

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.

The DuPont Oval Logo, DuPont™, The miracles of science™ and Zytel® are trademarks or registered trademarks of DuPont Company. Copyright© 2005.

050630/050630

The information provided in this data sheet corresponds to our knowledge on the subject at the date of its publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such material used in combination with any other materials, additives or pigments or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specification limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of a specific material for your particular purposes. Since DuPont cannot anticipate all variations in actual end-use conditions DuPont makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent rights. DuPont advises you to seek independent counsel for a freedom to practice opinion on the intended application or end-use of our products. Caution: Do not use this product in medical applications involving permanent implantation in the human body. For other medical applications see "DuPont Medical Caution Statement", H-50102.

Zytel® 101 NC010

Property	Test Method	Units	Value	
			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	

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.

The DuPont Oval Logo, DuPont™, The miracles of science™ and Zytel® are trademarks or registered trademarks of DuPont Company. Copyright© 2

050630/050630

The information provided in this data sheet corresponds to our knowledge on the subject at the date of its publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such material used in combination with any other materials, additives or pigments or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specification limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of a specific material for your particular purposes. Since DuPont cannot anticipate all variations in actual end-use conditions DuPont makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent rights. DuPont advises you to seek independent counsel for a freedom to practice opinion on the intended application or end-use of our products. Caution: Do not use this product in medical applications involving permanent implantation in the human body. For other medical applications see "DuPont Medical Caution Statement", H-50102.

Product Information

Zytel® 101 NC010

Property	Test Method	Units	Value	
			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 Equilibrium 50%RH Saturation, immersed	ISO 62, Similar to	%	2.6 8.5	
Molding Shrinkage Normal, 2.0mm Parallel, 2.0mm	ISO 294-4	%	1.4 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	

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.

The DuPont Oval Logo, DuPont™, The miracles of science™ and Zytel® are trademarks or registered trademarks of DuPont Company. Copyright© 2

050630/050630

The information provided in this data sheet corresponds to our knowledge on the subject at the date of its publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such material used in combination with any other materials, additives or pigments or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specification limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of a specific material for your particular purposes. Since DuPont cannot anticipate all variations in actual end-use conditions DuPont makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent rights. DuPont advises you to seek independent counsel for a freedom to practice opinion on the intended application or end-use of our products. Caution: Do not use this product in medical applications involving permanent implantation in the human body. For other medical applications see "DuPont Medical Caution Statement", H-50102.

