

PA66 - Nylon 66

Facts:

PA66, Nylons are tough, ridged, have high tensile strength and good resistance to creep, excellent abrasion, chemical and heat resistance and a low coefficient friction.

The addition of fibres and fillers increases such properties as strength, stiffness and decreases moisture absorption.

PA66 competes with PA6 for most applications. PA66 is heavily used in the automotive industry, appliance housings and generally where impact resistance and strength are required.

Applications:

Automotive parts, roller skates, carpet, bike parts, kitchen items, sports equipment, tool housings and bearings.

Limitations:

- High moisture absorption
- Requires UV stabilisation
- High Shrinkage
- Attacked by oxidizing agents
- Attacked by strong acids and bases
- High notch sensitivity

DuPont™ Zytel®

nylon resin

Zytel® 70G30HSL BK039B

Zytel® 70G30HSL BK039B is a 30% glass reinforced, heat stabilized, black nylon 66 resin for injection molding.

Property	Test Method	Units	Value	
			DAM	50%RH
Identification				
Resin Identification	ISO 1043		PA66-GF30	
Part Marking Code	ISO 11469		>PA66-GF30<	
Mechanical				
Stress at Break	ISO 527	MPa (kpsi)	187 (27.1)	124 (17)
Strain at Break	ISO 527	%	3	4.5
Tensile Modulus	ISO 527	MPa (kpsi)	9900 (1440)	7000 (1020)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²	-30°C (-22°F)	9
			23°C (73°F)	10
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²	75	80
Thermal				
Deflection Temperature	ISO 75f	°C (°F)	0.45MPa	258 (496)
			1.80MPa	250 (482)
Melting Temperature	ISO 11357-1/-3	°C (°F)	10°C/min	263 (505)
Electrical				
CTI	UL 746A	V	400	

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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Zytel® 70G30HSL BK039B

Property	Test Method	Units	Value	
			DAM	50%RH
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	120	
1.5mm			120	
3.0mm			120	
Hot Wire Ignition 0.75mm	UL 746A	s	7	
1.5mm			7	
3.0mm			60	
Temperature Index				
RTI, Electrical 0.75mm	UL 746B	°C	140	
RTI, Impact 0.75mm	UL 746B	°C	125	
RTI, Strength 0.75mm	UL 746B	°C	140	
Other				
Density	ISO 1183	kg/m ³ (g/cm ³)	1370 (1.37)	
Processing				
Melt Temperature Range		°C (°F)	285-305 (545-580)	
Melt Temperature Optimum		°C (°F)	295 (565)	
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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