

CAST NYLON 6 MOLY FILLED									
		Metric		English		Comments			
Physical Properties		Metric		English		Comments			
Specific Gravity		1.15 g/cc		0.0415 lb/in ³		ASTM D792			
Water Absorption		0.30%		0.30%		Immersion, 24hr;			
Water Absorption at Saturation		7%		7%		Immersion; ASTM D570(2)			
Mechanical Properties									
Hardness, Rockwell M		80		80		ASTM D785			
Hardness, Rockwell R		110		110		ASTM D785			
Hardness, Shore D		85		85		ASTM D2240			
Tensile Strength, Ultimate		75.8 MPa		11000 psi		ASTM D638			
Elongation at Break		20%		20%		ASTM D638			
Tensile Modulus		2.83 GPa		410 ksi		ASTM D638			
Flexural Modulus		3.28 GPa		475 ksi		ASTM D790			
Flexural Yield Strength 1		10 MPa		16000 psi		ASTM D790			
Compressive Strength		96.5 MPa		14000 psi		10% Def.; ASTM D695			
Compressive Modulus		2.76 GPa		400		ASTM D695			
Shear Strength		68.9 MPa		10000 psi		ASTM D732			
Coefficient of Friction		0.18		0.18		Dry vs. Steel; QTM55007			
K (wear) Factor		24.2 x 10 ⁻⁸ mm in ³ -min/ft-lb-hr		QTM 55010					
Limiting Pressure Velocity		0.525 MPa-m/sec		15000 psi-ft/mir		4:1 safety factor; QTM 55007			
Izod Impact, Notched		0.267 J/cm		0.5 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			
Dielectric Strength		15.7 kV/mm		400 V/mil		Short Term; ASTM D149			
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, 93.3 °C		200 °F		200 °F		Long Term			
Deflection Temp, 93.3 °C		200 °F		ASTM D648					
Flammability, UL94 (Estimated FHB)				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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