

DuPont™ Zytel® HTN

high performance polyamide resin

Zytel® HTN54G50HSLR BK031

Zytel® HTN54G50HSLR BK031 is a 50% glass reinforced, toughened, heat stabilized, hydrolysis resistant high performance polyamide resin developed for retention of toughness and stiffness with moisture in structural applications. It is also a PPA resin.

Property	Test Method	Units	Value		
			DAM	50%RH	
Identification					
Part Marking Code	ISO 11469		>PA-IGF50<		
Part Marking Code	SAE J1344		>PPA-IGF50<		
Mechanical					
Stress at Break	ISO 527	MPa (kpsi)	220 (31.9)	190 (27.6)	
Strain at Break	ISO 527	%	2.5	2.5	
Tensile Modulus	ISO 527	MPa (kpsi)	15700 (2270)	15700 (2270)	
Poissons Ratio	ISO 527		0.38		
Flexural Modulus	ISO 178	MPa (kpsi)	14000 (2030)		
Flexural Strength	ISO 178	MPa (kpsi)	330 (48)		
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²			
			-30°C (-22°F)	13	13
			23°C (73°F)	14	13
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²			
			-30°C (-22°F)	95	80
			23°C (73°F)	95	80

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, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.
 Test temperatures are 23°C unless otherwise stated.

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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Property	Test Method	Units	Value	
			DAM	50%RH
Thermal				
Deflection Temperature 0.45MPa	ISO 75-1/-2	°C (°F)	288 (550)	
1.80MPa			265 (509)	
Melting Temperature 10°C/min, First Heat	ISO 11357-1/-3	°C (°F)	300 (572)	
CLTE, Parallel -40 - 23°C (-40 - 73°F)	ISO 11359-1/-2	E-4/C (E-4/F)	0.14 (0.07)	
23 - 55°C (73 - 130°F)			0.14 (0.07)	
CLTE, Normal -40 - 23°C (-40 - 73°F)	ISO 11359-1/-2	E-4/C (E-4/F)	0.50 (0.27)	
23 - 55°C (73 - 130°F)			0.50 (0.27)	
125 - 160°C (257 - 320°F)			0.95 (0.52)	
Electrical				
Surface Resistivity	IEC 60093	ohm	>1E15	
Volume Resistivity	IEC 60093	ohm m	>1E13	
CTI	UL 746A	V	550	
Flammability				
Flammability Classification 0.75mm	UL94		HB	
Temperature Index				
RTI, Electrical 0.75mm	UL 746B	°C	150	
1.5mm			150	
3.0mm			150	

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Property	Test Method	Units	Value	
			DAM	50%RH
Temperature Index				
RTI, Impact	UL 746B	°C		
0.75mm			110	
1.5mm			120	
3.0mm			130	
RTI, Strength	UL 746B	°C		
0.75mm			130	
1.5mm			140	
3.0mm			150	
Other				
Density	ISO 1183	kg/m ³ (g/cm ³)	1580 (1.58)	
Water Absorption	ISO 62, Similar to	%		
Immersion 24h			0.27	
Molding Shrinkage	ISO 294-4	%		
Normal, 2.0mm			0.4	
Parallel, 2.0mm			0.2	
Processing				
Melt Temperature Range		°C (°F)	320-330 (610-625)	
Melt Temperature Optimum		°C (°F)	325 (620)	
Mold Temperature Range		°C (°F)	85-135 (185-275)	
Drying Time, Dehumidified Dryer		h	6-8	
Drying Temperature		°C (°F)	100 (212)	
Processing Moisture Content		%	<0.10	

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