

# DuPont™ Zytel®

nylon resin

## Zytel® 70G30HSL NC010

Zytel® 70G30HSL NC010 is a 30% glass fiber reinforced, heat stabilized polyamide 66 resin for injection molding.

Property	Test Method	Units	Value	
			DAM	50%RH
<b>Identification</b>				
Resin Identification	ISO 1043		PA66-GF30	
Part Marking Code	ISO 11469		>PA66-GF30<	
<b>Mechanical</b>				
Stress at Break	ISO 527	MPa (kpsi)	195 (28.3)	125 (18.1)
Strain at Break	ISO 527	%	3.4	5
Tensile Modulus	ISO 527	MPa (kpsi)	10000 (1450)	7200 (1045)
Tensile Creep Modulus	ISO 899	MPa (kpsi)		
1h				6800 (990)
1000h				5100 (740)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m <sup>2</sup>		
-30°C (-22°F)			10	10
23°C (73°F)			12	16
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m <sup>2</sup>		
-30°C (-22°F)			70	73
23°C (73°F)			82	93

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.

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<b>Thermal</b>				
Deflection Temperature 0.45MPa	ISO 75f	°C (°F)	261 (502)	
1.80MPa			248 (478)	
Melting Temperature 10°C/min	ISO 11357-1/-3	°C (°F)	263 (505)	
CLTE, Normal 23 - 55°C (73 - 130°F)	ISO 11359-1/-2	E-4/C (E-4/F)	1.07 (0.60)	
CLTE, Parallel 23 - 55°C (73 - 130°F)	ISO 11359-1/-2	E-4/C (E-4/F)	0.22 (0.12)	
Vicat Softening Temperature 50N	ISO 306	°C (°F)	250 (482)	
<b>Electrical</b>				
Surface Resistivity	IEC 60093	ohm	>1E15	1E13
Relative Permittivity	IEC 60250			
1E2 Hz			4.4	10.8
1E6 Hz			4.1	4.6
Volume Resistivity	IEC 60093	ohm m	>1E15	1E9
Dissipation Factor	IEC 60250	E-4		
1E2 Hz			70	4600
1E6 Hz			150	650
Electric Strength	IEC 60243-1	kV/mm (V/mil)		
1.0mm			38 (964)	32 (812)
CTI	IEC 60112	V	400	
CTI	UL 746A	V		
3.0mm			400	

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			DAM	50%RH
<b>Flammability</b>				
Flammability Classification	IEC 60695-11-10		HB	
0.75mm				
1.5mm				
3.0mm	UL94		HB	
Flammability Classification				
0.75mm				
1.5mm	UL 746A	arcs	120	
3.0mm				
High Amperage Arc Ignition Resistance				
0.75mm	UL 746A	s	7	
1.5mm				
3.0mm				
Hot Wire Ignition	UL 746B	°C	140	
0.75mm				
1.5mm				
3.0mm	UL 746B	°C	125	
RTI, Impact				
0.75mm				
1.5mm	UL 746B	°C	140	
3.0mm				
RTI, Strength				
0.75mm	UL 746B	°C	140	
1.5mm				
3.0mm				

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<b>Other</b>				
Density	ISO 1183	kg/m <sup>3</sup> (g/cm <sup>3</sup> )	1370 (1.37)	
Ball Indention Hardness H 961/30	ISO 2039-1	MPa (kpsi)	275 (39)	187 (27)
Hardness, Rockwell Scale M	ISO 2039/2		104	88
Scale R			124	117
Water Absorption Equilibrium 50%RH	ISO 62, Similar to	%	1.9	
Saturation, immersed			6	
Molding Shrinkage Normal, 2.0mm	ISO 294-4	%	1.1	
Parallel, 2.0mm			0.3	
<b>Processing</b>				
Melt Temperature Range		°C (°F)	285-305 (545-580)	
Melt Temperature Optimum		°C (°F)	295 (565)	
Mold Temperature Range		°C (°F)	70-120 (160-250)	
Mold Temperature Optimum		°C (°F)	100 (210)	
Drying Time, Dehumidified Dryer		h	2-4	
Drying Temperature		°C (°F)	80 (175)	
Processing Moisture Content		%	<0.20	

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