

QUADRANT EPP PRODUCT DATA SHEET

June 2001

NYLATRON® MC901

Cast Nylon 6 (PA6G, Heat Stabilised)

NYLATRON® MC901 is a tough, heat stabilised cast nylon 6. It has better impact strength and fatigue resistance compared with other cast nylons. It has proved an outstanding material for large gears, racks and pinions, successfully replacing phosphor bronze and cast iron in many applications.

- High impact strength
- High mechanical damping
- Good alkaline resistance (up to pH 11)
- High strength / stiffness
- Good fatigue resistance
- Low weight (1/6 vs steel)
- Good wear resistance
- Continuous temperature 90°C (max. 170°C)

Common applications: Racks; Pinions; Gears; Bearings; Rollers; Wheels; Cams; Nuts; Valve seats; Pulleys; Gaskets; Electrical insulators.

Delivery Programme

Rod 3m long		
Diameter (mm):	50 (Min)	150 (Max)
Rod 1m long		
Diameter (mm):	50 (Min)	500 (Max)
Rod 500mm long		
Diameter (mm):	210 (Min)	500 (Max)
Plate		
Thickness (mm):	10 (Min)	100 (Max)
Sizes (mm):	610 x 1220, 1220 x 2000 1220 x 2440	
Tube 2m long		
O.D. (mm):	50 (Min)	150 (Max)
I.D. (mm):	20 (Min)	135 (Max)
Tube 1000mm long		
O.D. (mm):	155 (Min)	260 (Max)
I.D. (mm):	50 (Min)	235 (Max)
Tube 600mm long		
O.D. (mm):	220 (Min)	600 (Max)
I.D. (mm):	70 (Min)	570 (Max)

Distributor

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Technical Specification

Property	ISO Methods	Units	NYLATRON® MC901
Colour	-	-	Blue
Density	1183	g/cm ³	1.15
Water absorption			
Saturation in air (23°C / 50% RH)	-	%	2.30
Saturation in water (23°C)	-	%	6.60
Tensile strength* ¹	527	N/mm ²	81
Tensile modulus of elasticity* ¹	527	N/mm ²	3200
Elongation at break* ¹	527	%	35
Impact - Charpy* ¹	179/1eU	kJ/m ²	no break
Impact - Izod notched* ¹	180/2A	kJ/m ²	3.5
Hardness	Rockwell	-	M85
	Shore D	-	-
Melt point	-	°C	220
Max allowable service temp in air			
for short periods	-	°C	170
continuously for 20,000hrs	-	°C	90
Linear thermal expansion coefficient	-	K ⁻¹ x 10 ⁻⁵	8.0
Thermal conductivity	-	W/(K.m)	0.29
Flammability* ² (6mm thickness)	-	-	HB
Volume resistivity* ¹	IEC93	Ohm.cm	>10 ¹⁴
Dielectric strength* ¹	IEC243	kV/mm	25
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 service; 'C' - Unacceptable.

*¹ Measured on dry test specimens (where applicable)

*² Tests completed by Quadrant EPP, using UL test methods

Not all material sizes shown within the delivery programme section of this data sheet are available as standard. Please contact Quadrant EPP UK Ltd for further details.

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