

Ensinger ENSITEP® PET Polyethylene Terephthalate - Extruded Products (discontinued **)

Category : Polymer , Thermoplastic , Polyester, TP , Polyethylene Terephthalate (PET)

Material Notes:

ENSITEP 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 ENSITEP has no centerline porosity, the possibility of fluid absorption and leakage is virtually eliminated. Uses: ENSITEP's superior wear resistance and lack of centerline porosity give it an advantage over other materials for applications involving solvents, chemicals, and food products. ENSITEP is also used in water purification systems, printing equipment, textile components, food-handling equipment, and valves. Information supplied by Ensinger, Inc. Ensitetp grades have been replaced by Tecapet

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ensinger-ENSITEP-PET-Polyethylene-Terephthalate-Extruded-Products-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.38 g/cc	0.0499 lb/in ³	ASTM D792
Water Absorption	0.10 %	0.10 %	at 24 hours; ASTM D570
Water Absorption at Saturation	0.50 %	0.50 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	114	114	ASTM D785
Tensile Strength, Yield	79.3 MPa	11500 psi	ASTM D638
Elongation at Break	15 %	15 %	ASTM D638
Tensile Modulus	2.76 GPa	400 ksi	ASTM D638
Flexural Strength	109 MPa	15800 psi	ASTM D790
Flexural Modulus	2.83 GPa	411 ksi	ASTM D790
Compressive Strength	35.9 MPa	5200 psi	ASTM D695
Izod Impact, Notched	0.320 J/cm	0.600 ft-lb/in	ASTM D256
Coefficient of Friction, Dynamic	0.25	0.25	40 psi, 50 fpm; ASTM D3702
Coefficient of Friction, Static	0.19	0.19	ASTM D3702
K (wear) Factor	423 x 10 ⁻⁸ mm ³ /N-M	210 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	40 psi, 50 fpm; ASTM D3702

Thermal Properties	Metric	English	Comments
CTE, linear	70.2 $\mu\text{m/m-}^{\circ}\text{C}$	39.0 $\mu\text{in/in-}^{\circ}\text{F}$	ASTM D696
	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	
Specific Heat Capacity	1.17 J/g- $^{\circ}\text{C}$	0.280 BTU/lb- $^{\circ}\text{F}$	
Thermal Conductivity	0.290 W/m-K	2.01 BTU-in/hr-ft ² - $^{\circ}\text{F}$	
Melting Point	254 $^{\circ}\text{C}$	490 $^{\circ}\text{F}$	ASTM D2133
Maximum Service Temperature, Air	110 $^{\circ}\text{C}$	230 $^{\circ}\text{F}$	Long Term; ASTM UL746B
	160 $^{\circ}\text{C}$	320 $^{\circ}\text{F}$	Intermittent
Deflection Temperature at 0.46 MPa (66 psi)	116 $^{\circ}\text{C}$	240 $^{\circ}\text{F}$	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	79.4 $^{\circ}\text{C}$	175 $^{\circ}\text{F}$	ASTM D648
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Dielectric Constant	3.4	3.4	50% RH; ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	
	3.7	3.7	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	
Dielectric Strength	15.7 kV/mm	400 kV/in	ASTM D149
Dissipation Factor	0.0020	0.0020	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	

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