



## Material: Nylon 6 Extruded

Offering an optimal combination of mechanical strength, stiffness, toughness, mechanical dampening properties and wear resistance together with a favourable electrical insulating ability and good chemical resistance makes Nylon 6 a "general purpose" grade for mechanical construction and maintenance.

### Technical Specification

Property	Test Method	Units	Value
Colour	-	-	Natural (White)/Black
Density	ISO 1183	g/cm <sup>3</sup>	1.14
Water Absorption - saturation in air (23°C/50%RH)	-	%	2.6
Water Absorption - saturation in water (23°C)	-	%	9
Tensile strength* <sup>1</sup>	ISO 527	N/mm <sup>2</sup>	76
Tensile modulus of elasticity* <sup>1</sup>	ISO 527	N/mm <sup>2</sup>	3250
Elongation at break* <sup>1</sup>	ISO 527	%	>50
Impact - Charpy* <sup>1</sup>	179/1eU	kJ/m <sup>2</sup>	No break
Impact – Izod notched	180/2A	kJ/m <sup>2</sup>	5.5
Hardness	Rockwell Shore D	-	M85
Melt point	-	°C	220
Max service temp in air short periods	-	°C	160
Max service temp continuously for 20000hrs	-	°C	70
Linear thermal expansion coefficient	-	K <sup>-1</sup> x10 <sup>-5</sup>	9.0
Thermal Conductivity	-	W/(K.m)	0.28
Flammability (6mm thickness)	-	-	HB
Volume resistivity* <sup>1</sup>	IEC93	Ohm.cm	>10 <sup>14</sup>
Dielectric strength* <sup>1</sup>	IEC243	Kv/mm	25
Outside applications – UV resistance	-	-	A/B
Acids – strong (Ph<3)	-	-	C
Alkalis – strong (pH>11)	-	-	B/C
Chlorinated Hydrocarbons	-	-	A/B
Hot Water	-	-	B
'A' – Acceptable service, 'B' – Limited, 'C' – Unacceptable			
* <sup>1</sup> Measured on dry test specimens (where applicable)			

#### Availability:

Rod, 1m & 3m long – 5 - 320mm diameter  
 Plate, 1m & 3m long x 610 wide – 8 - 100mm thickness  
 Tube, 1m & 3m long x 20 - 100mm od x 10 - 80mm id.  
 Coiled Strip, 0.5 - 1.5mm thick x 1m wide

#### Applications:

Racks, Pinions, Gears, Bearings, Rollers, Wheels, Cams, Nuts, Valve seats, Pulleys, Gaskets, Electrical Insulation

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The data shown are typical values and are not intended to represent specifications. Their aim is to guide the user toward a material choice.

Not all material sizes shown within the availability programme of this data sheet are available as standard.

Please contact ABG Rubber and Plastics Ltd for further details.