

DuPont™ Zytel®

nylon resin

Zytel® 101 NC010

Zytel® 101 NC010 is a general purpose polyamide 66 resin for injection molding and extrusion.

Property	Test Method	Units	Value	
			DAM	50%RH
Identification				
Resin Identification	ISO 1043		PA66	
Part Marking Code	ISO 11469		>PA66<	
Mechanical				
Yield Stress	ISO 527	MPa (kpsi)	82 (11.9)	55 (8.0)
Strain at Break	ISO 527	%		
50mm/min			45	
Nominal Strain at Break	ISO 527	%	25	>50
Yield Strain	ISO 527	%	4.5	25
Tensile Modulus	ISO 527	MPa (kpsi)	3100 (450)	1400 (200)
Poisson's Ratio			0.41	
Flexural Modulus	ISO 178	MPa (kpsi)	2800 (410)	1200 (174)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²		
-30°C (-22°F)			4.5	3
23°C (73°F)			5.5	15
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²		
-30°C (-22°F)			400	NB
23°C (73°F)			NB	NB
Thermal				
Deflection Temperature	ISO 75f	°C (°F)		
0.45MPa			200 (392)	
1.80MPa			70 (158)	
Melting Temperature	ISO 11357-1/-3	°C (°F)		
10°C/min			262 (504)	

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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			DAM	50%RH
Electrical				
CTI 3.0mm	UL 746A	V	>600	
Flammability				
Flammability Classification 0.71mm	IEC 60695-11-10		V-2	
Flammability Classification 0.71mm	UL94		V-2	
Glow Wire Flammability Index 0.71mm	IEC 60695-2-12	°C	960	
1.5mm			960	
3.0mm			960	
Glow Wire Ignition Temperature 0.71mm	IEC 60695-2-13	°C	725	
1.5mm			750	
3.0mm			800	
High Amperage Arc Ignition Resistance 0.71mm	UL 746A	arcs	120	
1.5mm			168	
3.0mm			182	
6.0mm			200	
High Voltage Arc Tracking Rate	UL 746A	mm/min (in/min)	5.10 (0.2)	
Hot Wire Ignition 0.71mm	UL 746A	s	7	
1.5mm			13	
3.0mm			17	
6.0mm			20	

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			DAM	50%RH
Temperature Index				
RTI, Electrical 0.71mm	UL 746B	°C	130	
RTI, Impact 0.71mm	UL 746B	°C	75	
RTI, Strength 0.71mm	UL 746B	°C	85	
Other				
Water Absorption	ISO 62, Similar to	%		
Equilibrium 50%RH			2.6	
Saturation, immersed			8.5	
Molding Shrinkage	ISO 294-4	%		
Normal, 2.0mm			1.4	
Parallel, 2.0mm			1.4	
Mold Shrinkage		%		
Flow, 3.2mm (0.126in)			1.5	
Processing				
Melt Temperature Range		°C (°F)	280-300 (535-570)	
Melt Temperature Optimum		°C (°F)	290 (555)	
Mold Temperature Range		°C (°F)	50-90 (120-190)	
Mold Temperature Optimum		°C (°F)	70 (160)	
Drying Time, Dehumidified Dryer		h	2-4	
Drying Temperature		°C (°F)	80 (175)	
Processing Moisture Content		%	<0.20	

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