



# THE GUND COMPANY

MANUFACTURERS & FABRICATORS OF ENGINEERED MATERIAL SOLUTIONS

## Nylatron® GS PA66 - Nylon 66

### Semi-Crystalline Engineering Plastic

Nylatron® GS PA66 is a Molybdenum Disulphide (MoS<sub>2</sub>) filled nylon. It offers outstanding mechanical strength and rigidity with a lower coefficient of linear thermal expansion than other nylon products. It is used for components that need to maintain fit and clearance with a reduced likelihood of seizing. As such, it is often used in wear applications such as bushings, bearings, roller wheels, pulleys, sheaves, wear pads, valve seats, and seals throughout the construction and heavy equipment industries.

The Gund Company custom fabricates insulation materials to the exact specifications and drawings specified by our customers. We offer our customers the proper product for their specific application. A variety of dimensions and diameter sizes are available. Product colors vary according to material type.

PROPERTIES	ISO/IEC			ASTM			
	Test Method	Units	Typical Values	Test Method	Units	Typical Values	
<b>PHYSICAL</b>	Density	ISO 1183-1	g/cm <sup>3</sup>	1.15		-	
	Specific Gravity			-	ASTM D792	1.16	
	Water Absorption: 24 hrs. in Water at 73°F	ISO 62	%	0.68	ASTM D570	%	0.3
	Water Absorption Saturation in Water at 73°F		%	7.8	ASTM D570	%	7
	Wear Rate	ISO 7148-2	µm/km	12.0000	QTM 55010	in <sup>3</sup> ·min/ft·lbs·hr·10 <sup>-10</sup>	90
	Coefficient of Friction: Dynamic	ISO 7148-2		0.35 - 0.55	QTM 55007	ft·lbs/in <sup>2</sup> ·min	0.2
	Limiting PV at 100 FPM			-	QTM 55007		3,000
Limiting PV at 0.1 / 1 (m/s)		MPa·m/s	0.13 / 0.08			-	
<b>THERMAL</b>	Melting Temperature: DSC, 10°C(50°F)/min	ISO 11357-1/-3	°C	260	ASTM D3418	°F	500
	Thermal Conductivity at 23°C (73°F)		W/m·K	0.29		BTU·in/ft <sup>2</sup> ·hr·°F	1.70
	CLTE (-40 to 150°C) (-40 to 300°F)			-	ASTM E831 (TMA)	µin/in·°F	40.0
	CLTE (23 to 60°C) (73°F to 140°F)		µm/m·°C	80.0			-
	CLTE (23 to 100°C) (73°F to 210°F)		µm/m·°C	90.0			-
	Heat Deflection Temperature (264 PSI)	ISO 75-1/-2	°C	85	ASTM D648	°F	200
	Continuous Service Temperature in Air 20 hrs.		°C	80		°F	220
	Min. Service Temperature		°C	-20.00			-
Flammability: UL94 (3 mm (1/8 in.))			HB			HB	
Flammability: Oxygen Index	ISO 4589-1/-2	%	26			-	
<b>MECHANICAL</b>	Ultimate Tensile Strength	ISO 527-1/-2	MPa	95.0	ASTM D638	PSI	12,500
	Tensile Strain at Yield	ISO 527-1/-2	%	5.0	ASTM D638	%	15
	Tensile Strain at Break	ISO 527-1/-2	%	20.0	ASTM D638	%	35
	Tensile Modulus of Elasticity	ISO 527-1/-2	GPa	3600	ASTM D638		480
	Shear Strength			72.0	ASTM D732	KSI	10,500
	Compressive Stress: 1 / 2 / 5 % nominal strain	ISO 604	MPa	32 / 62 / 100		PSI	-
	Compressive Strength			-	ASTM D695	PSI	16,000
	Charpy Impact Strength: Unnotched	ISO 179-1/1eU	kJ/m <sup>2</sup>	NB			-
	Charpy Impact Strength: Notched	ISO 179-1/1eA	kJ/m <sup>2</sup>	4.00		ft·lb/in	-
	IZOD Impact Strength: Notched	ISO 180	kJ/m <sup>2</sup>	-	ASTM D256	PSI	0.50
	Flexural Strength	ISO 178	MPa	128.0	ASTM D790	KSI	17,000
	Flexural Modulus	ISO 178	MPa	3,240.0	ASTM D790		460
Rockwell Hardness: M Scale	ISO 2039-2		88	ASTM D785		85	
Shore Hardness: D Scale	ISO 868		80	ASTM D2240		85	
<b>ELECTRICAL</b>	Dielectric Strength (Perp. in Oil)	IEC 60243-1	kV/mm	26	ASTM D149	V/mil	350
	Volume Resistivity	IEC 62631-3-1	Ohm·cm	10 <sup>13</sup>	ASTM D257	Ohm·cm	-
	Surface Resistivity			-	ANSI/ESDSTM 11.11	Ohms/sq	10 <sup>12</sup>
	Dielectric Constant at 1 MHz	IEC 62631-2-1		3.30	ASTM D150		-
	Dissipation Factor at 1 MHz	IEC 62631-2-1		0.0200	ASTM D150		-
<b>OPTICAL</b>	Refractive Index	ISO 14732		-	ASTM D542		-
	Haze	ISO 13468-1	%	-	ASTM D1003	%	-
	Transmission: Visible	ISO 13468-1	%	-	ASTM D1003	%	-
	Yellow Index			-	ASTM D1925	%	-
	Gloss	ISO 2813	%	-	ASTM D523	%	-

The data supplied are typical values. They are not to be considered specification values. All of the information, suggestions, and recommendations about these properties and uses of the products herein are based on tests and data believed to be accurate; however, the final determination regarding the suitability of any material described herein for the contemplated application, the manner of such use, and whether the use infringes any patents is the sole responsibility of the user. There is no warranty - expressed or implied - including, without limitation, warranties of merchantability or fitness for a particular purpose. Under no circumstances shall we be liable for incidental or consequential loss or damage.