

## POLYMAT PETP

BASIC MATERIAL FOR ENGINEERING

### PETP (POLYETHYLENE TEREPHTHALATE)

**POLYETHYLENE TEREPHTHALATE** engineering plastic extruded stock shapes available in natural white / black are part of a range of high performance engineering plastic products offered under trade name **POLYMAT** for machining into industrial components. These products are made using best raw material in modern production facility under strict quality confirming to international standards.

PETP is also known as (POLYETHYLENE TEREPHTHALATE) is highly crystalline thermoplastic with high tensile strength, stiffness, hardness, low coefficient of friction and very low moisture absorption. This broad range of useful properties in addition to its ability to provide excellent dimensional stability and low wear rates make it an engineering plastic of choice for many applications involving sliding and continuous high loads.

Mechanical and Electrical properties of PETP are not influenced by limited moisture uptake under working conditions. As a result PETP exhibits excellent dielectrical properties. These characteristics make PETP preferred material over Nylons / Polyacetals for precision electrical components. It is resistant to stain and acidic environment for food contact applications.

PETP is amenable to standard metal working machine tools and can be fabricated with ease to yield smooth surface finish. Information on technical properties for designers is provided on the back side. More specific data and engineering assistance is available upon request through our technical staff.

### ADVANTAGES

- Good Dimensional Stability
- Good Wear Resistance
- Good Tensile Properties
- Good Electrical and Thermal Properties
- Low Moisture Absorption

### APPLICATIONS

- Food Contact Components
- Electrical Components
- Mechanical Components requiring Close Tolerance
- Pharmaceutical Machinery Components

## MECHANICAL

<i>PROPERTY</i>	<i>TEST METHOD ASTM</i>	<i>UNITS</i>	<i>PETP</i>
Tensile Strength	D 638	MPa	80
Elongation at Break	D 638	%	15
Modulus of Elasticity	D 638	MPa	3700
Compressive Strength	D 695	MPa	100
Hardness - Rockwell	-	-	M 96
Izod Impact Strength (Notched)	D 256	J/m	25

## THERMAL

<i>PROPERTY</i>	<i>TEST METHOD ASTM</i>	<i>UNITS</i>	<i>PETP</i>
Coefficient Of Linear Thermal Expansion	D 696	m/m° K	60 X 10 <sup>-6</sup>
Melting Point	D 3418	°C	255
Min. Service Temperature	-	°C	-20
Max. Service Temperature	-	°C	100

## ELECTRICAL

<i>PROPERTY</i>	<i>TEST METHOD ASTM</i>	<i>UNITS</i>	<i>PETP</i>
Dielectric Constant	-	-	3.4
Dielectric Strength	D 149	KV/mm	15
Volume Resistivity	D 257	Ohm.cm	5.5 x 10 <sup>14</sup>

## MISCELLANEOUS

<i>PROPERTY</i>	<i>TEST METHOD ASTM</i>	<i>UNITS</i>	<i>PETP</i>
Specific Gravity			1.39
Moisture Absorption - 24 Hrs. / Saturation	D 570	%	0.16 / 0.85
Coefficient Of Friction vs. Steel	Non Lubricated		0.20

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