

General Information

- Chemical Designation:** *Poly-Texx 60F is an oil-filled grade of Nylon 6. Unlike Nylon 6/6 (Extrusion grade), castings provides the unique opportunity to be "poured" into an open mold allowing not only standard shapes such as rod, tubing, and sheet, but custom near net shaped blanks as well. Oil-filled Nylon 6 has reduced lubrication requirements, no galling, or corrosion. It is commonly used for bushings, slide plates and gears.*
- PA (Polyamide)**
- Fillers:** *Nylon 6 is easily fabricated into precision parts using standard metalworking equipment. Tight tolerances (<+/- .002") are easily achieved with experience. It is available in a broad variety of shapes and sizes. Rod and sheet stock normally comes slightly oversized for machining purposes.*
- oil**
- Color:** *Care should be taken when designing in high moisture applications. Nylon naturally absorbs water and its specifications can be degraded during prolonged exposure to water.*
- Cream or Green**
- Specific Gravity:**
- 1.14

Technical Information

Specification	Test	Value	Units
Specific Gravity, 73°F	D792	1.14	
Tensile Strength @ Yield, 73°F	D638	9,000	psi
Tensile Modulus of Elasticity, 73°F	D638	350,000	psi
Tensile Elongation (at break), 73°F	D638	25	%
Flexural Strength, 73°F	D790	12,500	psi
Flexural Modulus of Elasticity	D790	350,000	psi
Shear Strength, 73°F	D732		psi
Compressive Strength – Ultimate		12,000	psi
Compressive Strength at 2% Deformation	D695	8,000	psi
Compressive Strength at 10% Deformation	D695	12,000	psi
Deformation Under Load			%
Compressive Modulus of Elasticity, 73°F	D695	325,000	Psi
Compressive Strength \perp to Laminate (Modulus)		-	psi
Compressive Strength \perp to Laminate (Yield)		-	psi
Compressive Strength \perp to Laminate (Ultimate)		-	psi
Hardness, Durometer (Shore "D" scale)	D2240		
Hardness, Rockwell (Scale as noted)	D785	100	Rockwell R
Izod Impact, Notched @ 73°F	D256 Type A	1.2	ft.lbs/in. of notch
Coefficient of Friction (Dry vs Steel) Static	PTM55007	-	
Coefficient of Friction (Dry vs Steel) Dynamic	PTM55007	.12	
Maximum Static Bearing Load (P)	PTM55007	350	psi
Maximum Unlubricated No Load Bearing Velocity (V)	PTM55007	100	ft/minute
Maximum Limiting PV (Unlubricated)	PTM55007	5,500	psi x ft/min.
Wear Factor "K" x 10 ⁻¹⁰	PTM55010	200 x 10 ⁻¹⁰	Cubic in.-min/ft.lbs.hr
Sand Wheel Wear/Abrasion Test		80	UHMW=100
Minimum Mating Surface Hardness			Rockwell (Brinnell)
Coefficient of Linear Thermal Expansion	E-831(TMA)	3.5	in/in/°F x 10-5
Coefficient of Thermal Expansion // to Laminates	E-831(TMA)	-	in/in/°F x 10-5
Coefficient of Thermal Expansion \perp to Laminates	E-831(TMA)	-	in/in/°F x 10-5
Heat Deflection Temperature @ 66psi	D648	360	°F
Heat Deflection Temperature 264 psi	D648	260	°F
Embrittlement Temperature			°F Min.
Continuous Service Temperature in Air		200	°F Max.
Short Term Service Temperature		300	°F Max.
Tg-Glass Transition (Amorphous)	D3418		°F
Melting Point (Crystalline Peak)	D3418	428	°F
Thermal Conductivity	F433	2.57	BTU-in/(hr/ft ² F)
Dielectric Strength Short Term	D149	550	Volts/mil
Volume Resistivity	D257	10 ¹⁴	ohm/cm
Surface Resistivity	D257	10 ¹⁴	ohm/cm
Dielectric Constant, 106 Hz	D150	3.7	
Dissipation Factor, 106 Hz	D150		
Flammability @ 3.1mm(1/8 in.) UL94	UL94	HB	
Arc Resistance			seconds
Water Absorption, Immersion 24 Hours	D570 (2)	.75	%
Water Absorption, Immersion Saturation	D570 (2)	4.0	%
Machinability Rating		2	1=easy, 10=difficult
Rod Diameter Availability (Off the Shelf)	1		inches
Sheet Thickness Availability (Off the Shelf)	.25		inches
Characteristics / Attributes	Excellent toughness and impact strength, easily machined, wide variety of shapes		

Thank you for your interest in our materials. All statements, technical information and recommendations presented are in good faith, based upon tests believed to be reliable and practical field experience. Poly-Tech is not responsible for its accuracy or completeness. It is our recommendation and the customer's responsibility to determine the suitability of any material for any given application.