

DuPont™ Zytel®

nylon resin

Zytel® 45HSB NC010

Zytel® 45HSB NC010 is a high viscosity, heat stabilized polyamide 66 resin for injection molding and extrusion applications such as film and tubing.

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)	83 (12.0)	55 (8.0)
Nominal Strain at Break	ISO 527	%	>50	>50
Yield Strain	ISO 527	%	4	25
Tensile Modulus	ISO 527	MPa (kpsi)	3100 (450)	1300 (190)
Flexural Modulus	ISO 178	MPa (kpsi)	2800 (405)	
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²	-30°C (-22°F)	5.5
			23°C (73°F)	6
Thermal				
Deflection Temperature 1.80MPa	ISO 75f	°C (°F)	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)	1.0 (0.55)	
CLTE, Parallel 23 - 55°C (73 - 130°F)	ISO 11359-1/-2	E-4/C (E-4/F)	1.0 (0.55)	
Electrical				
CTI	UL 746A	V	600	

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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Flammability				
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	200	
1.5mm			>200	
3.0mm			>200	
High Voltage Arc Tracking Rate	UL 746A	mm/min (in/min)	15 (0.6)	
Hot Wire Ignition	UL 746A	s		
0.71mm			9	
1.5mm			11	
3.0mm			24	
Temperature Index				
RTI, Electrical 0.71mm	UL 746B	°C	140	
RTI, Impact 0.71mm	UL 746B	°C	95	
1.5mm			110	
RTI, Strength 0.71mm	UL 746B	°C	115	
1.5mm			125	
Other				
Density	ISO 1183	kg/m ³ (g/cm ³)	1140 (1.14)	
Molding Shrinkage	ISO 294-4	%		
Normal, 2.0mm			1.4	
Parallel, 2.0mm			1.4	

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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		%	<0.05	

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