DuPont™ Zytel®

nylon resin

Zytel® MT409AHS NC010

Zytel® MT409AHS NC010 is a Medium Toughened, high performance, heat stabilized polyamide 66 resin having good stiffness, improved knit line strength, surface appearance with outstanding processability.

Property	Test Method	Units	Value	
			DAM	50%RH
Identification				
Resin Identification	ISO 1043		PA66-I	
Part Marking Code	ISO 11469		>PA66-I<	
Mechanical				
Yield Stress	ISO 527	MPa (kpsi)	62 (9.0)	43 (6.2)
Yield Strain	ISO 527	%	5	28
Nominal Strain at Break	ISO 527	%	24	>50
Tensile Modulus	ISO 527	MPa (kpsi)	2500 (363)	1075 (156)
Tensile Stress	ISO 527	MPa (kpsi)		
@ 50% Strain			65 (9.4)	44 (6.3)
Flexural Modulus	ISO 178	MPa (kpsi)	2300 (334)	1075 (156)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m^2		
-40°C (-40°F)			13	
23°C (73°F)			21	

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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Property	Test Method	Units	Value	
			DAM	50%RH
Thermal				
Deflection Temperature	ISO 75-1/-2	°C (°F)		
0.45MPa			205 (401)	
1.80MPa			66 (151)	
Melting Temperature	ISO 11357-1/-3	°C (°F)		
10°C/min			262 (504)	
CLTE, Parallel	ISO 11359-1/-2	E-4/C (E-4/F)		
-40 - 23°C (-40 - 73°F)			0.8 (0.5)	
-30 - 30°C (-22 - 86°F)			0.9 (0.5)	
23 - 55°C (73 - 130°F)			1.0 (0.6)	
55 - 160°C (130 - 320°F)			1.0 (0.6)	
CLTE, Normal	ISO 11359-1/-2	E-4/C (E-4/F)		
-40 - 23°C (-40 - 73°F)			1.0 (0.6)	
-30 - 30°C (-22 - 86°F)			1.0 (0.6)	
23 - 55°C (73 - 130°F)			1.2 (0.7)	
55 - 160°C (130 - 320°F)			1.3 (0.7)	
Electrical				
Surface Resistivity	IEC 60093	ohm	3.4E15	9.5E12
Volume Resistivity	IEC 60093	ohm m	1.9E14	2.9E10
Electric Strength	IEC 60243-1	kV/mm (V/mil)	23 (585)	22 (560)
Relative Permittivity	IEC 60250			
1E2 Hz			3.6	6.6
1E6 Hz			3.4	3.7
Dissipation Factor	IEC 60250	E-4		
1E2 Hz			50	1800
1E6 Hz			120	440
CTI	IEC 60112	V	600	
CTI	UL 746A	V	600	

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Property	Test Method	Units	Value	
			DAM	50%RH
Flammability				
Flammability Classification	IEC 60695-11-10			
0.8mm			HB	
Flammability Classification	UL94			
0.8mm			HB	
High Amperage Arc Ignition Resistance	UL 746A	arcs		
0.8mm			120	
1.5mm			120	
3.0mm			120	
Hot Wire Ignition	UL 746A	s		
0.8mm			7	
1.5mm			7	
3.0mm			7	
Temperature Index				
RTI, Electrical	UL 746B	°C		
0.8mm			130	
RTI, Impact	UL 746B	°C		
0.8mm			65	
1.5mm			105	
RTI, Strength	UL 746B	°C		
0.8mm			95	
1.5mm			105	
3.0mm			110	
Other				
Density	ISO 1183	kg/m^3 (g/cm^3)	1110 (1.11)	
Water Absorption	ISO 62, Similar to	%		
Immersion 24h			1.28	
Molding Shrinkage	ISO 294-4	%		
Normal, 2.0mm			1.7	
Parallel, 2.0mm			1.5	

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Property	Test Method	Units	Value	
			DAM	50%RH
Processing				
Melt Temperature Range		°C (°F)	270-300 (520-570)	
Melt Temperature Optimum		°C (°F)	280 (535)	
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	

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