

DSM EPP PRODUCT DATA SHEET

May 1999

NYLATRON® GS

Nylon 66 + MoS₂ (PA 66 + MoS₂)

The performance of nylon 66 can be enhanced by the incorporation of a filler. NYLATRON® GS has been modified with molybdenum disulphide (MoS₂), which results in a material with even better wear resistance and a lower coefficient of friction. Stiffness, tensile strength and temperature resistance are also improved.

- 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)
- Excellent wear resistance
- Continuous temperature 80°C (max. 180°C)

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

Delivery Programme

Rod 1m & 3m long		
Diameter (mm):	6 (Min)	50 (Max)
Plate 1m & 3m long		
Width (mm):	610	
Thickness (mm):	8 (Min)	50 (Max)
Tube 1m & 3m long		
O.D. (mm):	20 (Min)	66 (Max)
I.D. (mm):	10 (Min)	55 (Max)
Coiled Strip		
Thickness (mm):	0.25 (Min)	3.18 (Max)
Width (mm):	25.4 (Min)	101.6 (Max)
Length (mm):	Dependant on thickness	

Distributor

Technical Specification

Property	ISO Methods	Units	NYLATRON® GS
Colour	-	-	Grey-Black
Density	1183	g/cm ³	1.15
Water absorption			
Saturation in air (23°C / 50% RH)	-	%	2.30
Saturation in water (23°C)	-	%	7.80
Tensile strength* ¹	527	N/mm ²	92
Tensile modulus of elasticity* ¹	527	N/mm ²	3500
Elongation at break* ¹	527	%	20
Impact - Charpy* ¹	179/1eU	kJ/m ²	no break
Impact - Izod notched* ¹	180/2A	kJ/m ²	4
Hardness	Rockwell	-	M88
	Shore D	-	-
Melt point	-	°C	255
Max allowable service temp in air			
for short periods	-	°C	180
continuously for 20,000hrs	-	°C	80
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	26
Outside applications - UV resistance	-	-	A
Acids - strong (pH < 3)	-	-	C
Alkalis - strong (pH > 11)	-	-	B/C
Chlorinated hydrocarbons	-	-	A/B
Hot water	-	-	B

COEFFICIENT OF FRICTION .25 / .30

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

*¹ Measured on dry test specimens (where applicable)

*² Tests completed by DSM 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 DSM 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.