

DuPont™ Zytel® HTN52G45HSL 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® HTN52G45HSL BK083 is a 45% 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-GF45	-	ISO 1043
Part Marking Code	PA6T/66-GF45	-	ISO 11469
Part Marking Code	>PPA-GF45<	-	SAE J1344
Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	15500 / -	MPa	ISO 527-1/-2
Stress at break	235 / -	MPa	ISO 527-1/-2
Strain at break	2 / -	%	ISO 527-1/-2
Charpy impact strength, 73°F	65 / -	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 73°F	12 / -	kJ/m ²	ISO 179/1eA
Thermal properties	Value	Unit	Test Standard
Thermal conductivity of melt	0.26	W/(m K)	-
Spec. heat capacity of melt	2050	J/(kg K)	-
Flammability	Value	Unit	Test Standard
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	17	mm/min	ISO 3795 (FMVSS 302)
Other properties	dry / cond	Unit	Test Standard
Density	1560 / -	kg/m ³	ISO 1183
Density of melt	1450	kg/m ³	-
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	-
Mold Temperature Optimum	100	°C	-
Min. mold temperature	90	°C	-
Max. mold temperature	110	°C	-
Ejection temperature	240	°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 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.

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

North America

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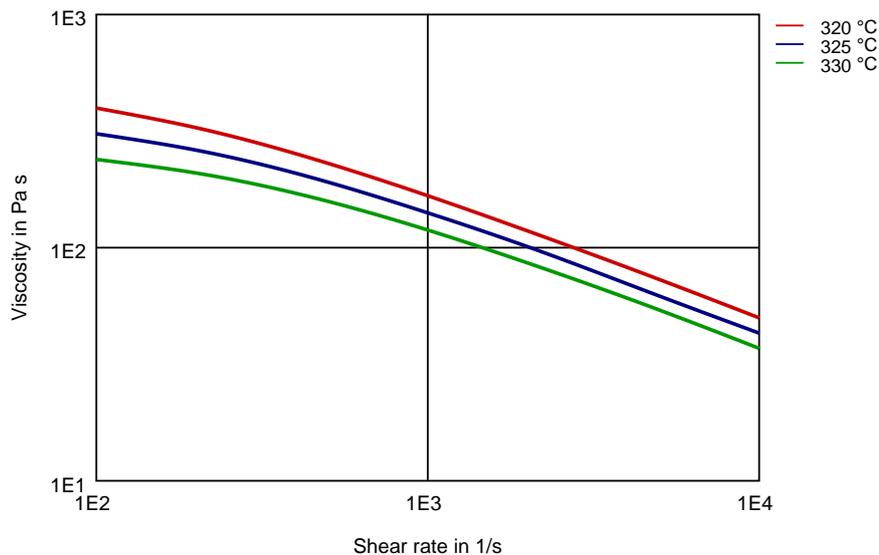
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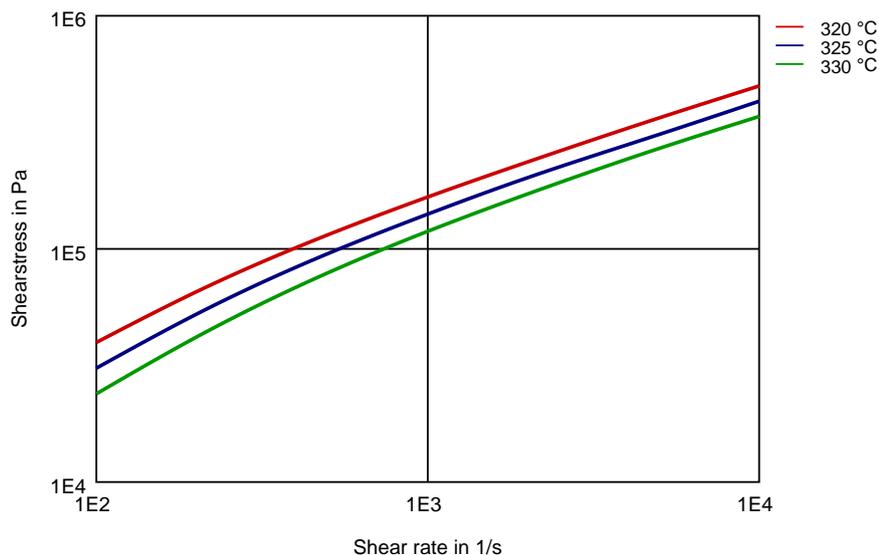
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Diagrams

Viscosity-shear rate



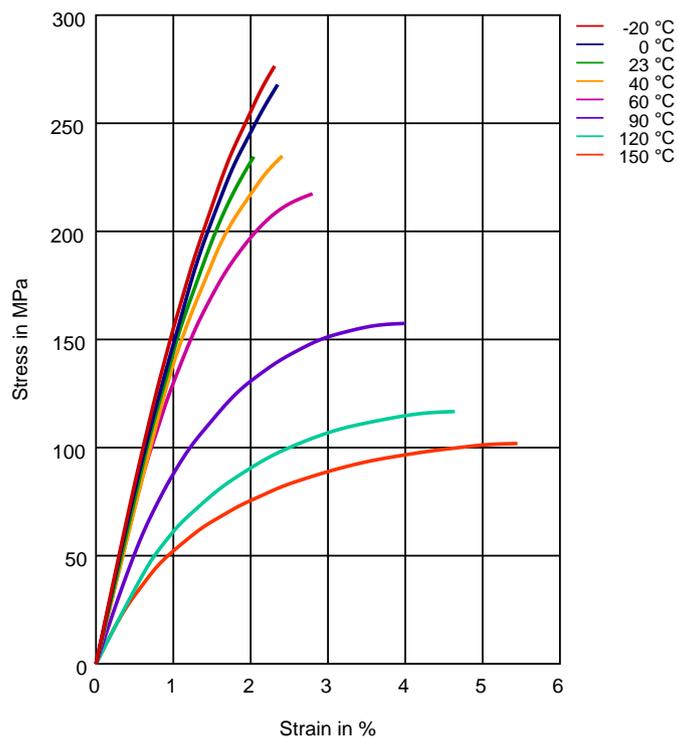
Shearstress-shear rate



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Stress-strain (dry)



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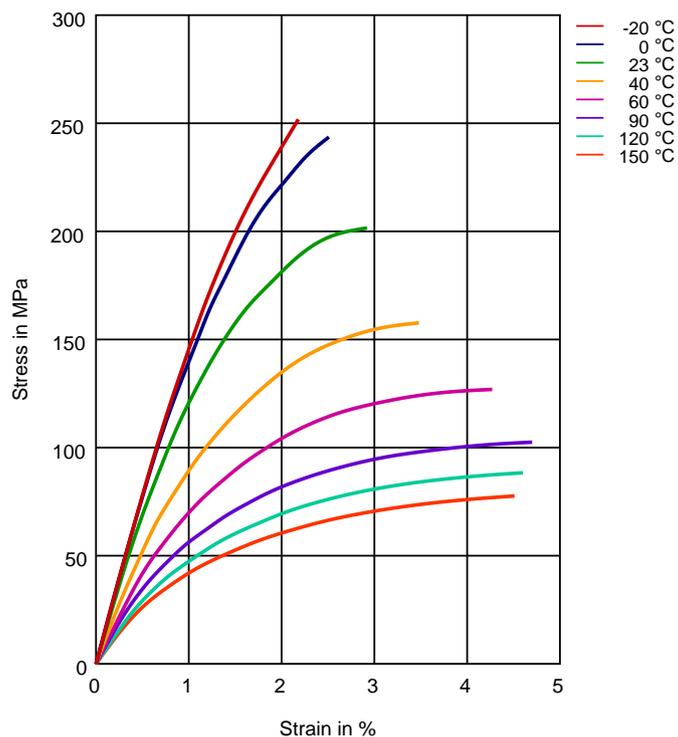
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HIGH PERFORMANCE POLYAMIDE RESIN

Stress-strain (cond.)



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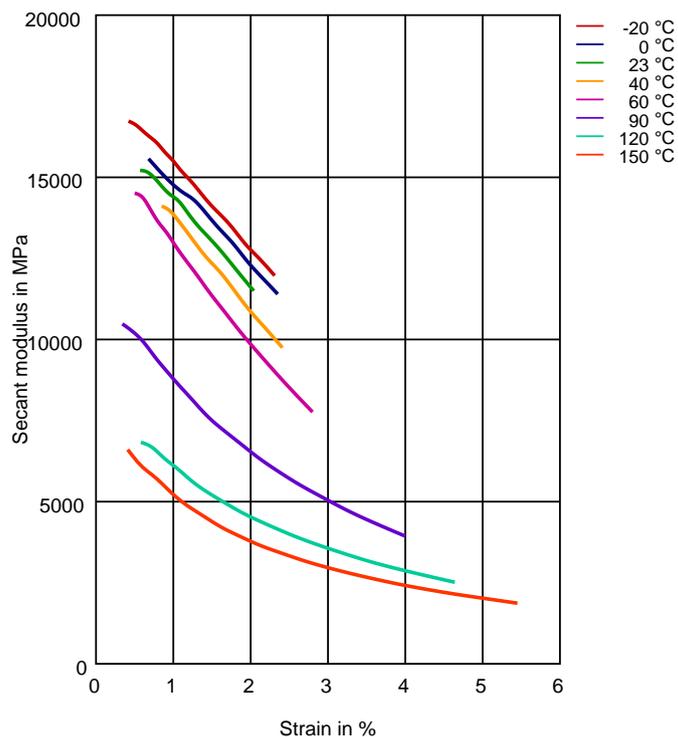
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Secant modulus-strain (dry)



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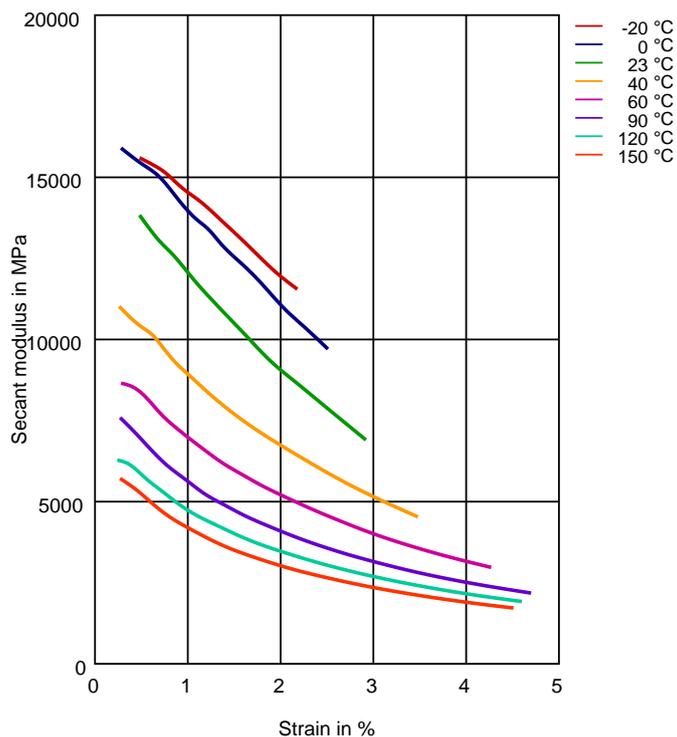
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Secant modulus-strain (cond.)



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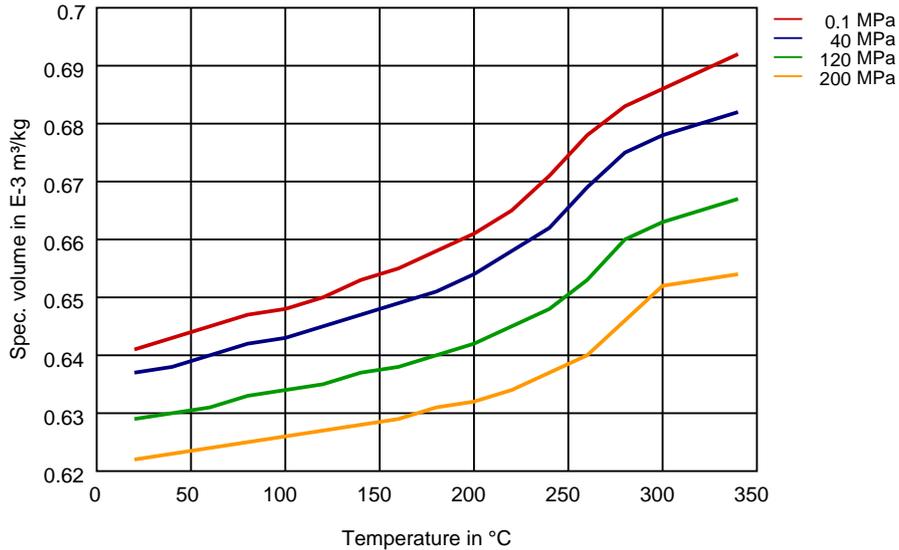
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Specific volume-temperature (pvT)



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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