



MANUFACTURING CORPORATION

- Plastics Machining
- Spring Energized Seals
- Rotary Lip Seals

Material Data Sheet

Material: Ertalyte® TX

Polyester

Ertalyte® TX is an internally lubricated thermoplastic polyester providing enhanced wear and inertness over general purpose nylon(PA) and acetal(POM) products. Containing uniformly dispersed solid lubricant, Ertalyte® TX provides a lower wear rate and coefficient of friction than unmodified polyesters like PET or PBT and even internally lubricated materials like Delrin® AF blend.

Ertalyte® TX excels under both high pressure and velocity conditions. It is also ideally suited for applications involving soft metal and plastic mating surfaces.

Mechanical Properties	Test Method ASTM	Value	Units
Specific Gravity, 73°F	D792	1.44	
Tensile Strength, 73°F	D638	10,500	psi
Tensile Modulus of Elasticity, °F	D638	500,00	psi
Tensile Elongation (at break), 73°F	D638	5	%
Flexural Strength, 73°F	D790	14,000	psi
Flexural Modulus of Elasticity, 73°F	D790	360,000	psi
Shear Strength, 73°F	D732	8,500	psi
Compressive Strength, 10% Deformation, 73°F	D695	15,250	psi
Compressive Modulus of Elasticity, 73°F	D695	400,000	psi
Hardness, Rockwell, Scale as noted, 73°F	D785	M94	
Hardness, Durometer, Shore "D" Scale, 73°F	D2240	D80	
Izod Impact (notched), 73°F	D256 Type A	0.4	ft-lb/in of notch
Coefficient of Friction (Dry vs. Steel) Dynamic	QTM 55007	0.19	
Limiting PV (with 4:1 safety factor applied)	QTM 55007	6,000	ft.lbs./in. ² min
Wear Factor "k" x 10 ⁻¹⁰	QTM 55010	35	in. ³ -min/ft.lbs.hr
Thermal Properties			
Coefficient of Linear Thermal Expansion (-40°F to 300°F)	E-831 (TMA)	4.5 x 10 ⁻⁵	in/in./°F
Heat Deflection Temperature 264 psi	D648	180	°F
TG-Glass transition (amorphous)	D3418	N/A	°F
Melting Point (Crystalline) peak	D3418	491	°F
Continuous Service Temperature in Air (Max.) (1)		210	°F
Thermal Conductivity	F433	1.9	BTU-in/hr-ft ² -°F
Electrical Properties			
Dielectric Strength, Short Term	D149	533	Volts/mil
Surface Resistivity	EOS/ESD S11.11	>10 ¹³	ohm/square
Dielectric Constant, 106 Hz	D150	3.6	
Dissipation Factor, 106 Hz	D150	0.02	
Flammability @ 3.1 mm (1/8 in.)	UL 94	HB	
FDA Compliant		Yes	

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*The values shown in these and the following charts are typical, average properties. Actual values may differ due to variations in resin formulations and processing methods. These values are obtained from sources believed to be reliable, including the resin manufactures, converters and other published sources. However, they should not be used for specification or design purposes. Above information is provided by Quadrant EPP.