

DuPont™ Zytel®

nylon resin

Zytel® 80G33HS1L BK104

Zytel® 80G33HS1L BK104 is a 33% glass fiber reinforced, heat stabilized black polyamide 66 resin with outstanding impact resistance developed using DuPont® Super Tough technology.

Property	Test Method	Units	Value	
			DAM	50%RH
Identification				
Resin Identification	ISO 1043		PA66-IGF33	
Part Marking Code	ISO 11469		>PA66-IGF33<	
Mechanical				
Stress at Break	ISO 527	MPa (kpsi)	148 (21.5)	112 (16.2)
Strain at Break	ISO 527	%	3.6	6.6
Tensile Modulus	ISO 527	MPa (kpsi)	8800 (1276)	6500 (943)
Flexural Modulus	ISO 178	MPa (kpsi)	7600 (1102)	
Flexural Strength	ISO 178	MPa (kpsi)	214 (31)	
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²		
-40°C (-40°F)			18	
-30°C (-22°F)			18	17
23°C (73°F)			20	27
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²		
-40°C (-40°F)			109	97
23°C (73°F)			97	96

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 0.45MPa	ISO 75f	°C (°F)	261 (502)	
1.80MPa			245 (473)	
Melting Temperature 10°C/min	ISO 11357-1/-3	°C (°F)	262 (504)	
CLTE, Normal -40 - 23°C (-40 - 73°F)	ISO 11359-1/-2	E-4/C (E-4/F)	0.96 (0.53)	
23 - 55°C (73 - 130°F)			1.19 (0.66)	
55 - 160°C (130 - 320°F)			1.30 (0.72)	
CLTE, Parallel -40 - 23°C (-40 - 73°F)	ISO 11359-1/-2	E-4/C (E-4/F)	0.22 (0.12)	
23 - 55°C (73 - 130°F)			0.15 (0.08)	
55 - 160°C (130 - 320°F)			0.14 (0.08)	
Electrical				
CTI 3.0mm	UL 746A	V	400	
Flammability				
Flammability Classification 0.75mm	IEC 60695-11-10		HB	
Flammability Classification 0.75mm	UL94		HB	
High Amperage Arc Ignition Resistance 0.75mm	UL 746A	arcs	150	
1.5mm			150	
3.0mm			120	
Hot Wire Ignition 0.75mm	UL 746A	s	18	
1.5mm			103	
3.0mm			60	

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Property	Test Method	Units	Value	
			DAM	50%RH
Temperature Index				
RTI, Electrical 0.75mm	UL 746B	°C	130	
RTI, Impact 0.75mm	UL 746B	°C	65	
			105	
RTI, Strength 0.75mm	UL 746B	°C	85	
			95	
			105	
Other				
Density	ISO 1183	kg/m ³ (g/cm ³)	1330 (1.33)	
Water Absorption Immersion 24h	ISO 62, Similar to	%	0.91	
Molding Shrinkage Normal, 2.0mm	ISO 294-4	%	0.7	
			0.3	
Processing				
Melt Temperature Range		°C (°F)	285-305 (545-580)	
Melt Temperature Optimum		°C (°F)	295 (565)	
Mold Temperature Range		°C (°F)	50-100 (120-210)	
Mold Temperature Optimum		°C (°F)	80 (175)	
Drying Time, Dehumidified Dryer		h	2-4	
Drying Temperature		°C (°F)	80 (175)	
Processing Moisture Content		%	<0.20	

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