

**Nylatron GS****General Information**

Nylatron is a trade name for nylon that is filled with molybdenum disulphide lubricant. Components are normally supplied in Nylatron GS which makes it stiffer, harder and more dimensionally stable than traditional Nylon. Possessing a high mechanical strength, and fatigue resistance, Nylatron is most suited to applications where a medium load of moving parts is apparent. Its high mechanical damping ability coupled with its strong sliding properties make it a popular choice in conveyor belt trades. Furthermore, our Nylatron washers and gaskets have a good wear resistance as well as electrical insulating properties.

Nylatron GS Nylon is a nylon and molybdenum disulphide (MoS₂) composition designed to improve the mechanical, thermal and bearing properties of type 6/6 nylon while maintaining its basic electrical and chemical characteristics. Through compounding, finely divided particles impart extra lubricity to this nylon, permitting Nylatron GS parts to operate with little or no lubrication.

The added lubricity also contributes dramatically to component service life, making Nylatron GS a very cost-efficient choice. Nylatron GS nylon offers greater wear resistance, lower surface friction, higher strength and greater rigidity than unfilled 6/6 with improved dimensional stability.

Property	Test Method (ISO)	Unit	Result
Colour	-	-	Grey/black
Density	1183	g/cm ³	1.15
Water absorption:			
- after 24/96 h immersion in water of 23°C	62	Mg	46/82
- at saturation in air of 23°C	62	%	0.68/1.25
	-	%	2.5
- at saturation in water of 23°C	-	%	7.8
Thermal Properties			
Melting temperature	-	°C	255
Thermal conductivity at 23°C	-	W/(K – m)	0.29
Coefficient of linear thermal expansion:			
- average value between 23 and 60°C	-	m/(m – K)	80 – 10 ⁻⁶
- average value between 23 and 100°C	-	m/(m – K)	90 – 10 ⁻⁶
Temperature of deflection under load:			
- method A: 1.8 MPa	75	°C	85
Max. allowable service temperature in air:			
- for short periods	-	°C	180
- continuously: for 5,000/20,000 h	-	°C	95/80
Min. service temperature			-20
Flammability:			
- “Oxygen Index”	4589	%	26
- according to UL 94 (3/6mm thickness)	-	-	HB/HB
Mechanical Properties at 23°C			
Tension test:			
- tensile stress at yield	527	MPa	92
	527	MPa	55
- tensile strain at break	527	%	20
	527	%	> 50
	527	MPa	3,500

The information given above is based upon average values and is no way intended as a warranty. The purchaser is deemed responsible for determining the suitability of the product for any application. All data relating to suitable uses and description information concerning our products are compiled from research and are believed to be reliable but are provided for guidance purposes only. The Company holds no legal or contractual responsibility for information supplied



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Nylatron GS

- tensile modulus of elasticity	527	MPa	1,675
Compression test:			
- compressive stress at 1/2/5% nominal strain	604	MPa	25/49/92
Creep test in tension:			
- stress to produce 1% strain in 1,000 h	899	MPa	21
	899	MPa	9
Charpy impact strength – Unnotched	179/1eU	kJ/m ²	No break
Charpy impact strength – Notched	179/1eA	kJ/m ²	4
Izod impact strength – Notched	180/2A	kJ/m ²	4
	180/2A	kJ/m ²	9
Ball indentation hardness	2039-1	N/mm ²	165
Rockwell hardness	2039-2	-	M 88
Electrical Properties at 23°C			
Electric strength	(60243)	kV/mm	26
	(60243)	kV/mm	17
Volume resistivity	(60093)	Ω - cm	> 10 ¹⁴
	(60093)	Ω - cm	> 10 ¹²
Surface resistivity	(60250)	Ω	> 10 ¹³
	(60250)	Ω	> 10 ¹²
Relative permittivity: - at 100Hz	(60250)	-	3.8
	(60250)	-	7.4
- at 1MHz	(60250)	-	3.3
	(60250)	-	3.8
Dielectric dissipation factor tan: - at 100Hz	(60250)	-	0.013
	(60250)	-	0.13
- at 1MHz	(60250)	-	0.020
	(60250)	-	0.06
Comparative tracking index (CTI)	(60112)	-	600
	(60112)	-	600

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