DuPont™ Zytel®

nylon resin

Zytel® 77G43L NC010

Zytel® 77G43L NC010 is a 43% glass fiber reinforced polyamide 612 resin for injection molding.

Property	Test Method	Units	Value	
			DAM	50%RH
Identification				
Resin Identification	ISO 1043		PA612-GF43	
Part Marking Code	ISO 11469		>PA612-GF43<	
Mechanical				
Stress at Break	ISO 527	MPa (kpsi)	200 (29.0)	165 (23.9)
Strain at Break	ISO 527	%	3	5
Tensile Modulus	ISO 527	MPa (kpsi)	12500 (1810)	11500 (1650)
Poisson's Ratio			0.42	
Flexural Modulus	ISO 178	MPa (kpsi)	11000 (1600)	
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m^2		
-40°C (-40°F)			17	
-30°C (-22°F)			17	
23°C (73°F)			17	
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m^2		
-30°C (-22°F)			85	
23°C (73°F)			100	

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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			DAM	50%RH
Thermal				
Deflection Temperature	ISO 75f	°C (°F)		
0.45MPa			217 (423)	
1.80MPa			203 (397)	
Melting Temperature	ISO 11357-1/-3	°C (°F)		
10°C/min			218 (424)	
CLTE, Normal	ISO 11359-1/-2	E-4/C (E-4/F)		
-40 - 23°C (-40 - 73°F)			0.73 (0.41)	
23 - 55°C (73 - 130°F)			1.04 (0.58)	
55 - 160°C (130 - 320°F)			1.39 (0.77)	
CLTE, Parallel	ISO 11359-1/-2	E-4/C (E-4/F)		
-40 - 23°C (-40 - 73°F)			0.21 (0.12)	
23 - 55°C (73 - 130°F)			0.10 (0.06)	
55 - 160°C (130 - 320°F)			0.16 (0.09)	
Electrical				
Relative Permittivity	IEC 60250			
1E6 Hz			3.6	
Volume Resistivity	IEC 60093	ohm m	1E13	
Dissipation Factor	IEC 60250	E-4		
1E6 Hz			200	
Arc Resistance	UL 746A	s		
3.0mm			145	
CTI	UL 746A	V	>600	
3.0mm			>600	

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Flammability				
Flammability Classification	IEC 60695-11-10			
0.71mm			HB	
Flammability Classification	UL94			
0.71mm			HB	
High Amperage Arc Ignition Resistance	UL 746A	arcs		
0.71mm			200	
1.5mm			>200	
3.0mm			>200	
Hot Wire Ignition	UL 746A	s		
0.71mm			8	
1.5mm			14	
3.0mm			26	
Temperature Index				
RTI, Electrical	UL 746B	°C		
0.71mm			105	
1.5mm			120	
RTI, Strength	UL 746B	°C		
1.5mm			120	
Other				
Density	ISO 1183	kg/m^3 (g/cm^3)	1420 (1.42)	
Hardness, Rockwell	ISO 2039/2			
Scale R			118	
Water Absorption	ISO 62, Similar to	%		
Saturation, immersed			1.7	
Molding Shrinkage	ISO 294-4	%		
Normal, 2.0mm			0.8	
Parallel, 2.0mm			0.3	

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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)	70-120 (160-250)	
Mold Temperature Optimum		°C (°F)	100 (210)	
Drying Time, Dehumidified Dryer		h	2-4	
Drying Temperature		°C (°F)	80 (175)	
Processing Moisture Content		%	<0.15	

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