

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
Part Marking Code	>PA6T/66-GF45FR <	-	ISO 11469
Part Marking Code	>PPA-GF45FR<	-	SAE J1344
Rheological properties	dry / cond	Unit	Test Standard
Moulding shrinkage, parallel	0.2 / *	%	ISO 294-4, 2577
Moulding 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
23°C	42 / 36	kJ/m²	
-30°C	40 / 36	kJ/m²	
Charpy notched impact strength			ISO 179/1eA
23°C	13 / -	kJ/m²	
-40°C	13 / -	kJ/m²	
Izod notched impact strength, 23°C	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
1.8 MPa	284 / *	°C	
0.45 MPa	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
0.8mm	140 / *	°C	
1.5mm	140 / *	°C	
3mm	140	°C	
RTI, impact			UL 746B
0.8mm	120	°C	
1.5mm	120 / *	°C	
3mm	120	°C	
RTI, strength			UL 746B
0.8mm	120	°C	
1.5mm	120 / *	°C	
3mm	130	°C	

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

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Flammability	dry / cond	Unit	Test Standard
Burning Behav. at 1.5mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
UL recognition	UL / *	-	-
Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.8 / *	mm	IEC 60695-11-10
UL recognition	UL / *	-	-
Oxygen index	49 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index, 1mm	960 / -	°C	IEC 60695-2-1/2
Glow Wire Ignition Temperature, 1mm	900 / -	°C	IEC 60695-2-1/3
Glow Wire Temperature, No Flame			IEC 60335-1
1mm	875 / -	°C	
1.5mm	875 / -	°C	
2mm	875 / -	°C	
3mm	875 / -	°C	
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
Comparative tracking index	450 / -	-	IEC 60112
Other properties	dry / cond	Unit	Test Standard
Density	1760 / -	kg/m³	ISO 1183

Characteristics			
Processing	• Injection Moulding		
Delivery form	• Pellets		
Additives	• Lubricants • Release agent		
Regional Availability	• North America	• Asia Pacific	• Near East/Africa
	• Europe	• South and Central America	• Global

Processing Texts

Injection molding

PREPROCESSING

Drying recommended = Yes, if moisture content of resin exceeds recommended level

Drying temperature = 100°C

Drying time, dehumidified dryer = 6-8 h

Processing moisture content = <0.1 %

PROCESSING

Melt temperature optimum = 325°C

Melt temperature range = 320-330°C

Mold temperature range = 85-105°C

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.

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 4.0mm (Hytrel® measured at 2 mm), IEC Electrical properties measured at 2.0mm, all ASTM properties measured at 3.2mm, and test temperatures are 23°C unless otherwise stated.

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