DuPont™ Zytel®

nylon resin

Zytel® FR50 NC010

Zytel® FR50 NC010 is a 25% glass fiber reinforced, flame retardant polyamide 66 resin for injection molding.

Property	Test Method	Units	Value DAM
Identification			
Resin Identification	ISO 1043		PA66-GF25FR(17)
Part Marking Code	ISO 11469		>PA66-GF25FR(17)<
Mechanical			
Stress at Break	ISO 527	MPa (kpsi)	177 (25.6)
Strain at Break	ISO 527	%	2.6
Tensile Modulus	ISO 527	MPa (kpsi)	10200 (1400)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m^2	10.8
Thermal			
Deflection Temperature 1.80MPa	ISO 75f	°C (°F)	239 (462)
Electrical			
CTI 3.0mm	UL 746A	V	285

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.

During molding, use proper protective equipment and adequate ventilation. Avoid exposure to fumes and limit the hold up time and temperature of the resin in the machine. Purge degraded resin carefully with HDPE.

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Property	Test Method	Units	Value
			DAM
Flammability			
Flammability Classification	IEC 60695-11-10		
0.35mm			V-0
0.75mm			V-0
1.5mm			V-0
3.0mm			V-0
Flammability Classification	UL94		
0.35mm			V-0
0.75mm			V-0
1.5mm			V-0
3.0mm			V-0
5V Rating	IEC 60695-11-20		5VA
5V Rating	UL94		5VA
5V Min. Thickness Tested	IEC 60695-11-20	mm	1.5
5V Min. Thickness Tested	UL94	mm	1.5
High Amperage Arc Ignition Resistance	UL 746A	arcs	
0.75mm			166
1.5mm			171
3.0mm			187
High Voltage Arc Tracking Rate	UL 746A	mm/min (in/min)	20.3 (0.8)
Hot Wire Ignition	UL 746A	s	
0.75mm			300
1.5mm			300
3.0mm			300

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Property	Test Method	Units	Value
			DAM
Temperature Index			
RTI, Electrical	UL 746B	°C	
0.75mm			130
1.5mm			130
3.0mm			130
RTI, Impact	UL 746B	°C	
0.75mm			105
1.5mm			115
3.0mm			115
RTI, Strength	UL 746B	°C	
0.75mm			105
1.5mm			115
3.0mm			120
Other			
Density	ISO 1183	kg/m^3 (g/cm^3)	1610 (1.61)
Mold Shrinkage		%	
Flow, 3.2mm (0.126in)			0.4
Transverse, 3.2mm (0.126in)			0.8
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		%	<0.20

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Test temperatures are 23°C unless otherwise stated.

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