

DuPont™ Zytel® HTN

high performance polyamide resin

PRELIMINARY DATA

Zytel® HTNFR52G30NHF NC010

Zytel® HTNFR52G30NHF NC010 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.

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)	150 (21.7)	135 (19)
Strain at Break	ISO 527	%	2.1	2
Tensile Modulus	ISO 527	MPa (kpsi)	11000 (1590)	11300 (1640)
Flexural Modulus	ISO 178	MPa (kpsi)	10200 (1480)	10500 (1520)
Flexural Strength	ISO 178	MPa (kpsi)	215 (31.2)	200 (29)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²		
-30°C (-22°F)			7	7
23°C (73°F)			7	7
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²		
-30°C (-22°F)			35	35
23°C (73°F)			40	35

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.

For molding machine components, use corrosion resistant and wear resistant steel. For details please contact your DuPont representative. Limit the residence time of the resin in the machine. Use proper protective equipment and adequate ventilation.

The above data are preliminary and are subject to change as additional data are developed on subsequent lots.

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Property	Test Method	Units	Value	
			DAM	50%RH
Thermal				
Deflection Temperature 1.80MPa	ISO 75-1/-2	°C (°F)	285 (545)	
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)	0.18 (0.10)	
23 - 55°C (73 - 130°F)			0.18 (0.10)	
55 - 160°C (131 - 320°F)			0.12 (0.07)	
160 - 250°C (320 - 480°F)			0.11 (0.06)	
CLTE, Normal -40 - 23°C (-40 - 73°F)	ISO 11359-1/-2	E-4/C (E-4/F)	0.60 (0.33)	
23 - 55°C (73 - 130°F)			0.62 (0.34)	
55 - 160°C (131 - 320°F)			0.95 (0.53)	
160 - 250°C (320 - 480°F)			1.20 (0.67)	
Electrical				
Surface Resistivity	IEC 60093	ohm	1E16	
Volume Resistivity	IEC 60093	ohm m	1E13	
Electric Strength 1.0mm	IEC 60243-1	kV/mm (V/mil)	37 (940)	
CTI	IEC 60112	V	600	

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Property	Test Method	Units	Value	
			DAM	50%RH
Flammability				
Flammability Classification	UL94			
0.4mm			V-0	
3.0mm			V-0	
Oxygen Index	ISO 4589-1/-2	%	34	
Glow Wire Flammability Index	IEC 60695-2-12	°C		
0.4mm			960	
3.0mm			960	
Glow Wire Ignition Temperature	IEC 60695-2-13	°C		
0.4mm			700	
3.0mm			775	
Temperature Index				
RTI, Electrical	UL 746B	°C		
0.4mm			140	
3.0mm			140	
RTI, Impact	UL 746B	°C		
0.75mm			115	
3.0mm			120	
RTI, Strength	UL 746B	°C		
0.75mm			125	
3.0mm			130	
Other				
Density	ISO 1183	kg/m ³ (g/cm ³)	1460 (1.46)	
Hardness, Rockwell	ISO 2039/2			
Scale M			97	
Scale R			119	
Molding Shrinkage	ISO 294-4	%		
Normal, 2.0mm			1.1	
Parallel, 2.0mm			0.3	

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			DAM	50%RH
Processing				
Melt Temperature Range		°C (°F)	320-325 (605-615)	
Mold Temperature Range		°C (°F)	85-130 (185-265)	
Drying Time, Dehumidified Dryer		h	6-8	
Drying Temperature		°C (°F)	100 (210)	
Processing Moisture Content		%	<0.10	

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