Nylatron MC 901

Type 6, blue, heat stabilized, cast

Physical Properties	Metric	English	Comments
Specific Gravity	1.15 g/cc	0.0415 lb/in³	ASTM D792
Water Absorption	0.6 %	0.6 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	7 %	7 %	Immersion; ASTM D570(2)
Mechanical Properties			
Hardness, Rockwell M	85	85	ASTM D785
Hardness, Rockwell R	115	115	ASTM D785
Hardness, Shore D	85	85	ASTM D2240
Tensile Strength, Ultimate	82.7 MPa	12000 psi	ASTM D638
Elongation at Break	20 %	20 %	ASTM D638
Tensile Modulus	2.76 GPa	400 ksi	ASTM D638
Flexural Modulus	3.45 GPa	500 ksi	ASTM D790
Flexural Yield Strength	110 MPa	16000 psi	ASTM D790
Compressive Strength	103 MPa	15000 psi	10% Def.; ASTM D695
Compressive Modulus	2.76 GPa	400 ksi	ASTM D695
Shear Strength	75.8 MPa	11000 psi	ASTM D732
Coefficient of Friction	0.2	0.2	Dry vs. Steel; QTM55007
K (wear) Factor	201 x 10^{-8} mm³/N-M	100 x 10^{-10} in³-min/ft-lb-hr	QTM 55010
Limiting Pressure Velocity	0.105 MPa-m/sec	3000 psi-ft/min	4:1 safety factor; QTM 55007
Izod Impact, Notched	0.214 J/cm	0.4 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 Constant	3.7	3.7	1MHz; ASTM D150
Dielectric Strength	19.7 kV/mm	500 V/mil	Short Term; ASTM D149
Thermal Properties			
CTE, linear 68°F	90 µm/m-°C	50 µin/in-°F	(-40°F to 300°F); ASTM E831
Thermal Conductivity	0.245 W/m-K	1.7 BTU-in/hr-ft²-°F	ASTM F433
Melting Point	216 °C	420 °F	Crystalline, Peak; ASTM D3418
Maximum Service Temperature, Air	127 °C	260 °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		