



- Plastics Machining
- Spring Energized Seals
- Rotary Lip Seals

Material Data Sheet

Material: Tecapet™ PET

Polyethylene Terephthalate

Tecapet™ PET is an unreinforced, semi-crystalline thermoplastic polyester derived from polyethylene terephthalate. Its excellent wear resistance, low coefficient of friction, high flexural modulus, and superior dimensional stability make it a versatile material for designing mechanical and electro-mechanical parts. Because Tecapet™ PET has no centerline porosity, the possibility of fluid absorption and leakage is virtually eliminated. This material offers excellent wear resistance, low coefficient of friction and has great chemical resistance. Tecapet™ PET is also compliant to FDA regulation 21 CFR 177.1630 for use in contact with food. This material has uses in water purification systems, printing equipment, textile components, food-handling equipment and valves.

Mechanical Properties	ASTM Test Method	Value	Units
Density	D792	0.0499	lbs/in ³
Specific Gravity	D792	1.38	g/cc
Water Absorption @ 24 hours, 73°F	D570	0.1	%
@ Saturation, 73°F	D570	0.5	%
Tensile Strength, 73°F	D638	12500	psi
Tensile Modulus	D639	470000	psi
Elongation (at break), 73°F	D638	20	%
Flexural Strength, 73°F	D790	17600	psi
Flexural Modulus of Elasticity, 73°F	D790	430000	psi
Compressive Strength	D695		psi
Izod Impact Strength, 73°F	D256	0.7	ft-lb/in of notch
Rockwell Hardness, 73°F	D785	M - 94	M or R Scale
Shure Hardness			D Scale
Wear Factor Against Steel, 40 psi, 50 fpm	D3702	210 X 10 ⁻¹⁰	in. ³ -min/ft.lbs.hr
Static Coefficient of Friction	D3702	0.19	
Dynamic Coefficient of Friction, 40 pcs, 50 fpm	D3702	0.25	
Thermal Properties			
Heat Deflection Temperature @ 66 psi	D648	240	°F
@ 264 psi	D648	175	°F
Coefficient of Linear Thermal Expansion	D696	3.9 X 10 ⁻⁵	in/in./°F
Continuous Servicing Temperature, Intermittent		320	°F
Long Term	UL746B	230	°F
Specific Heat		0.28	BTU/lb -°F
Thermal Conductivity		2.01	
Melting Point	D2133	490	°F
Flammability	UL94	HB	(mm)
Electrical Properties			
Surface Resistivity	D257		ohm/square
Volume Resistivity	D257	10 ¹⁵	ohm - cm
Dielectric Strength	D149	400	Volts/mil
Dielectric Constant, 60 Hz, 73°F, 50% RH	D150	3.4	
Dissipation Factor, 60 HZ, 73°F	D150	0.002	

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