

## GEHR Plastics PET Polyethylene Terephthalate

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

### Material Notes:

Polyethylene terephthalate shows high tensile and mechanical strength, hardness and toughness, low friction and a high dimensional stability. PET may be used at temperatures ranging from -20°C to approximately 115°C. Properties high mechanical resistance and tensile strength high surface strength easy to varnish and polish high dimensional stability high toughness good electrical insulating properties high chemical resistance limited dielectric properties sensitive to hydrolysis Applications include bearings, pumps and parts for housings, frame components, tank lids, cogwheels, insulators for the electrotechnic, deflection rollers for the filament industry, levers, handles, and control disks.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_GEHR-Plastics-PET-Polyethylene-Terephthalate.php](http://www.lookpolymers.com/polymer_GEHR-Plastics-PET-Polyethylene-Terephthalate.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.39 g/cc	1.39 g/cc	ISO 1183
Water Absorption	0.30 %	0.30 %	ISO 62

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	170 MPa	24700 psi	ISO 2039
Tensile Strength, Yield	90.0 MPa	13100 psi	ISO 527
Elongation at Break	15 %	15 %	ISO 527
Modulus of Elasticity	3.70 GPa	537 ksi	ISO 527
Charpy Impact Unnotched	>= 5.00 J/cm <sup>2</sup>	>= 23.8 ft-lb/in <sup>2</sup>	ISO 179
Charpy Impact, Notched	0.200 J/cm <sup>2</sup>	0.952 ft-lb/in <sup>2</sup>	ISO 179
Coefficient of Friction	0.25	0.25	DIN 53375

Thermal Properties	Metric	English	Comments
CTE, linear	80.0 Åµm/m-Å°C @Temperature 20.0 Å°C	44.4 Åµin/in-Å°F @Temperature 68.0 Å°F	DIN 53752
Thermal Conductivity	0.290 W/m-K	2.01 BTU-in/hr-ft <sup>2</sup> -Å°F	DIN 52612
Maximum Service Temperature, Air	115 Å°C	239 Å°F	
Deflection Temperature at 1.8 MPa (264 psi)	75.0 Å°C	167 Å°F	ISO 75
Minimum Service Temperature, Air			

Thermal Properties	-20.0 °C Metric	-4.00 °F English	Comments
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	VDE 0303
Surface Resistivity per Square	>= 1.00e+14 ohm	>= 1.00e+14 ohm	VDE 0303
Dielectric Constant	3.2	3.2	DIN 53483
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	22.0 kV/mm	559 kV/in	VDE 0303
Dielectric Loss Index	0.014	0.014	DIN 53483
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	CTI; IEC 60112

Descriptive Properties	Value	Comments
Acid Resistance	yes	
Aromatic Resistance	yes	
Bondability	yes	
CKW Resistance	limited	
Color	Natural	
Hydrocarbonate Resistance	yes	
Hydroxide Resistance	limited	
Physiological indifference according	yes	
UV Stabilization	no	

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