

# DuPont™ Zytel®

nylon resin

## Zytel® 7301 NC010

Zytel® 7301 NC010 is a general purpose, unlubricated polyamide 6 resin for extrusion applications.

Property	Test Method	Units	Value	
			DAM	50%RH
<b>Identification</b>				
Resin Identification	ISO 1043		PA6	
Part Marking Code	ISO 11469		>PA6<	
<b>Mechanical</b>				
Yield Stress	ISO 527	MPa (kpsi)	80 (11.6)	50 (7.3)
Strain at Break	ISO 527	%		
50mm/min			50	>100
Nominal Strain at Break	ISO 527	%	25	
Yield Strain	ISO 527	%	4.5	
Tensile Modulus	ISO 527	MPa (kpsi)	2900 (420)	1500 (218)
Flexural Modulus	ISO 178	MPa (kpsi)	2300 (330)	
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m <sup>2</sup>	6	
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m <sup>2</sup>		
-40°C (-40°F)			NB	
23°C (73°F)			NB	NB
<b>Thermal</b>				
Deflection Temperature	ISO 75f	°C (°F)		
0.45MPa			160 (320)	
1.80MPa			55 (131)	
Melting Temperature	ISO 11357-1/-3	°C (°F)		
10°C/min			221 (430)	
CLTE, Normal	ISO 11359-1/-2	E-4/C (E-4/F)		
23 - 55°C (73 - 130°F)			1.0 (0.56)	
CLTE, Parallel	ISO 11359-1/-2	E-4/C (E-4/F)		
23 - 55°C (73 - 130°F)			0.70 (0.39)	

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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<b>Electrical</b>				
Surface Resistivity	IEC 60167	ohm	1E13	1E10
Relative Permittivity 1E6 Hz	IEC 60250		3.5	7
Volume Resistivity	IEC 60093	ohm m	1E13	1E10
CTI	IEC 60112	V	600	600
<b>Other</b>				
Density	ISO 1183	kg/m <sup>3</sup> (g/cm <sup>3</sup> )	1130 (1.13)	
Water Absorption Equilibrium 50%RH Saturation, immersed	ISO 62, Similar to	%	3.0 9.5	
Mold Shrinkage Flow, 3.0mm (0.118in)		%	1.0	
<b>Processing - Injection Molding</b>				
Melt Temperature Range		°C (°F)	260-280 (500-535)	
Melt Temperature Optimum		°C (°F)	270 (520)	
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	
<b>Processing - Extrusion</b>				
Melt Temperature Range		°C (°F)	230-240 (445-465)	
Melt Temperature Optimum		°C (°F)	230 (445)	
Drying Time, Dehumidified Dryer		h	4-6	
Drying Temperature		°C (°F)	80 (175)	
Processing Moisture Content		%	<0.04	

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