



Material: Cast Nylon 6 Heat Stabilised

Heat stabilised cast nylon 6 (Ertalon® 6XAU+) with a dense and highly crystalline structure. It offers better mechanical properties than conventional extruded or cast nylons, including superior resistance to creep and wear, better heat ageing performance and excellent machinability. Ertalon® 6XAU+ is particularly recommended for bearings and other mechanical parts subject to wear that are operating at temperatures above 60°C

Technical Specification

Property	Test Method	Units	Value
Colour	-	-	Black
Density	ISO 1183	g/cm ³	1.15
Water Absorption - saturation in air (23°C/50%RH)	-	%	2.20
Water Absorption - saturation in water (23°C)	-	%	6.50
Tensile strength* ¹	ISO 527	N/mm ²	83
Tensile modulus of elasticity* ¹	ISO 527	N/mm ²	3400
Elongation at break* ¹	ISO 527	%	25
Impact - Charpy* ¹	179/1eU	kJ/m ²	No break
Impact – Izod notched	180/2A	kJ/m ²	3.5
Hardness	Rockwell Shore D	-	M87
Melt point	-	°C	220
Max service temp in air short periods	-	°C	180
Max service temp continuously for 20000hrs	-	°C	105
Linear thermal expansion coefficient	-	K ⁻¹ x10 ⁻⁵	8.0
Thermal Conductivity	-	W/(K.m)	0.29
Flammability (6mm thickness)	-	-	HB
Volume resistivity* ¹	IEC93	Ohm.cm	>10 ¹⁴
Dielectric strength* ¹	IEC243	Kv/mm	29
Outside applications – UV resistance	-	-	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			
* ¹ Measured on dry test specimens (where applicable)			

Availability:

Rod, 3m long – 50-150mm diameter

Rod, 1m long – 50-500mm diameter

Plate, 610mm x 1220mm, 1220mm x 2440mm – 8-100mm thickness

Tube, 2m long x 50–150mm od x 20–135mm id.

Tube, 1m long x 155mm-260mm od x 50–235mm id.

Applications:

Racks, Pinions, Gears, Bearings, Rollers, Wheels, Cable Sheaves, 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.