



# LEHIGH VALLEY PLASTICS

We Shape The Industry

## Ertalyte® PET-P, Polyester-semi-crystalline thermoplastic, extruded

MECHANICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Specific Gravity	1.41	ASTM D792	1.41
Tensile Strength, psi	12400	ASTM D638	85 MPa
Tensile Modulus, psi	460000	ASTM D638	3,172 MPa
Elongation, %	20	ASTM D638	20 %
Flexural Strength, psi	18000	ASTM D790	124 MPa
Flexural Modulus, psi	490000	ASTM D790	3,379 MPa
Shear Strength, psi	8000	ASTM D732	55 MPa
Compressive Strength, psi	15000	ASTM D695, 10% Def.	103 MPa
Compressive Modulus, psi	420000	ASTM D695	2,896 MPa
Hardness, Rockwell M	93	ASTM D785	93
Hardness, Rockwell R	125	ASTM D785	125
Hardness, Durometer, Shore D Scale	87	ASTM D2240	87
Izod Impact (Notched), ft-lb/in	0.5	ASTM D256 Type A	27 J/m
Coefficient of Friction, Dynamic	0.2	Dry vs. Steel, QTM55007	0.2
Limiting PV, psi-fpm	2800	4:1 safety factor; QTM 55007	0.10 MPa-m/sec
k (wear) factor, 10 <sup>-10</sup> in <sup>3</sup> -min/lb-ft-hr	60	QTM 55010	60 10 <sup>-10</sup> in <sup>3</sup> -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	0.33	ASTM E831 (-40°F to 300°F)	0.59 10 <sup>-4</sup> /K
Deflection Temperature 264 psi, °F	240	ASTM D648	116 °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 <sup>2</sup> -°F	2	ASTM F433	0.29 W/m-K
ELECTRICAL PROPERTIES	VALUES	COMMENTS	METRIC VALUES
Dielectric Strength, Short Term, Volts/mil	385	ASTM D149	15 kV/mm
Surface Resistance, Ohm/Square	1E+13	Lower Limit; EOS/ESD S11.111	1E+13 Ohm/Square
Dielectric Constant, 1 MHz	3.4	ASTM D150	3.4
Dissipation Factor, 1 MHz	0.02	ASTM D150	0.02
CHEMICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Water Absorption Immersion, 24 hr., %	0.07	ASTM D570(2)	0.07 %
Water Absorption Immersion Sat, %	0.9	ASTM D570(2)	0.9 %
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.