

Extruded Nylon Types 66 & 6 (PA66 & PA6)



Hard Wearing Engineering Plastics for many applications

Service. Quality. Value.

	Nylon 66, un-modified (Nylon 6 un-mod)	Nylon 66+ 30% glass (Nylon 6+30% glass)	Nylon 66+MoS ₂ (Nylon 6+MoS ₂)	
Mechanical Properties				
Density at 20°C	1.15 (1.14)	1.35 (1.35)	1.15 (1.14)	g/cm ³
Tensile strength @ yield	85 (80)	100 (100)	90 (80)	MPa
Elongation @ break	50 (>50)	5 (5)	20 (>50)	%
Tensile modulus of elasticity	3,300 (3,200)	5,000 (5,000)	3,400 (3,200)	MPa
Notched impact strength (Charpy)	>3 (>3)	6 (6)	>2 (>3)	kJ/m ²
Ball indentation hardness	180 (170)	210 (210)	180 (170)	N/mm ²
Shore – hardness	83 (82)	86 (86)	83 (82)	Scale D
Electrical Properties				
Volume resistivity	10 ¹⁵ (10 ¹⁵)	- (-)	- (-)	Ohm cm
Surface resistivity	10 ¹³ (10 ¹³)	- (-)	- (-)	Ohm
Dielectric constant, 50 Hz	3.8 (3.9)	- (-)	- (-)	-
Dielectric dissipation factor, 50 Hz	0.015 (0.02)	- (-)	- (-)	-
Dielectric strength	25 (20)	- (-)	- (-)	Kv/mm
Comparative tracing index (CTI), Solution 'A'	600 (600)	- (-)	- (-)	-
Thermal Properties				
Melting temperature	260 (200)	260 (200)	260 (200)	°C
Heat deflection temperature – method A, 1.8 MPa	100 (75)	150 (140)	100 (75)	°C
Coefficient of thermal expansion (Ave. between 20 - 60 °C)	80 (90)	50 (60)	80 (90)	10 ⁻⁶ .K ⁻¹
Specific thermal capacity at 100°C	1.70 (1.70)	1.50 (1.50)	1.70	kJ/(kg · K)
Thermal conductivity at 20°C	0.23 (0.23)	0.24 (0.28)	0.23	W/(m · K)
Service temperatures without high mechanical load – long term	-30 to +95 (-40 to +85)	-20 to +120 (-30 to +110)	-30 to +95	°C
Service temperature – short term (max)	+170 (+160)	+200 (+180)	+170 (160)	°C
Chemical resistance				
Acid resistance	- (-)	- (-)	- (-)	
Alkali resistance	+ (+)	+ (+)	+ (+)	
Hydrocarbon resistance	0 (0)	0 (0)	0 (0)	
Chlorinated hydrocarbon resistance	- (-)	- (-)	- (-)	
Aromatic resistance	0 (0)	0 (0)	0 (0)	
Ketone resistance	+ (+)	+ (+)	+ (+)	
Resistance to hot water	0 (0)	0 (0)	0 (0)	
Other Physical Properties				
Moisture absorption	2.8 (3.0)	1.7 (2.0)	2.8 (3.0)	%
Saturation in air @ 23°C and 50% RH				
Flammability according to UL94 (3mm / 6mm thick)	HB/V2 (HB/V2)	HB/V2 (HB/V2)	HB/V2 (HB/V2)	-