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
Identification				
Resin Identification	ISO 1043		PA66-GF30	
Part Marking Code	ISO 11469		>PA66-GF30<	
Mechanical				
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^2		
-30°C (-22°F)			10	10
23°C (73°F)			12	16
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m^2		
-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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Property	Test Method	Units	Value	
			DAM	50%RH
Thermal				
Deflection Temperature	ISO 75f	°C (°F)		
0.45MPa			261 (502)	
1.80MPa			248 (478)	
Melting Temperature	ISO 11357-1/-3	°C (°F)		
10°C/min			263 (505)	
CLTE, Normal	ISO 11359-1/-2	E-4/C (E-4/F)		
23 - 55°C (73 - 130°F)			1.07 (0.60)	
CLTE, Parallel	ISO 11359-1/-2	E-4/C (E-4/F)		
23 - 55°C (73 - 130°F)			0.22 (0.12)	
Vicat Softening Temperature	ISO 306	°C (°F)		
50N			250 (482)	
Electrical				
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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Property	Test Method	Units	Value	
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Flammability				
Flammability Classification	IEC 60695-11-10			
0.75mm			HB	
1.5mm			HB	
3.0mm			HB	
Flammability Classification	UL94			
0.75mm			HB	
1.5mm			HB	
3.0mm			HB	
High Amperage Arc Ignition Resistance	UL 746A	arcs		
0.75mm			120	
1.5mm			120	
3.0mm			120	
Hot Wire Ignition	UL 746A	s		
0.75mm			7	
1.5mm			7	
3.0mm			60	
Temperature Index				
RTI, Electrical	UL 746B	°C		
0.75mm			140	
1.5mm			140	
3.0mm			140	
RTI, Impact	UL 746B	°C		
0.75mm			125	
1.5mm			125	
3.0mm			125	
RTI, Strength	UL 746B	°C		
0.75mm			140	
1.5mm			140	
3.0mm			140	

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Property	Test Method	Units	Value	
			DAM	50%RH
Other				
Density	ISO 1183	kg/m^3 (g/cm^3)	1370 (1.37)	
Ball Indention Hardness	ISO 2039-1	MPa (kpsi)		
H 961/30			275 (39)	187 (27)
Hardness, Rockwell	ISO 2039/2			
Scale M			104	88
Scale R			124	117
Water Absorption	ISO 62, Similar to	%		
Equilibrium 50%RH			1.9	
Saturation, immersed			6	
Molding Shrinkage	ISO 294-4	%		
Normal, 2.0mm			1.1	
Parallel, 2.0mm			0.3	
Processing				
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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