



Zytel®

nylon resin

Zytel® 153HSL NC010 Nylon Resin

Zytel® 153HSL NC010 is a lubricated, heat stabilized molding and extrusion grade PA 612 resin.

Property	Test Method	Units	Value	
			DAM	50%RH
Mechanical				
Tensile Strength	ASTM D 638	MPa (kpsi)		
-40C (-40F)			94 (13.6)	94 (13.6)
23C (73F)			61 (8.8)	61 (8.8)
77C (170F)			41 (5.9)	
Tensile Strength at Yield	ASTM D 638	MPa (kpsi)		
-40C (-40F)			94 (13.6)	93 (13.5)
23C (73F)			61 (8.8)	51 (7.4)
77C (170F)			30 (4.3)	
Elongation at Break	ASTM D 638	%		
-40C (-40F)			15	30
23C (73F)			150	>300
Elongation at Yield	ASTM D 638	%		
-40C (-40F)			8	14
23C (73F)			7	40
77C (170F)			30	
Poisson's Ratio			0.4	
Flexural Modulus	ASTM D 790	MPa (kpsi)		
-40C (-40F)			2300 (340)	2800 (400)
23C (73F)			2030 (295)	1240 (180)
77C (170F)			410 (60)	
Notched Izod Impact	ASTM D 256	J/m (ft lb/in)		
-40C (-40F)			43 (0.8)	32 (0.6)
23C (73F)			43 (0.8)	75 (1.4)
Thermal				
Heat Deflection Temperature 1.8MPa (264psi)	ASTM D 648	°C (°F)	55 (131)	
CLTE, Flow	ASTM D 696	E-4/K (E-4/F)	0.9 (0.5)	
Melting Point	ASTM D 3418	°C (°F)	218 (414)	

Mechanical properties measured at 23°C (73°F) unless otherwise stated.

Contact DuPont for MSDS, general guides and/or additional information about ventilation, handling, purging, drying, etc.

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The data listed here fall within the normal range of product properties but they should not be used to establish specification limits nor used alone as the basis of design.

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CAUTION: Do not use in medical applications involving permanent implantation in the human body.

For other medical applications, see "DuPont Medical Caution Statement", H-50102.

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Zytel® 153HSL NC010

Property	Test Method	Units	Value	
			DAM	50%RH
Electrical				
Surface Resistivity	ASTM D 257	ohm	1 E15	1 E14
Volume Resistivity	ASTM D 257	ohm cm	1 E14	1 E13
Dielectric Constant 1E2 Hz	IEC 250		3.9	
Dielectric Constant 1E2 Hz	ASTM D 150		3.9	
Dielectric Constant 1E3 Hz			3.3	
Dielectric Constant 1E3 Hz	IEC 250		3.3	
Dielectric Constant 1E6 Hz			3.0	
Dielectric Constant 1E6 Hz	ASTM D 150		3.0	
Dissipation Factor 1E2 Hz	ASTM D 150		0.02	
Dissipation Factor 1E2 Hz	IEC 250		0.02	
Dissipation Factor 1E3 Hz	ASTM D 150		0.02	
Dissipation Factor 1E3 Hz	IEC 250		0.02	
Dissipation Factor 1E6 Hz			0.02	
Dissipation Factor 1E6 Hz	ASTM D 150		0.02	
Flammability				
UL94 Rating at Min. Thickness	UL94		HB	
UL94 Min. Thickness Tested	UL94	mm (in)	0.86 (0.034)	
Other				
Hardness, Rockwell Scale R	ASTM D 785		114	
Taber Abrasion CS-17 Wheel, 1kg, 1000 cycles	ASTM D 1044	mg		6
Water Absorption Immersion 24hr	ASTM D 570	%	0.25	
Saturation			3.0	
Specific Gravity	ASTM D 792		1.06	
Mold Shrinkage Flow, 3.2mm (0.125in)		%	1.1	
Processing				
Melt Temperature Range		°C (°F)	230-290 (450-550)	
Mold Temperature Range		°C (°F)	40-95 (100-200)	
Processing Moisture Content		%	<0.2	

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