

General Information

Chemical Designation: *Poly-Texx® 350LX, 350LXC and 350 LXS comprise a family of UHMW based materials that are not only abrasive resistant, and FDA compliant; they boast the lowest coefficient of friction of any UHMW based product in the industry. 350LX is designed for standard bearing and wear applications against cold rolled steel and stainless steel mating surfaces, and the standard colors are blue and gray.*

UHMW-PE (Ultra High Molecular Weight Polyethylene)

Fillers:

Siloxane

Color:

Blue and Gray

Specific Gravity:

0.93

350LXC is specifically designed to run against POM (Acetal) conveyor chains and is gray in color. 350LXS is an anti-static grade that is black. All are available in standard sheet and rod sizes, as well as custom profile shapes. Typical applications are in the food and beverage handling industry for chain conveyor guides. Sleeve and flanged bearings for industrial and manufacturing bearing applications are also common. All three can be machined to custom components according to client specifications. Its main attributes are low coefficient of friction, excellent impact strength and abrasion resistance. Its self-lubrication properties and excellent mechanical properties makes Poly-Texx® 350LX a great choice for many demanding bearing and wear applications.

Technical Information

Specification	Test	Value	Units
Density	D792	.930	gm/cm3
Tensile Strength @ Yield, 73°F	D638	3,100	psi
Tensile Modulus of Elasticity			psi
Tensile Elongation (at break), 73°F	D638	>50	%
Flexural Strength, 73°F	D790		psi
Flexural Modulus of Elasticity	D790		psi
Shear Strength, 73°F	D732		psi
Compressive Strength – Ultimate		1,000	psi
Compressive Strength at 2% Deformation	D695	1,100	psi
Compressive Strength at 10% Deformation	D695	1,200	psi
Deformation Under Load		10	%
Compressive Modulus of Elasticity, 73°F	D695		
Compressive Strength ⊥ to Laminate (Modulus)			psi
Compressive Strength ⊥ to Laminate (Yield)		1,000	psi
Compressive Strength ⊥ to Laminate (Ultimate)		1,000	psi
Hardness, Durometer (Shore "D" scale)	D2240	D62-D66	
Hardness, Rockwell (Scale as noted)	D785		Rockwell M
Izod Impact, Notched @ 73°F	D256 Type A	N/A	No Break
Coefficient of Friction (Dry vs Acetal) Dynamic	PTM 55007	0.08	
Coefficient of Friction (Dry vs Steel) Dynamic	PTM 55007	0.11	
Maximum Static Bearing Load (P)	PTM 55007	1,000	psi
Maximum Unlubricated No Load Bearing Velocity (V)	PTM 55007	50	ft/minute
Maximum Limiting PV (Unlubricated)	PTM 55007	2,500	psi x ft/min.
Wear Factor "K" x 10-10	PTM 55010		Cubic in.-min/ft.lbs.hr
Sand Wheel Wear/Abrasion Test		100	UHMW=100
Minimum Mating Surface Hardness		20	Rockwell (Brinnell)
Coefficient of Linear Thermal Expansion	E-831 (TMA)	9.1	in/in°F x 10-5
Coefficient of Thermal Expansion // to Laminates	E-831 (TMA)	9.1	in/in°F x 10-5
Coefficient of Thermal Expansion I to Laminates	E-831 (TMA)	9.1	in/in°F x 10-5
Softening Point		180	°F
Heat Deflection Temperature 264 psi	D648		°F
Embrittlement Temperature		-180	°F Min.
Continuous Service Temperature in Air		180	°F Max.
Short Term Service Temperature		220	°F Max.
Tg-Glass Transition (Amorphous)	D3418		°F
Melting Point (Crystalline) Peak	D3418	380	°F
Thermal Conductivity	F433		BTU-in/(hr/ft2°F)
Dielectric Strength Short Term	D149	900	KV/mil
Volume Resistivity	D257	>1015	ohm/cm
Surface Resistivity	D257	>1014	ohm/cm
Dielectric Constant, (103 Hz)	D150	2.3	
Dissipation Factor, 106 Hz	D150	<.5 x 10-3	
Flammability @ 3.1mm(1/8 in.) UL94	UL94	HB	
Arc Resistance			seconds
Water Absorption, Immersion 24 Hours	D570 (2)	Nil	%
Water Absorption, Immersion Saturation	D570 (2)	Nil	%
Machinability Rating		3	1=easy, 10=difficult
Rod Diameter Availability (Off the Shelf)	1.00	6.0	inches
Sheet Thickness Availability (Off the Shelf)	.250	3.0	inches
Characteristics / Attributes		Very High Abrasion Resistance/ Self Lubricating / Very Low Friction	

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.