DuPont™ Zytel® HTNFR52G45BL BK337

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® HTNFR52G45BL BK337 is a 45% glass reinforced, flame retardant, lubricated high performance polyamide resin that has been developed for connector applications.

General information	Value	Unit	Test Standard
Resin Identification	PA6T/66-GF45FR(16+72)	-	ISO 1043
Part Marking Code	PA6T/66-GF45FR(16+72)	-	ISO 11469
Part Marking Code	>PPA-GF45FR<	-	SAE J1344
Rheological properties	**dry / cond**	**Unit**	**Test Standard**
Molding shrinkage, parallel	0.2 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.6 / -	%	ISO 294-4, 2577
Mechanical properties	**dry / cond**	**Unit**	**Test Standard**
Tensile Modulus	17000 / 17000	MPa	ISO 527-1/-2
Stress at break	175 / 155	MPa	ISO 527-1/-2
Strain at break	1.3 / 1.5	%	ISO 527-1/-2
Flexural Modulus	15200 / 15200	MPa	ISO 178
Flexural Strength	290 / 260	MPa	ISO 178
Charpy impact strength			ISO 179/1eU
73°F	42 / 36	kJ/m²	
-22°F	40 / 36	kJ/m²	
Charpy notched impact strength			ISO 179/1eA
73°F	13 / -	kJ/m²	
-40°F	13 / -	kJ/m²	
Izod notched impact strength, 73°F	12 / -	kJ/m²	ISO 180/1A
Thermal properties	**dry / cond**	**Unit**	**Test Standard**
Melting temperature, first heat	310 / *	°C	ISO 11357-1/-3
Temp. of deflection under load			ISO 75-1/-2
260 psi	284 / *	°C	
65 psi	300 / *	°C	
Coeff. of linear therm. expansion, parallel	15 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion			ISO 11359-1/-2
normal	50 / *	E-6/K	
Normal, -40-23°C	50 / *	E-6/K	
Normal, 55-160°C	75 / *	E-6/K	
Parallel, -40-23°C	15 / *	E-6/K	
Parallel, 55-160°C	8 / *	E-6/K	
RTI, electrical			UL 746B
30mil	140 / *	°C	
60mil	140 / *	°C	
120mil	140	°C	
RTI, impact			UL 746B
30mil	120	°C	
60mil	120 / *	°C	
120mil	120	°C	

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

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RTI, strength			UL 746B
30mil	120	°C	
60mil	120 / *	°C	
120mil	130	°C	
Flammability	**dry / cond**	**Unit**	**Test Standard**
Burning Behav. at 60mil nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
UL recognition	yes / *	-	UL 94
Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
UL recognition	yes / *	-	UL 94
Oxygen index	49 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index, 40mil	960 / -	°C	IEC 60695-2-1/2
Glow Wire Ignition Temperature, 40mil	900 / -	°C	IEC 60695-2-1/3
Glow Wire Temperature, No Flame			IEC 60335-1
40mil	875 / -	°C	
60mil	875 / -	°C	
80mil	875 / -	°C	
120mil	875 / -	°C	
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<100	mm/min	ISO 3795 (FMVSS 302)
Electrical properties	**dry / cond**	**Unit**	**Test Standard**
Relative permittivity			IEC 60250
100Hz	3.9 / -	-	
1MHz	3.6 / -	-	
Dissipation factor			IEC 60250
100Hz	45 / -	E-4	
1MHz	112 / -	E-4	
Volume resistivity	>1E13 / -	Ohm*m	IEC 60093
Electric strength	31 / -	kV/mm	IEC 60243-1
Comparative tracking index	500 / -	-	IEC 60112
Other properties	**dry / cond**	**Unit**	**Test Standard**
Density	1760 / -	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		
Delivery form	• Pellets		
Additives	• Lubricants	• Release agent	
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 holdup time and temperature of the resin in the machine. Purge degraded resin carefully with HDPE.

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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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