

DuPont™ Zytel®

nylon resin

Zytel® 103FHS NC010

Zytel® 103FHS NC010 is a heat stabilized, internally lubricated polyamide 66 resin for injection molding. It was developed for fast cycles and high productivity.

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)	85 (12.3)	55 (8.0)
Nominal Strain at Break	ISO 527	%	20	>100
Yield Strain	ISO 527	%	4.5	25
Tensile Modulus	ISO 527	MPa (kpsi)	3100 (450)	1400 (200)
Flexural Modulus	ISO 178	MPa (kpsi)	2800 (410)	1300 (190)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²		
-30°C (-22°F)			4.5	3
23°C (73°F)			5.5	11
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²		
-30°C (-22°F)			350	NB
23°C (73°F)			NB	NB

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
Thermal				
Deflection Temperature 0.45MPa	ISO 75f	°C (°F)	200 (392)	
1.80MPa			70 (158)	
Melting Temperature 10°C/min	ISO 11357-1/-3	°C (°F)	262 (504)	
CLTE, Normal 23 - 55°C (73 - 130°F)	ISO 11359-1/-2	E-4/C (E-4/F)	1.1 (0.61)	
CLTE, Parallel 23 - 55°C (73 - 130°F)	ISO 11359-1/-2	E-4/C (E-4/F)	1.0 (0.55)	
Electrical				
CTI	IEC 60112	V	600	
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	
Oxygen Index	ISO 4589-1/-2	%	28	
Glow Wire Flammability Index 0.71mm	IEC 60695-2-12	°C	850	
1.5mm			960	
3.0mm			960	
Glow Wire Ignition Temperature 0.71mm	IEC 60695-2-13	°C	725	
1.5mm			725	
3.0mm			725	

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Flammability				
High Amperage Arc Ignition Resistance	UL 746A	arcs		
0.71mm			200	
1.5mm			>200	
3.0mm			>200	
Hot Wire Ignition	UL 746A	s		
0.71mm			9	
1.5mm			11	
3.0mm			24	
Temperature Index				
RTI, Electrical	UL 746B	°C		
0.71mm			140	
RTI, Impact	UL 746B	°C		
0.71mm			95	
1.5mm			110	
RTI, Strength	UL 746B	°C		
0.71mm			115	
1.5mm			125	
Other				
Density	ISO 1183	kg/m ³ (g/cm ³)	1140 (1.14)	
Water Absorption	ISO 62, Similar to	%		
Equilibrium 50%RH			2.6	
Saturation, immersed			8.5	
Molding Shrinkage	ISO 294-4	%		
Normal, 2.0mm			1.3	
Parallel, 2.0mm			1.4	
Mold Shrinkage		%		
Flow, 1.6mm (0.063in)			1.4	
Flow, 3.2mm (0.126in)			1.8	

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			DAM	50%RH
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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