

POLYESTER

SPECIFICATIONS SHEET

DETAILS

Chemical Name: Polyethylene Terephthalate

Common/Trade Names: Mylar®, Arnite®

Abbreviation: PETP

Properties (Colour): Off White

Properties (Form): Rod, Sheet, Tube

Machining: Is readily machined using conventional tooling

Grades: Molybdomen Disulphide Filled

Chemical Resistance: Moderate resistance to acids in concentrated form. Resistant to dilute acids. Good resistance to alcohols, but poor resistance to Alkalis

KEY BENEFITS

- Extreme strength
- Dimensionally stable
- Low percentage of moisture pick up

MECHANICAL PROPERTIES

Density ρ (g/cm ³)	1.37
Tensile Strength at Yield s (MPa)	81
Elongation at Break %	70
Modulus of Elasticity Tensile E_t (Mpa)	2800
Modulus of Elasticity Bending E_b (Mpa)	-
Impact Strength kJ/mm ²	NO BREAK
Hardness Ball Indent	145
Creep 1 % after 1000hr MPa	24
Coefficient of friction against Steel μ	0.25

POLYESTER

(CONT.)

THERMAL PROPERTIES

Melting Point °C	255
Glass Transition Temperature °C	
Thermal Conductivity W/M°C	0.24
Specific Heat J/(g.K)	1.1
Coefficient of Linear Expansion α 10 ⁻⁶ .°K	80
Safe Working Temp. Short Term °C	170
Safe Working Temp. Continuous °C	110
Minimum Working Temperature °C	-40

ELECTRICAL PROPERTIES

Dielectric Constant $\hat{\epsilon}$ 106 Hz	0.021
Dielectric loss Factor tand 106 Hz	10 ⁻¹⁴
Volume Resistance W.cm	10 ¹⁴
Surface Resistance W	60
Dielectric Strength kV/mm	0.5
Moisture Absorption % (at 50%RH)	

Whilst all care has been taken to provide accurate & up to date information, we cannot provide legal certification of properties. We recommend that this information be used as a design guide only. Actual testing should be undertaken to confirm data if certification is required.