

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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Thermal				
Deflection Temperature 0.45MPa	ISO 75f	°C (°F)	217 (423)	
1.80MPa			203 (397)	
Melting Temperature 10°C/min	ISO 11357-1/-3	°C (°F)	218 (424)	
CLTE, Normal -40 - 23°C (-40 - 73°F)	ISO 11359-1/-2	E-4/C (E-4/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 -40 - 23°C (-40 - 73°F)	ISO 11359-1/-2	E-4/C (E-4/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 1E6 Hz	IEC 60250		3.6	
Volume Resistivity	IEC 60093	ohm m	1E13	
Dissipation Factor 1E6 Hz	IEC 60250	E-4	200	
Arc Resistance 3.0mm	UL 746A	s	145	
CTI 3.0mm	UL 746A	V	>600	

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

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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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