



MANUFACTURING CORPORATION

- Plastics Machining
- Spring Energized Seals
- Rotary Lip Seals

Material Data Sheet

Material: Nylatron® GS Nylon | Molybdenum Disulphide (MoS2) Filled Polyamide

Molybdenum disulphide (MoS2) filled nylon offering improved strength and rigidity. With a lower coefficient of linear thermal expansion than Nylon 101, Nylatron GS parts maintain better fit and clearances, and have less tendency to seize as bearings.

Mechanical Properties	Test Method ASTM	Value	Units
Specific Gravity, 73°F	D792	1.16	
Tensile Strength, 73°F	D638	12,500	psi
Tensile Modulus of Elasticity, °F	D638	480,000	psi
Tensile Elongation (at break), 73°F	D638	25	%
Flexural Strength, 73°F	D790	17,000	psi
Flexural Modulus of Elasticity, 73°F	D790	460,000	psi
Shear Strength, 73°F	D732	10,500	psi
Compressive Strength, 10% Deformation, 73°F	D695	16,000	psi
Compressive Modulus of Elasticity, 73°F	D695	420,000	psi
Hardness, Rockwell, Scale as noted, 73°F	D785	M85(R115)	
Hardness, Durometer, Shore "D" Scale, 73°F	D2240	D85	
Izod Impact (notched), 73°F	D256 Type A	0.5	ft-lb/in of notch
Coefficient of Friction (Dry vs. Steel) Dynamic	QTM 55007	0.2	
Limiting PV (with 4:1 safety factor applied)	QTM 55007	3,000	ft.lbs./in. ² min
Wear Factor "k" x 10 ⁻¹⁰	QTM 55010	90	in. ³ -min/ft.lbs.hr
Thermal Properties			
Coefficient of Linear Thermal Expansion (-40°F to 300°F)	E-831 (TMA)	4 x 10 ⁻⁵	in/in./°F
Heat Deflection Temperature 264 psi	D648	200	°F
TG-Glass transition (amorphous)	D3418	N/A	°F
Melting Point (Crystalline) peak	D3418	500	°F
Continuous Service Temperature in Air (Max.) (1)		220	°F
Thermal Conductivity	F433	1.7	BTU-in/hr-ft ² -°F
Electrical Properties			
Dielectric Strength, Short Term	D149	350	Volts/mil
Surface Resistivity	EOS/ESD S11.11	>10 ¹³	ohm/square
Dielectric Constant, 106 Hz	D150		
Dissipation Factor, 106 Hz	D150		
Flammability @ 3.1 mm (1/8 in.)	UL 94	V-2	
FDA Compliant		No	

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*The values shown in these and the following charts are typical, average properties. Actual values may differ due to variations in resin formulations and processing methods. These values are obtained from sources believed to be reliable, including the resin manufactures, converters and other published sources. However, they should not be used for specification or design purposes. Above information is provided by Quadrant EPP.