

CAST NYLON 6 MOLY FILLED									
		Metric		English		Comments			
Physical Properties									
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		
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			
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;		
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;				
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			
Thermal Properties							D149		
CTE, linear 68°F		99 μm/m-°C		55 μin/in-°F		(-40°F to 300°F);			
Melting Point			216 °C			420 °F	Crystalline, Peak;		
Maximum Service Temperature, 93.3 °C			200 °F			Long Term	ASTM D3418		
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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