



# Zytel®

nylon resin

## Zytel® 42A NC010 Nylon Resin

Zytel® 42A NC010 is a high viscosity molding and extrusion grade PA 66 resin, suitable for film and tubing applications.

Property	Test Method	Units	Value	
			DAM	50%RH
<b>Mechanical</b>				
Tensile Strength	ASTM D 638	MPa (kpsi)	85.5 (12.4)	77.2 (11.2)
Tensile Strength at Yield	ASTM D 638	MPa (kpsi)	85.5 (12.4)	59.3 (8.6)
Elongation at Break	ASTM D 638	%	90	>300
Elongation at Yield	ASTM D 638	%	5	30
Flexural Modulus	ASTM D 790	MPa (kpsi)	2827 (410)	1207 (175)
Notched Izod Impact	ASTM D 256	J/m (ft lb/in)	64 (1.2)	133 (2.5)
<b>Thermal</b>				
Heat Deflection Temperature 0.45MPa (66psi) 1.8MPa (264psi)	ASTM D 648	°C (°F)	210 (410) 65 (149)	
CLTE, Flow	ASTM D 696	E-4/K (E-4/F)	0.7 (0.4)	
Melting Point	ASTM D 3418	°C (°F)	263 (505)	
<b>Electrical</b>				
Volume Resistivity	ASTM D 257	ohm cm	1 E15	1 E13
Dielectric Constant	ASTM D 150			
1E2 Hz			4.0	8.0
1E3 Hz			3.9	7.0
1E6 Hz			3.6	4.6
Dissipation Factor	ASTM D 150			
1E2 Hz			0.01	0.20
1E3 Hz			0.02	0.20
1E6 Hz			0.02	0.10
<b>Flammability</b>				
UL94 Rating at Min. Thickness	UL94		HB	
UL94 Min. Thickness Tested	UL94	mm (in)	0.12 (3.0)	

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

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Property	Test Method	Units	Value	
			DAM	50%RH
<b>Other</b>				
Hardness, Rockwell Scale M	ASTM D 785		80	60
Scale R			121	108
Taber Abrasion CS-17 Wheel, 1kg, 1000 cycles	ASTM D 1044	mg		4
Water Absorption Immersion 24hr	ASTM D 570	%	1.2	
Saturation			8.5	
Specific Gravity	ASTM D 792		1.14	
Mold Shrinkage Flow, 3.2mm (0.125in)		%	1.5	
<b>Processing</b>				
Melt Temperature Range		°C (°F)	280-305 (530-550)	
Processing Moisture Content		%	<0.05	

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