

# DuPont™ Zytel®

nylon resin

## Zytel® 70G35HSL NC010

Zytel® 70G35HSL NC010 is a 35% glass fiber reinforced, heat stabilized polyamide 66 resin for injection molding.

Property	Test Method	Units	Value		
			DAM	50%RH	
<b>Identification</b>					
Resin Identification	ISO 1043		PA66-GF35		
Part Marking Code	ISO 11469		>PA66-GF35<		
<b>Mechanical</b>					
Stress at Break	ISO 527	MPa (kpsi)	210 (30.5)	145 (21.0)	
Strain at Break	ISO 527	%	3.2	4.6	
Tensile Modulus	ISO 527	MPa (kpsi)	11200 (1600)	8300 (1200)	
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m <sup>2</sup>			
			-30°C (-22°F)	10	10
			23°C (73°F)	15	18
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m <sup>2</sup>			
			-30°C (-22°F)	80	75
			23°C (73°F)	90	100
<b>Thermal</b>					
Deflection Temperature	ISO 75f	°C (°F)			
			0.45MPa	261 (502)	
			1.80MPa	252 (486)	
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.

050321/050321

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® 70G35HSL NC010**

Property	Test Method	Units	Value	
			DAM	50%RH
<b>Thermal</b>				
CLTE, Normal 23 - 55°C (73 - 130°F)	ISO 11359-1/-2	E-4/C (E-4/F)	1 (0.56)	
CLTE, Parallel 23 - 55°C (73 - 130°F)	ISO 11359-1/-2	E-4/C (E-4/F)	0.2 (0.11)	
Vicat Softening Temperature 50N	ISO 306	°C (°F)	255 (491)	
<b>Electrical</b>				
Surface Resistivity	IEC 60093	ohm	>1E15	1E13
Relative Permittivity 1E6 Hz	IEC 60250		4.1	4.7
Volume Resistivity	IEC 60093	ohm m	1E15	1E9
Dissipation Factor 1E6 Hz	IEC 60250	E-4	140	620
CTI	IEC 60112	V	400	
CTI 3.0mm	UL 746A	V	250	
<b>Flammability</b>				
Flammability Classification 0.71mm	IEC 60695-11-10		HB	
Flammability Classification 0.71mm	UL94		HB	
High Amperage Arc Ignition Resistance 0.71mm	UL 746A	arcs	120	
1.5mm			120	
3.0mm			120	
Hot Wire Ignition 0.71mm	UL 746A	s	7	
1.5mm			7	
3.0mm			120	

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

050321/050321

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® 70G35HSL NC010

Property	Test Method	Units	Value	
			DAM	50%RH
<b>Temperature Index</b>				
RTI, Electrical 0.71mm	UL 746B	°C	140	
RTI, Impact 0.71mm	UL 746B	°C	125	
RTI, Strength 0.71mm	UL 746B	°C	140	
<b>Other</b>				
Density	ISO 1183	kg/m <sup>3</sup> (g/cm <sup>3</sup> )	1410 (1.41)	
Ball Indention Hardness H 961/30	ISO 2039-1	MPa (kpsi)	285 (41)	203 (29)
Hardness, Rockwell Scale M	ISO 2039/2		105	89
Scale R			125	117
Water Absorption Equilibrium 50%RH Saturation, immersed	ISO 62, Similar to	%	1.7 5.5	
Molding Shrinkage Normal, 2.0mm Parallel, 2.0mm	ISO 294-4	%	1.1 0.3	
<b>Processing</b>				
Melt Temperature Range		°C (°F)	285-305 (545-580)	
Melt Temperature Optimum		°C (°F)	295 (565)	
Mold Temperature Range		°C (°F)	70-120 (160-250)	
Mold Temperature Optimum		°C (°F)	100 (210)	
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

050321/050321

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.