



Nylatron GSM Blue

Type 6, MoS2 filled, cast blue nylon

Physical Properties	Metric	English	Comments
Specific Gravity	1.15 g/cc	0.0415 lb/in ³	ASTM D792
Water Absorption	0.3 %	0.3 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	6 %	6 %	Immersion; ASTM D570 (2)

Mechanical Properties

Hardness, Rockwell M	80	80	ASTM D785
Hardness, Rockwell R	117	117	ASTM D785
Tensile Strength, Ultimate	68.9 MPa	10000 psi	ASTM D638
Elongation at Break	30 %	30 %	ASTM D638
Tensile Modulus	3.45 GPa	500 ksi	ASTM D638
Flexural Modulus	3.45 GPa	500 ksi	ASTM D790
Flexural Yield Strength	103 MPa	15000 psi	ASTM D790
Compressive Strength	89.6 MPa	13000 psi	10% Def.; ASTM D695
Compressive Modulus	2.93 GPa	425 ksi	ASTM D695
Coefficient of Friction	0.18	0.18	Dry vs. Steel; QTM55007
K (wear) Factor	131 x 10 ⁻⁸ mm ³ /N-M	65 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	QTM 55010
Limiting Pressure Velocity	0.193 MPa-m/sec	5500 psi-ft/min	4:1 safety factor; QTM 55007
Izod Impact, Notched	0.481 J/cm	0.9 ft-lb/in	ASTM D256 Type A

Electrical Properties

Surface Resistivity per Square	Min 1e+013 ohm	Min 1e+013 ohm	EOS/ESD S11.11
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Thermal Properties

CTE, linear 68°F	99 µm/m-°C	55 µin/in-°F	(-40°F to 300°F); ASTM E831
Melting Point	216 °C	420 °F	Crystalline, Peak; ASTM D3418
Maximum Service Temperature, Air	93.3 °C	200 °F	Long Term
Deflection Temperature at 1.8 MPa (264 psi)	93.3 °C	200 °F	ASTM D648
Flammability, UL94 (Estimated Rating)	HB	HB	1/8 inch

Qualitative Processing Properties

Compliance - FDA	Not Compliant		
Machinability	1	1-10, 1=Easier to Machine	
Service in Alcohols	Limited		
Service in Aliphatic Hydrocarbons	Acceptable		
Service in Aromatic Hydrocarbons	Acceptable		
Service in Chlorinated Solvents	Limited		
Service in Ethers	Acceptable		
Service in Ketones	Acceptable		
Service in Strong Acids	Unacceptable		
Service in Strong Alkalies	Unacceptable		
Service in Sunlight	Limited		
Service in Weak Acids	Limited		
Service in Weak Alkalies	Limited		

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