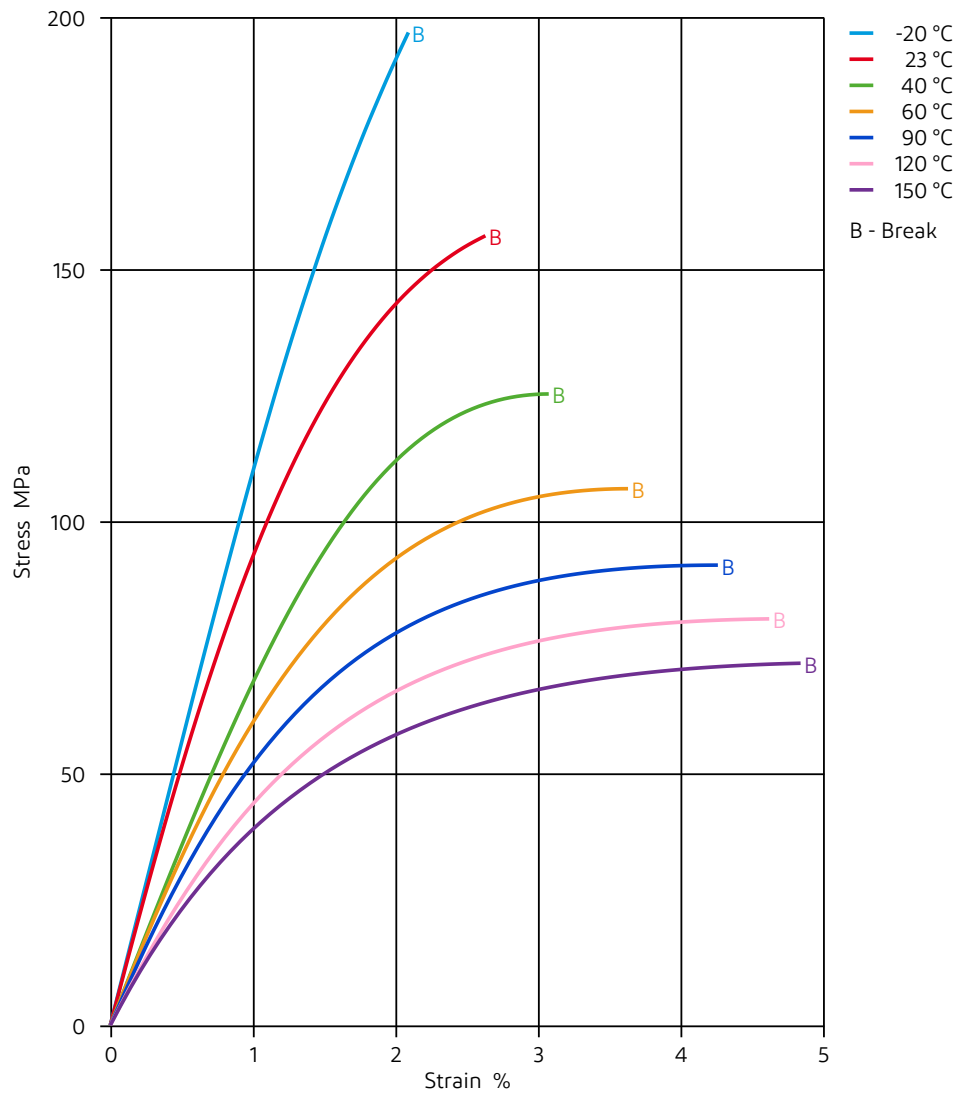




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Stress-strain (cond.)

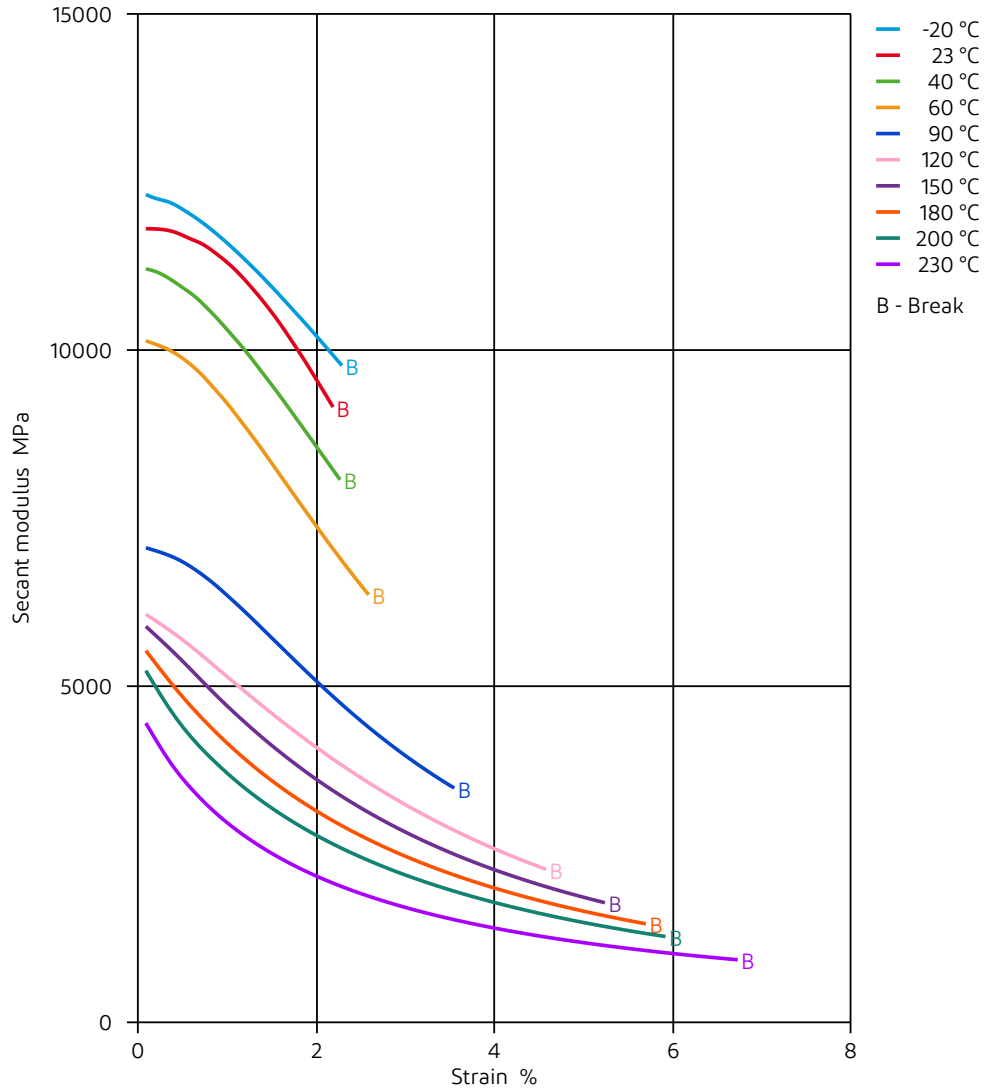




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HIGH PERFORMANCE POLYAMIDE RESIN

Secant modulus-strain (dry)

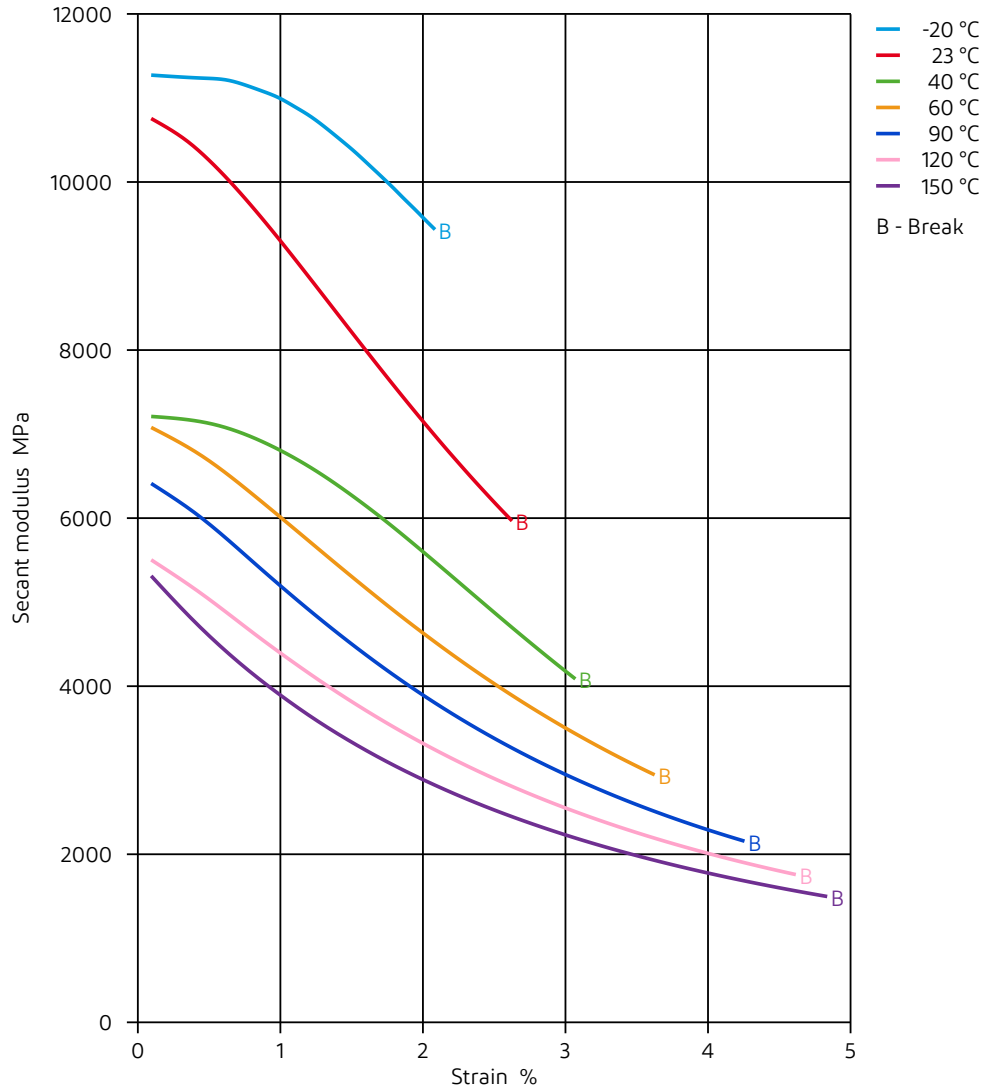




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Secant modulus-strain (cond.)

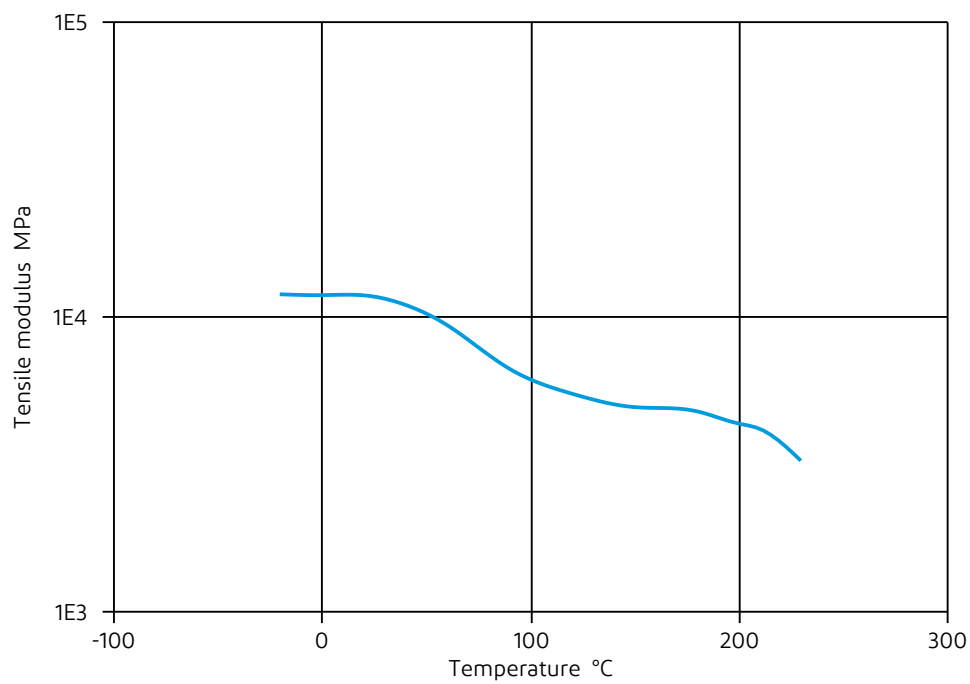




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Tensile modulus-temperature (dry)

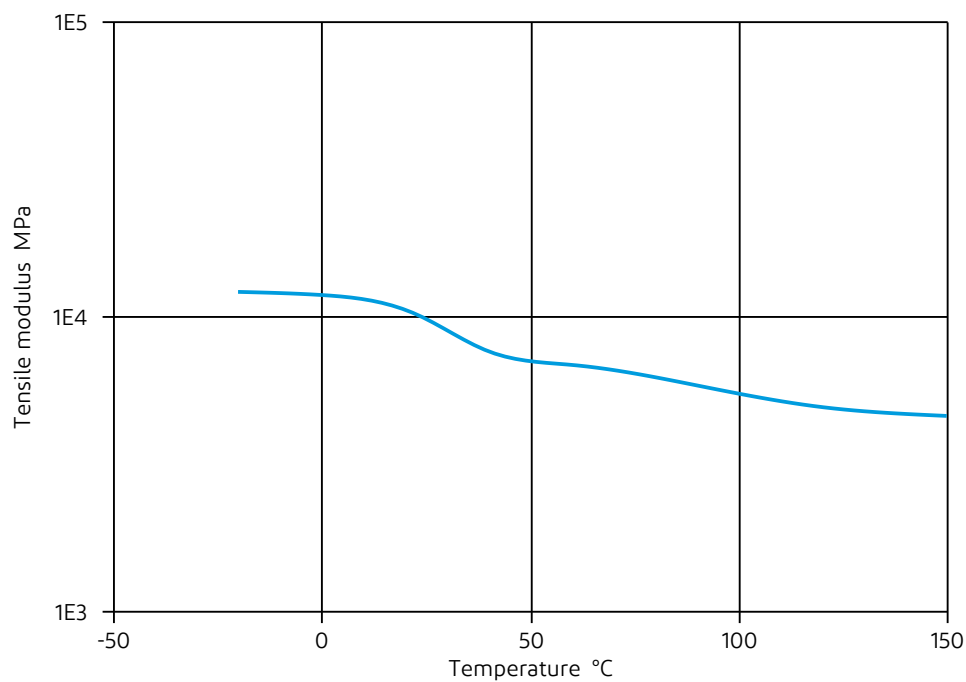




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Tensile modulus-temperature (cond.)





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Chemical Media Resistance

Acids

- ✓ Acetic Acid (5% by mass), 23°C
- ✓ Citric Acid solution (10% by mass), 23°C
- ✓ Lactic Acid (10% by mass), 23°C

Symbols used:

- ✓ possibly resistant
Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).
- ✗ not recommended - see explanation
Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

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