

# DuPont™ Zytel® HTN54G35EF BK420

## 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® HTN54G35EF BK420 is a 35% glass reinforced, toughened, heat stabilized high performance polyamide resin, developed for electrical and electronics applications. 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	11000 / -	MPa	ISO 527-1/-2
Stress at break	190 / -	MPa	ISO 527-1/-2
Strain at break	3 / -	%	ISO 527-1/-2
Charpy impact strength, 73°F	82 / -	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 73°F	11 / -	kJ/m <sup>2</sup>	ISO 179/1eA
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, first heat	300 / *	°C	ISO 11357-1/-3
Temp. of deflection under load, 260 psi	262 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	20 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion			ISO 11359-1/-2
normal	60 / *	E-6/K	
Normal, -40-23°C	55 / *	E-6/K	
Parallel, -40-23°C	20 / *	E-6/K	
Flammability	dry / cond	Unit	Test Standard
Oxygen index	23 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index, 120mil	960 / -	°C	IEC 60695-2-12
Glow Wire Ignition Temperature, 120mil	800 / -	°C	IEC 60695-2-13
FMVSS Class	SE	-	ISO 3795 (FMVSS 302)
Electrical properties	dry / cond	Unit	Test Standard
Relative permittivity			IEC 62631-2-1
100Hz	4.3 / -	-	
1MHz	3.9 / -	-	
Dissipation factor			IEC 62631-2-1
100Hz	50 / -	E-4	
1MHz	155 / -	E-4	
Volume resistivity	>1E13 / -	Ohm*m	IEC 62631-3-1
Electric strength	32 / 31	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 <sup>3</sup>	ISO 1183
Injection	Value	Unit	Test Standard
Drying Recommended	yes	-	-
Drying Temperature	≥100	°C	-
Drying Time, Dehumidified Dryer	6 - 8	h	-

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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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	• 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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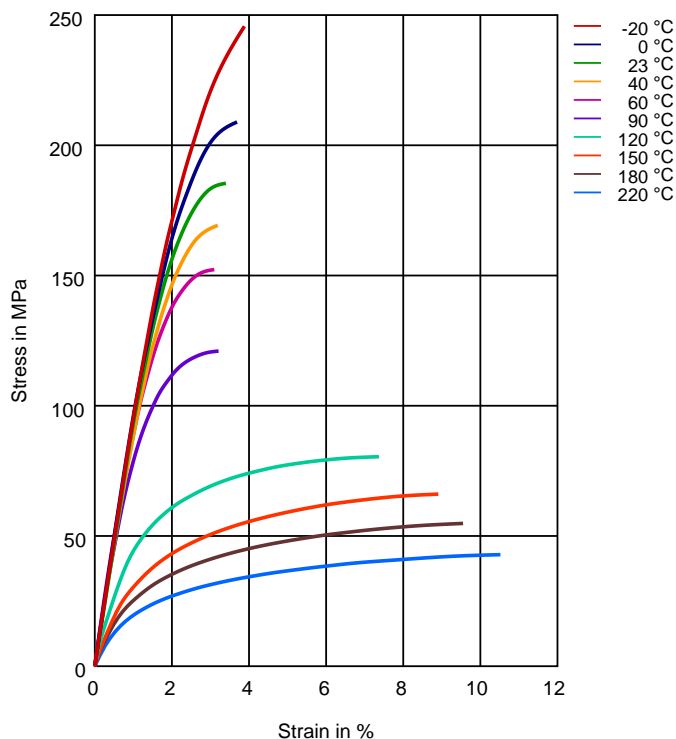


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## HIGH PERFORMANCE POLYAMIDE RESIN

Diagrams

Stress-strain (dry)



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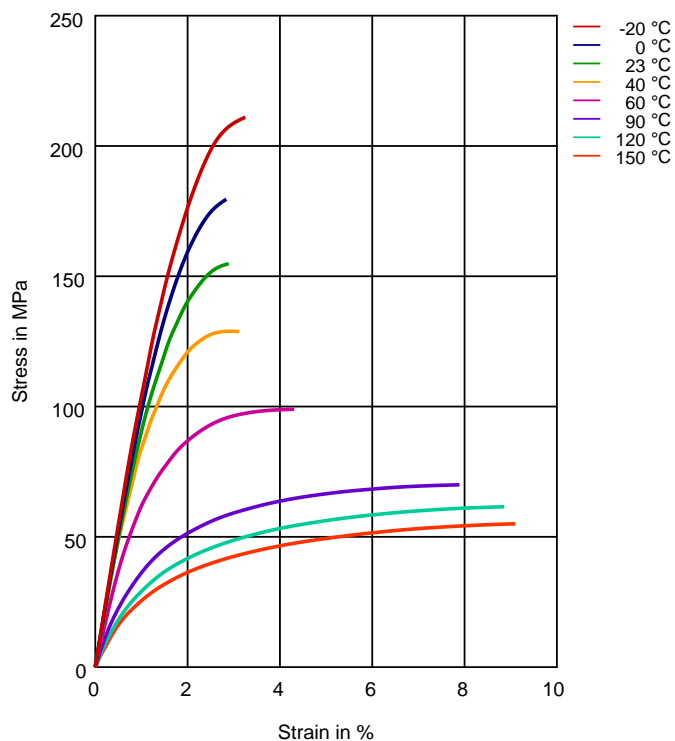
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## HIGH PERFORMANCE POLYAMIDE RESIN

Stress-strain (cond.)



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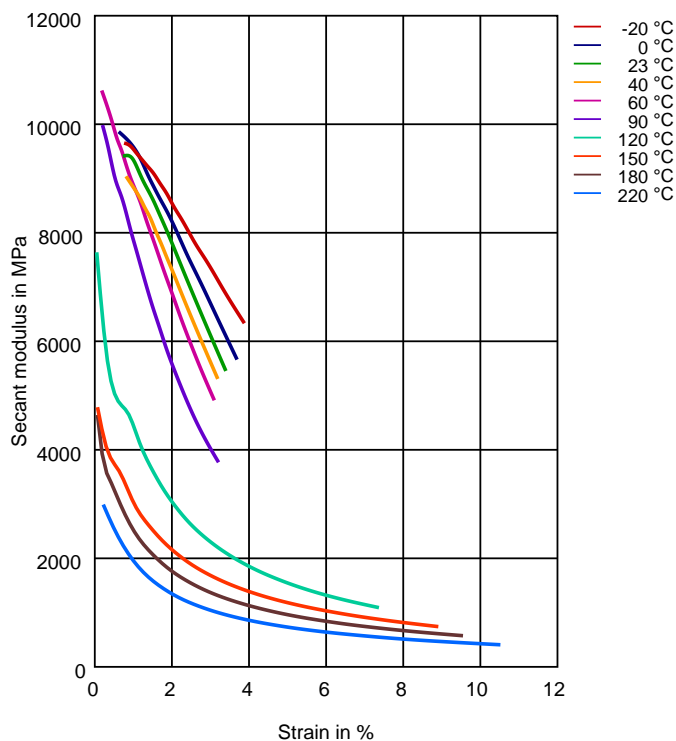
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# DuPont™ Zytel® HTN54G35EF BK420

## HIGH PERFORMANCE POLYAMIDE RESIN

Secant modulus-strain (dry)



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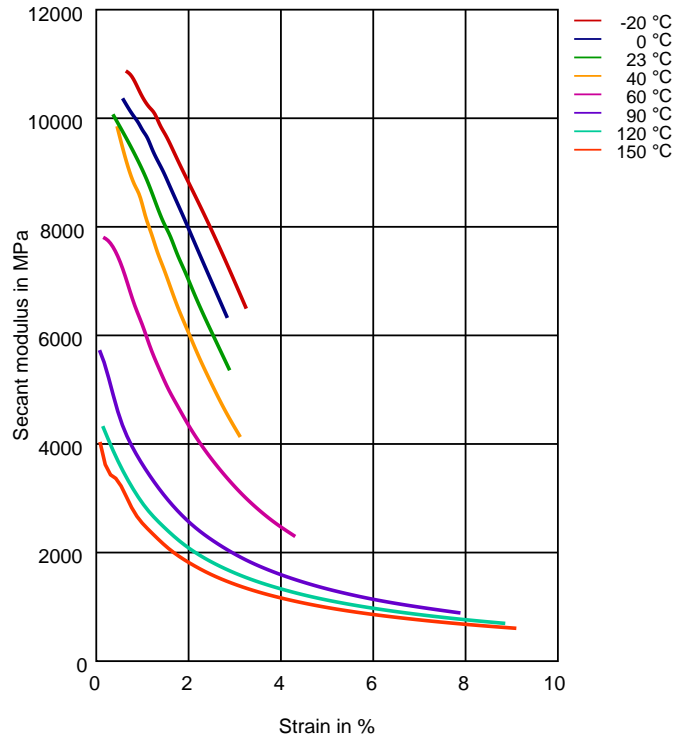
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## HIGH PERFORMANCE POLYAMIDE RESIN

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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