

DuPont Performance Polymers Zytel® HTN 53G50HSLR BK083 Polyphthalamide (PPA) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 50% Glass Fiber Reinforced

Material Notes:

50% Glass Reinforced High Performance Polyamide with Improved Impact and Stiffness Zytel HTN53G50HSLR BK083 is a 50% glass reinforced heat stabilized lubricated high performance polyamide resin developed for moderate temperature structural applications. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-HTN-53G50HSLR-BK083-Polyphthalamide-PPA-Unverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.59 g/cc	0.0574 lb/in ³	DAM; ISO 1183
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	DAM; ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.0050 cm/cm	0.0050 in/in	DAM; ISO 294-4 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	215 MPa	31200 psi	50%RH; ISO 527-1/-2
	250 MPa	36300 psi	DAM; ISO 527-1/-2
Elongation at Break	2.7 %	2.7 %	DAM; ISO 527-1/-2
	3.0 %	3.0 %	50%RH; ISO 527-1/-2
Tensile Modulus	16.5 GPa	2390 ksi	DAM; ISO 527-1/-2
	16.5 GPa	2390 ksi	50%RH; ISO 527-1/-2
Flexural Modulus	15.3 GPa	2220 ksi	DAM; ISO 178
Izod Impact, Notched (ISO)	100 kJ/m ²	47.6 ft-lb/in ²	DAM; ISO 180/1A
Charpy Impact Unnotched	9.00 J/cm ²	42.8 ft-lb/in ²	50%RH; ISO 179/1eU
	9.50 J/cm ²	45.2 ft-lb/in ²	DAM; ISO 179/1eU
	6.50 J/cm ²	30.9 ft-lb/in ²	DAM; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	6.50 J/cm ²	30.9 ft-lb/in ²	50%RH; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.30 J/cm ²	6.19 ft-lb/in ²	50%RH; ISO 179/1eA

Mechanical Properties	Metric	English	Comments
	1.30 J/cm ²	6.19 ft-lb/in ²	DAM; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.30 J/cm ²	6.19 ft-lb/in ²	50%RH; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Tensile Creep Modulus, 1 hour	10000 MPa	1.45e+6 psi	50%RH; ISO 899-1
	@Time 3600 sec	@Time 1.00 hour	
Tensile Creep Modulus, 1000 hours	7500 MPa	1.09e+6 psi	50%RH; ISO 899-1
	@Time 3.60e+6 sec	@Time 1000 hour	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	17.0 µm/m-°C	9.44 µin/in-°F	DAM; ISO 11359-1/-2
	19.0 µm/m-°C	10.6 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
CTE, linear, Transverse to Flow	59.0 µm/m-°C	32.8 µin/in-°F	DAM; ISO 11359-1/-2
	59.0 µm/m-°C	32.8 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	95.0 µm/m-°C	52.8 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	
Melting Point	260 °C	500 °F	DAM; first heat; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	254 °C	489 °F	DAM; ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	234 °C	453 °F	DAM; ISO 75-1/-2
Flammability, UL94	HB	HB	DAM; IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	DAM; IEC 60695-11-10
	@Thickness 0.800 mm	@Thickness 0.0315 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	DAM; IEC 60093

Comparative Tracking Index Electrical Properties	550 V Metric	550 V English	DAM: IEC 60112 Comments
Descriptive Properties	Value		Comments
Additives	Release agent		
Delivery Form	Pellets		
Part Marking Code	>PA-GF50<		ISO 11469
	>PA-GF50<		SAE J1344
Processing	Injection Moulding		
Regional Availability	Asia Pacific		
	Europe		
	Global		
	Near East/Africa		
	North America		
	South and Central America		
Special Characteristics	Heat stabilised or stable to heat		
UL recognition	UL		DAM

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