



Zytel®

nylon resin

Zytel® 71G13L NC010 Glass Reinforced Nylon Resin

Zytel® 71G13L NC010 is a 13% glass reinforced, impact modified PA 66 resin.

Property	Test Method	Units	Value	
			DAM	50%RH
Mechanical				
Tensile Strength	ASTM D 638	MPa (kpsi)	103 (15.0)	62 (9.0)
Stress at Break	ISO 527-1/-2	MPa (kpsi)	105 (15.2)	62 (9.0)
Elongation at Break	ASTM D 638	%	4	11
Strain at Break	ISO 527-1/-2	%	4.5	10
Tensile Modulus	ISO 527-1/-2	MPa (kpsi)	4700 (682)	3000 (435)
Shear Strength	ASTM D 732	MPa (kpsi)	62 (9)	
Flexural Modulus	ASTM D 790	MPa (kpsi)	3790 (550)	2070 (300)
Flexural Modulus	ISO 178	MPa (kpsi)	4100 (595)	2600 (377)
Flexural Strength	ASTM D 790	MPa (kpsi)	145 (21)	
Deformation Under Load 50C (122F), 13.8MPa (2000psi)	ASTM D 621	%	1.7	
Izod Impact	ASTM D 256	J/m (ft lb/in)	123 (2.3)	123 (2.3)
Notched Izod Impact	ISO 180/1A	kJ/m2		
-40C (-40F)			6	4
-30C (-22F)			7	4
23C (73F)		8	8	
Unnotched Izod Impact	ISO 180/1U	kJ/m2		
-30C (-22F)			65	
23C (73F)		70		
Notched Charpy Impact	ISO 179/1eA	kJ/m2		
-40C (-40F)			5	4
-30C (-22F)			5	5
23C (73F)		8	8	
Unnotched Charpy Impact	ISO 179/1eU	kJ/m2		
-30C (-22F)			50	
23C (73F)		70	50	

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.

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Product Information

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Property	Test Method	Units	Value	
			DAM	50%RH
Thermal				
Heat Deflection Temperature 0.45MPa (66psi) 1.8MPa (264psi)	ASTM D 648	°C (°F)	255 (491) 232 (450)	
Deflection Temperature 0.45MPa 1.80MPa	ISO 75-1/-2	°C (°F)	256 (463) 233 (451)	
CLTE, Parallel -40 - 23C (-40 - 73F) 23 - 55C (73 - 130F) 55 - 160C (130 - 320F)	ASTM E 831	E-4/C (E-4/F)	0.42 (0.23) 0.40 (0.22) 0.28 (0.16)	
CLTE, Normal -40 - 23C (-40 - 73F) 23 - 55C (73 - 130F) 55 - 160C (130 - 320F)	ASTM E 831	E-4/C (E-4/F)	0.99 (0.55) 1.30 (0.72) 1.88 (1.04)	
Melting Point	ASTM D 3418	°C (°F)	262 (504)	
Melting Temperature	ISO 3146C	°C (°F)	263 (505)	
Electrical				
Volume Resistivity	ASTM D 257	ohm cm	1 E14	1 E9
Arc Resistance	ASTM D 495	s	133	
CTI	UL 746A	V	>600	
Flammability				
Flammability Classification 0.71mm 1.5mm 3.0mm	UL94		HB HB HB	
Limited Oxygen Index	ISO 4589	%	22	
High Amperage Arc Ignition Resistance	UL 746A	arcs	>200	
High Voltage Arc Tracking Rate	UL 746A	mm/min (in/min)	19.3 (0.76)	
Hot Wire Ignition	UL 746A	s	9	
Temperature Index				
RTI, Electrical 0.71mm 1.5mm 3.0mm	UL 746B	°C	65 65 65	
RTI, Mechanical with Impact 0.71mm 1.5mm 3.0mm	UL 746B	°C	65 65 65	
RTI, Mechanical without Impact 0.71mm 1.5mm 3.0mm	UL 746B	°C	110 110 110	

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Property	Test Method	Units	Value	
			DAM	50%RH
Other				
Specific Gravity	ASTM D 792	kg/m3 (g/cm3)	1.18	
Density	ISO 1183		1180 (1.18)	
Hardness, Rockwell	ASTM D 785			
Scale M			8.2 (82)	66
Scale R			117	110
Taber Abrasion	ASTM D 1044	mg		
CS-17 Wheel, 1kg, 1000 cycles				34
Water Absorption	ASTM D 570	%		
Saturation			6.1	
Mold Shrinkage		%		
Flow, 3.2mm (0.126in)			0.6	
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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