

# QUADRANT EPP PRODUCT DATA SHEET

## ERTALON® 4.6

May 1999

Stanyl (PA4.6)

Compared with conventional nylons, NYLATRON® 4.6 features a better retention of stiffness and creep resistance over a wider temperature range, as well as having superior wear and heat aging resistance.

- Good chemical resistance (pH 5-11)
- Good fatigue resistance
- Good UV-resistance
- High strength / stiffness
- High impact strength
- High mechanical damping ability
- Excellent wear resistance
- Continuous temperature 135°C (max. 200°C)

Common applications: Sealing rings for hydraulic equipment; Gears; Camplates; Hydraulic brake pistons; Electrical coil cores.

### Delivery Programme

Rod 1m & 3m long			
Diameter (mm):	5 (Min)	60 (Max)	
Plate 500mm wide			
Length:	1m & 3m		
Thickness (mm):	50 (Min)	50 (Max)	
Plate 610mm wide			
Length:	1m & 3m		
Thickness (mm):	10 (Min)	40 (Max)	

### Technical Specification

Property	ISO Methods	Units	NYLATRON® 4.6
Colour	-	-	Red/brown
Specific gravity	1183	g/cm <sup>3</sup>	1.18
Water absorption			
Saturation in air (23°C / 50% RH)	-	%	2.80
Saturation in water (23°C)	-	%	9.50
Tensile strength* <sup>1</sup>	527	N/mm <sup>2</sup>	100
Tensile modulus of elasticity* <sup>1</sup>	527	N/mm <sup>2</sup>	3300
Elongation at break* <sup>1</sup>	527	%	25
Impact - Charpy* <sup>1</sup>	179/1eU	kJ/m <sup>2</sup>	no break
Impact - Charpy notched* <sup>1</sup>	179/1eA	kJ/m <sup>2</sup>	8
Hardness			
	Rockwell	-	M92
	Shore D	-	-
Melt Point	-	°C	295
Max allowable service temp in air			
for short periods	-	°C	200
continuously for 20000hrs	-	°C	135
Linear thermal expansion coefficient	-	K <sup>-1</sup> x 10 <sup>-5</sup>	8.0
Thermal Conductivity	-	W/(K.m)	0.30
Flammability* <sup>2</sup> (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
Acids - Strong (pH < 3)	-	-	C
Alkalis - Strong (pH > 11)	-	-	B/C
Chlorinated Hydrocarbons	-	-	A
Hot Water	-	-	B

### Distributor

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'A' - Acceptable service; 'B' - Limited service; 'C' - Unacceptable.

\*<sup>1</sup> Measured on dry test specimens (where applicable)

\*<sup>2</sup> 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 Engineering Plastic Products UK 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.