



**LEHIGH VALLEY
PLASTICS**

We Shape The Industry

Ertalyte® TX, Polyester-semi-crystalline thermoplastic with solid lubricant, extruded

MECHANICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Specific Gravity	1.44	ASTM D792	1.44
Tensile Strength, psi	10500	ASTM D638	72 MPa
Tensile Modulus, psi	500000	ASTM D638	3,448 MPa
Elongation, %	5	ASTM D638	5 %
Flexural Strength, psi	14000	ASTM D790	97 MPa
Flexural Modulus, psi	360000	ASTM D790	2,482 MPa
Shear Strength, psi	8500	ASTM D732	59 MPa
Compressive Strength, psi	15250	ASTM D695, 10% Def.	105 MPa
Compressive Modulus, psi	400000	ASTM D695	2,758 MPa
Hardness, Rockwell M	94	ASTM D785	94
Hardness, Durometer, Shore D Scale	80	ASTM D2240	80
Izod Impact (Notched), ft-lb/in	0.4	ASTM D256 Type A	21 J/m
Coefficient of Friction, Dynamic	0.19	Dry vs. Steel, QTM55007	0.19
Limiting PV, psi-fpm	6000	4:1 safety factor; QTM 55007	0.21 MPa-m/sec
k (wear) factor, 10 ⁻¹⁰ in ³ -min/lb-ft-hr	35	QTM 55010	35 10 ⁻¹⁰ in ³ -min/lb-ft-hr
Relative Machinability	2	1-10, 1=Easier to Machine	2
THERMAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Coefficient of Thermal Expansion, 10E-4/°F	0.45	ASTM E831 (-40°F to 300°F)	0.81 10 ⁻⁴ /K
Deflection Temperature 264 psi, °F	180	ASTM D648	82 °C
Melting Point (Crystalline) Peak, °F	491	ASTM D3418	255 °C
Continuous Service in Air (Max), °F	210	Long Term	99 °C
Thermal Conductivity, BTU-in/hr-ft ² -°F	1.9	ASTM F433	0.27 W/m-K
ELECTRICAL PROPERTIES	VALUES	COMMENTS	METRIC VALUES
Dielectric Strength, Short Term, Volts/mil	533	ASTM D149	21 kV/mm
Surface Resistance, Ohm/Square	1E+13	Lower Limit; EOS/ESD S11.111	E+13 Ohm/Square
Dielectric Constant, 1 MHz	3.6	ASTM D150	3.6
Dissipation Factor, 1 MHz	0.02	ASTM D150	0.02
CHEMICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Water Absorption Immersion, 24 hr., %	0.06	ASTM D570(2)	0.06 %
Water Absorption Immersion Sat, %	0.47	ASTM D570(2)	0.47 %
Acids, Weak (acetic, dilute HCl)	3	Acceptable Service	3
Acids, Strong (conc. HCl or sulfuric)	2	Limited Service	2
Alkalies, Weak (dilute NaOH)	3	Acceptable Service	3
Alkalies, Strong (conc. NaOH)	1	Unacceptable	1
Hydrocarbons, Aromatic (toluene)	3	Acceptable Service	3
Hydrocarbons, Aliphatic (gasoline)	3	Acceptable Service	3
Ketones, Esters (acetone)	3	Acceptable Service	3
Ethers (diethyl ether, THF)	3	Acceptable Service	3
Chlorinated Solvents (methylene chloride)	1	Unacceptable	1
Alcohols (methanol, anti-freeze)	3	Acceptable Service	3
Continuous Sunlight	2	Limited Service	2
COMPLIANCE	ENGLISH VALUES	COMMENTS	METRIC VALUES
Flammability, UL94 (5=V-0; 4=V-1; 3=V-2; 1=HB)	1 (HB)	UL94; 1/8 inch	1
FDA (1=Yes)	1	Compliant	1

IMPORTANT: The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom. Lehigh Valley Plastics, Inc. will not be held responsible for the use of this information relative to actual application.