

DuPont Performance Polymers Zytel® HTN FR52G30NHF BK337 Polyphthalamide (PPA) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 30% Glass Fiber Reinforced

Material Notes:

Zytel® HTNFR52G30NHF BK337 is a 30% glass reinforced, flame retardant, lubricated high performance polyamide resin with improved flow. It is also a PPA resin and it uses a non-halogenated flame retardant. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-HTN-FR52G30NHF-BK337-Polyphthalamide-PPA-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.46 g/cc	0.0527 lb/in ³	DAM; ISO 1183
Filler Content	30 %	30 %	DAM
Linear Mold Shrinkage, Flow	0.0030 cm/cm @Thickness 2.00 mm	0.0030 in/in @Thickness 0.0787 in	DAM; ISO 294-4
Linear Mold Shrinkage, Transverse	0.010 cm/cm @Thickness 2.00 mm	0.010 in/in @Thickness 0.0787 in	DAM; ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	135 MPa @Temperature 23.0 °C	19600 psi @Temperature 73.4 °F	50%RH; ISO 527
	145 MPa @Temperature 23.0 °C	21000 psi @Temperature 73.4 °F	DAM; ISO 527
Elongation at Break	1.9 % @Temperature 23.0 °C	1.9 % @Temperature 73.4 °F	50%RH; ISO 527
	2.1 % @Temperature 23.0 °C	2.1 % @Temperature 73.4 °F	DAM; ISO 527
Tensile Modulus	10.7 GPa @Temperature 23.0 °C	1550 ksi @Temperature 73.4 °F	DAM; ISO 527
	11.3 GPa @Temperature 23.0 °C	1640 ksi @Temperature 73.4 °F	50%RH; ISO 527
Flexural Strength	200 MPa @Temperature 23.0 °C	29000 psi @Temperature 73.4 °F	50%RH; ISO 178

Mechanical Properties	225 MPa Metric	32600 psi English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	9.80 GPa	1420 ksi	DAM; ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	10.8 GPa	1570 ksi	50%RH; ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	3.50 J/cm²	16.7 ft-lb/in²	50%RH; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	4.00 J/cm²	19.0 ft-lb/in²	DAM; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	4.00 J/cm²	19.0 ft-lb/in²	50%RH; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	4.50 J/cm²	21.4 ft-lb/in²	DAM; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.700 J/cm²	3.33 ft-lb/in²	DAM; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.700 J/cm²	3.33 ft-lb/in²	50%RH; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.700 J/cm²	3.33 ft-lb/in²	DAM; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.700 J/cm²	3.33 ft-lb/in²	50%RH; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 µm/m-°C	278 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	500 µm/m-°C	278 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature 160 - 250 °C	@Temperature 320 - 482 °F	
	500 µm/m-°C	278 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	

Thermal Properties	500 $\mu\text{m}/\text{m}^{\circ}\text{C}$ Metric	278 $\mu\text{in}/\text{in}^{\circ}\text{F}$ English	Comments DAM; ISO 11359-1/-2
	@Temperature 55.0 - 160 $^{\circ}\text{C}$	@Temperature 131 - 320 $^{\circ}\text{F}$	
CTE, linear, Transverse to Flow	60.0 $\mu\text{m}/\text{m}^{\circ}\text{C}$	33.3 $\mu\text{in}/\text{in}^{\circ}\text{F}$	DAM; ISO 11359-1/-2
	@Temperature -40.0 - 23.0 $^{\circ}\text{C}$	@Temperature -40.0 - 73.4 $^{\circ}\text{F}$	
	62.0 $\mu\text{m}/\text{m}^{\circ}\text{C}$	34.4 $\mu\text{in}/\text{in}^{\circ}\text{F}$	DAM; ISO 11359-1/-2
	@Temperature 23.0 - 55.0 $^{\circ}\text{C}$	@Temperature 73.4 - 131 $^{\circ}\text{F}$	
	95.0 $\mu\text{m}/\text{m}^{\circ}\text{C}$	52.8 $\mu\text{in}/\text{in}^{\circ}\text{F}$	DAM; ISO 11359-1/-2
	@Temperature 55.0 - 160 $^{\circ}\text{C}$	@Temperature 131 - 320 $^{\circ}\text{F}$	
	120 $\mu\text{m}/\text{m}^{\circ}\text{C}$	66.7 $\mu\text{in}/\text{in}^{\circ}\text{F}$	DAM; ISO 11359-1/-2
	@Temperature 160 - 250 $^{\circ}\text{C}$	@Temperature 320 - 482 $^{\circ}\text{F}$	
Melting Point	310 $^{\circ}\text{C}$	590 $^{\circ}\text{F}$	10 $^{\circ}\text{C}/\text{min}$, First Heat; DAM; ISO 11357-1/-3
Deflection Temperature at 1.8 MPa (264 psi)	281 $^{\circ}\text{C}$	538 $^{\circ}\text{F}$	DAM; ISO 75-1/-2
UL RTI, Electrical	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	DAM; UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	DAM; UL 746B
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	DAM; UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	DAM; UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical with Impact	115 $^{\circ}\text{C}$	239 $^{\circ}\text{F}$	DAM; UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	120 $^{\circ}\text{C}$	248 $^{\circ}\text{F}$	DAM; UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	125 $^{\circ}\text{C}$	257 $^{\circ}\text{F}$	DAM; UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	130 $^{\circ}\text{C}$	266 $^{\circ}\text{F}$	DAM; UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	

Thermal Properties Flammability, UL 94	Metric	English	Comments DAM, UL 94
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	V-0	V-0	DAM; UL94
	@Thickness 3.00 mm	@Thickness 0.118 in	
Glow Wire Test	700 °C	1290 °F	DAM; Ignition; IEC 60695-2-13
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	775 °C	1430 °F	DAM; Ignition; IEC 60695-2-13
	@Thickness 3.00 mm	@Thickness 0.118 in	
	960 °C	1760 °F	DAM; IEC 60695-2-12
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	960 °C	1760 °F	DAM; IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	600 V	600 V	DAM; IEC 60112
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Processing Properties	Metric	English	Comments
Melt Temperature	320 - 325 °C	608 - 617 °F	DAM
Mold Temperature	85.0 - 130 °C	185 - 266 °F	DAM
Drying Temperature	100 °C	212 °F	DAM
Dry Time	6.00 - 8.00 hour	6.00 - 8.00 hour	DAM
Moisture Content	<= 0.10 %	<= 0.10 %	DAM

Descriptive Properties	Value	Comments
Appearance	Black Color	DAM
Filler	Glass Reinforced	DAM
Forms	Pellets	DAM
Generic	Polyphthalamide (PPA)	DAM
Material Status	Preliminary Data	DAM
Part Marking Code	>PA6T/66-GF30FR<	ISO 11469; DAM

Descriptive Properties	Value	Comments
Polymer Family	High performance polyamide	DAM
Polymer Type	Partially Aromatic PA, PPA	DAM
Processing Method	Injection Molding	DAM
Product Category	Flame Retardant Resins	DAM
	Glass Reinforced Resins	DAM
Region Available - Global	Yes	DAM
Resin Identification	PA6T/66-GF30FR	ISO 1043; DAM
RoHS Compliance	Contact Manufacturer	DAM

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