

DuPont™ Zytel® HTN

high performance polyamide resin

Zytel® HTNFR52G30BL NC010

Zytel® HTNFR52G30BL NC010 is a 30% glass reinforced, flame retardant, lubricated high performance polyamide resin that has been developed for connector applications.

Property	Test Method	Units	Value	
			DAM	50%RH
Identification				
Part Marking Code	ISO 11469		>PA6T/66-GF30FR<	
Part Marking Code	SAE J1344		>PPA-GF30FR<	
Mechanical				
Stress at Break	ISO 527	MPa (kpsi)	170 (24.7)	150 (21.7)
Strain at Break	ISO 527	%	2	2
Tensile Modulus	ISO 527	MPa (kpsi)	11800 (1710)	
Flexural Modulus	ISO 178	MPa (kpsi)	10500 (1520)	
Flexural Strength	ISO 178	MPa (kpsi)	250 (36.3)	225 (32.6)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²		
-30°C (-22°F)			11	
23°C (73°F)			11	
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²		
-30°C (-22°F)			50	40
23°C (73°F)			50	30

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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			DAM	50%RH
Thermal				
Deflection Temperature 0.45MPa	ISO 75-1/-2	°C (°F)	300 (572)	
1.80MPa			282 (540)	
Melting Temperature 10°C/min, First Heat	ISO 11357-1/-3	°C (°F)	310 (590)	
CLTE, Parallel -40 - 23°C (-40 - 73°F)	ISO 11359-1/-2	E-4/C (E-4/F)	0.2 (0.11)	
23 - 55°C (73 - 130°F)			0.2 (0.11)	
55 - 160°C (131 - 320°F)			0.1 (0.06)	
CLTE, Normal -40 - 23°C (-40 - 73°F)	ISO 11359-1/-2	E-4/C (E-4/F)	0.57 (0.32)	
23 - 55°C (73 - 130°F)			0.63 (0.35)	
55 - 160°C (131 - 320°F)			1.0 (0.56)	
Electrical				
Surface Resistivity	IEC 60093	ohm	>1E15	
Volume Resistivity	IEC 60093	ohm m	>1E13	
Relative Permittivity 1E2 Hz	IEC 60250		3.5	
1E3 Hz			3.5	
1E6 Hz			3.3	
Dissipation Factor 1E2 Hz	IEC 60250	E-4	50	
1E3 Hz			85	
1E6 Hz			140	
CTI	IEC 60112	V	525	
CTI M	IEC 60112	V	175	

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Property	Test Method	Units	Value	
			DAM	50%RH
Flammability				
Flammability Classification	UL94			
0.75mm			V-0	
5V Rating	UL94		5VA	
5V Min. Thickness Tested	UL94	mm	1.5	
Glow Wire Flammability Index	IEC 60695-2-12	°C		
0.75mm			960	
1.5mm			960	
3.0mm			960	
Glow Wire Ignition Temperature	IEC 60695-2-13	°C		
0.75mm			925	
1.5mm			925	
3.0mm			960	
High Amperage Arc Ignition Resistance	UL 746A	arcs		
0.75mm			150	
1.5mm			150	
3.0mm			150	
Hot Wire Ignition	UL 746A	s		
0.75mm			150	
1.5mm			150	
3.0mm			150	

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			DAM	50%RH
Temperature Index				
RTI, Electrical	UL 746B	°C		
0.75mm			140	
1.5mm			140	
3.0mm			140	
RTI, Impact				
0.75mm	UL 746B	°C		
1.5mm			120	
3.0mm			120	
RTI, Strength				
0.75mm	UL 746B	°C		
1.5mm			120	
3.0mm			130	
Other				
Density	ISO 1183	kg/m ³ (g/cm ³)	1620	(1.62)
Water Absorption				
Equilibrium 50%RH, 1.0mm	ISO 62, Similar to	%	1.5	
Molding Shrinkage				
Normal, 2.0mm	ISO 294-4	%	0.8	
Parallel, 2.0mm			0.3	
Processing				
Melt Temperature Range		°C (°F)	320-330	(610-625)
Melt Temperature Optimum		°C (°F)	325	(620)
Mold Temperature Range		°C (°F)	85-105	(190-220)
Drying Time, Dehumidified Dryer		h	6-8	
Drying Temperature		°C (°F)	100	(210)
Processing Moisture Content		%	<0.10	

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