




PS 6/6 Nylon (PA66)

Material Notes: Type 6/6 is a general purpose standard grade nylon. Extruded in natural and black. (Weather Resistant Black Grade is also available.)

PS 6/6 Nylon withstands severe environments, resist harsh chemicals, and perform well in extreme temperatures. They offer weight savings that have potential to drive lower cost systems.

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in ³	ASTM D792
Water Absorption	1.2 %	1.2 %	at 24 hours; ASTM D570
Water Absorption at Saturation	8.5 %	8.5 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	90	90	ASTM D785
Tensile Strength, Yield	80.0 MPa	11600 psi	ASTM D638
Elongation at Break	25 %	25 %	ASTM D638
Tensile Modulus	2.41 GPa	350 ksi	ASTM D638
Flexural Strength	107 MPa	15500 psi	ASTM D790
Flexural Modulus	3.03 GPa	440 ksi	ASTM D790
Compressive Strength	34.5 MPa	5000 psi	ASTM D695
Izod Impact, Notched	0.587 J/cm	1.10 ft-lb/in	ASTM D256
Coefficient of Friction, Dynamic	0.26	0.26	40 psi, 50 fpm; ASTM D3702
K (wear) Factor	403 x 10 ⁻⁸ mm ³ /N-M	200 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	40 psi, 50 fpm; ASTM D3702

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Dielectric Constant 	3.6	3.6	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	4.0	4.0	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	
Dielectric Strength	11.8 - 15.7 kV/mm	300 - 400 kV/in	ASTM D149
Dissipation Factor	0.010	0.010	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	

Thermal Properties	Metric	English	Comments
CTE, linear	81.0 µm/m-°C	45.0 µin/in-°F	ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Specific Heat Capacity	1.67 J/g-°C	0.400 BTU/lb-°F	
Melting Point	255 °C	491 °F	ASTM D2133
Maximum Service Temperature, Air	85.0 °C	185 °F	Long Term; ASTM UL746B
	149 °C	300 °F	Intermittent
Deflection Temperature at 0.46 MPa (66 psi)	235 °C	455 °F	ASTM D648

Deflection Temperature at
1.8 MPa (264 psi)

90.0 °C

194 °F

ASTM D648

Flammability, UL94

V-2

V-2

@Thickness 3.00 mm

@Thickness 0.118 in

All specifications are deemed to be approximate values and may vary depending on the processing methods used and the specimen or test piece. Information presented herein cannot necessarily be applied to finished items or products. Suitability of materials for a specific field of application must be assessed by the party responsible for processing or the end-user.

All technical specifications presented herein are designed merely to provide assistance in terms of project planning. Under no circumstances do they constitute a guaranteed property or quality of the items presented.

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