

Nylon PA6 is a tough, wear-resistant engineering plastic with good strength, stiffness and damping. It is widely machined into bushes, gears, rollers, sheaves and wear pads where metal parts would corrode, gall or cause noise.

Specification

Material	Polyamide 6 (extruded); cast PA6 and oil-filled / MoS2 grades on request
Standard Colours	Natural (off-white), black; blue (cast) on request
Forms	Sheets, round rods, tubes; cut-to-size blanks and machined parts
Sheet Thickness	Approx. 1 mm to 100 mm
Rod Diameter	Approx. 6 mm to 300 mm
Standard Lengths	Rods 1 m / 3 m; sheets 1000 x 2000 mm, or cut to size

Material Properties (typical values)

Property	Typical Value
Density	1.14 g/cm ³
Tensile strength (dry)	75 - 85 MPa
Elongation at break	> 25%
Tensile modulus	3,000 - 3,300 MPa
Hardness	Shore D 80 - 82
Notched impact (Charpy)	approx. 5 kJ/m ²
Melting point	approx. 220°C
Service temperature	-40°C to +85°C continuous
Water absorption (saturation)	approx. 9%; 2.5 - 3% at 23°C / 50% RH
Coefficient of friction	0.30 - 0.45 (dry on steel)
Dielectric strength	approx. 25 kV/mm

Typical Applications

Bushes and bearings, gears and sprockets, rollers and wheels, sheaves, wear pads and slide plates, guide rails, cable pulleys.

Selection Note

Nylon absorbs moisture, which slightly changes its dimensions and lowers stiffness; allow for this on close-tolerance parts or choose POM.

How to Order

Send the material, grade, colour, form, dimensions (thickness / diameter, width, length) and quantity, or a drawing for machined parts, to Diode Trading EST at www.diode.sa or +966 51 083 8213. Material test certificates are available on request.

Notice: Values are typical and indicative, based on common industry grades. Exact grade, size, tolerance and performance are confirmed on quotation and against the supplier or manufacturer data and material test certificate for each batch. This sheet is not a warranty. Contact Diode Trading EST to confirm availability and specification for your application.