Zytel®

nylon resin

Zytel® 74G33L NC010

33% Glass Reinforced Nylon Resin

Zytel® 74G33L NC010 is a 33% glass reinforced nylon 66 and nylon 6 co-melt resin. This resin has properties comparable to those of glass reinforced nylon 66 with improved surface gloss.

Property	Test Method	Units	Value	
			DAM	50%RH
Mechanical				
Tensile Strength	ASTM D 638	MPa (kpsi)	186 (27.0)	121 (17.5)
Stress at Break	ISO 527-1/-2	MPa (kpsi)	185 (26.8)	112 (16.2)
Elongation at Break	ASTM D 638	%	4	7
Strain at Break	ISO 527-1/-2	%	3.5	7
Tensile Modulus	ISO 527-1/-2	MPa (kpsi)	10000 (1450)	6000 (870)
Flexural Modulus	ASTM D 790	MPa (kpsi)	8965 (1300)	4830 (700)
Flexural Modulus	ISO 178	MPa (kpsi)	8800 (1280)	5100 (740)
Flexural Strength	ASTM D 790	MPa (kpsi)	290 (42.0)	
Izod Impact	ASTM D 256	J/m (ft lb/in)	135 (2.5)	185 (3.5)
Notched Izod Impact	ISO 180/1A	kJ/m2		
-40C (-40F)			10	10
-30C (-22F)			11	10
23C (73F)			14	20
Unnotched Izod Impact	ISO 180/1U	kJ/m2		
-30C (-22F)			95	65
23C (73F)			100	100
Unnotched Impact	ASTM D 4812	J/m (ft lb/in)	1330 (25)	1385 (26)
Notched Charpy Impact	ISO 179/1eA	kJ/m2		
-40C (-40F)			10	10
-30C (-22F)			10	10
23C (73F)			12	18
Unnotched Charpy Impact	ISO 179/1eU	kJ/m2		
-30C (-22F)			70	65
23C (73F)			85	100

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.
Mechanical properties measured at 23°C (73°F) unless otherwise stated.

990105/991021

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Property	Test Method	Units	Value	
			DAM	50%RH
Thermal				
Heat Deflection Temperature	ASTM D 648	°C (°F)		
0.45MPa (66psi)			245 (473)	
1.8MPa (264psi)			225 (437)	
Deflection Temperature	ISO 75-1/-2	°C (°F)		
0.45MPa			250 (482)	
1.80MPa			225 (437)	
CLTE, Parallel	ASTM E 831	E-4/C (E-4/F)		
-40 - 23C (-40 - 73F)			0.22 (0.12)	
23 - 55C (73 - 130F)			0.14 (0.08)	
55 - 160C (130 - 320F)			0.08 (0.04)	
CLTE, Normal	ASTM E 831	E-4/C (E-4/F)		
-40 - 23C (-40 - 73F)			0.71 (0.39)	
23 - 55C (73 - 130F)			1.08 (0.60)	
55 - 160C (130 - 320F)			1.25 (0.69)	
Melting Point	ASTM D 3418	°C (°F)	259 (498)	
Melting Temperature	ISO 3146C	°C (°F)	255 (491)	
Electrical				
Relative Permittivity	IEC 60250			
1E2 Hz			4.2	
1E6 Hz			4.0	
Volume Resistivity	IEC 60093	ohm cm	1E16	
Dissipation Factor	IEC 60250	E-4		
1E2 Hz			100	
1E6 Hz			150	
Electric Strength	IEC 60243-1	kV/mm (V/mil)		
2.0mm			27 (686)	
Flammability				
Flammability Classification	UL94			
0.84mm			HB	
1.5mm			HB	
3.0mm			HB	
Limited Oxygen Index	ISO 4589	%	24	

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Property	Test Method	Units	Value	
			DAM	50%RH
Temperature Index				
RTI, Electrical	UL 746B	°C		
0.84mm			65	
1.5mm			65	
3.0mm			65	
RTI, Mechanical with Impact	UL 746B	°C		
0.84mm			65	
1.5mm			65	
3.0mm			65	
RTI, Mechanical without Impact	UL 746B	°C		
0.84mm			65	
1.5mm			65	
3.0mm			65	
Other				
Specific Gravity	ASTM D 792		1.39	
Density	ISO 1183	kg/m3 (g/cm3)	1390 (1.39)	
Humidity Absorption	ISO 62, Similar to	%		
Equilibrium 50%RH, 2.0mm			1.8	
Water Absorption	ISO 62, Similar to	%		
Immersion 24h, 2.0mm			1.5	
Saturation, immersed, 2.0mm			6.3	
Mold Shrinkage		%		
Flow, 3.2mm (0.126in)			0.2	
Transverse, 3.2mm (0.126in)			1.0	
Molding Shrinkage	ISO 294-4	%		
Normal, 2.0mm			0.8	
Parallel, 2.0mm			0.3	
Processing				
Melt Temperature Range		°C (°F)	290-305 (550-580)	
Mold Temperature Range		°C (°F)	65-120 (150-250)	
Processing Moisture Content		%	<0.20	

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