

Polyethylene Terephthalate Glycol Modified (PETG)

TYPICAL PROPERTIES OF POLYETHYLENE TEREPHTHALATE GLYCOL MODIFIED (PETG)		
ASTM Test	Property	Values
PHYSICAL		
D792	Specific gravity (g/cm ³)	1.27
MECHANICAL		
D638	Tensile strength (psi)	3,800
D638	Elongation at break (%)	
	At .120" thickness	54
	At .080" thickness	210
D790	Flexural strength (Mpa)	77
D790	Flexural modulus (Mpa)	3.12×10 ⁵
D4812	Unnotched impact (J/m)	No break
D256	Notched impact (J/m)	88
D785	Hardness, Rockwell R	106
THERMAL		
D648	Deflection temperature (°F)	
	At 66 psi	158
D1525	Vicat softening point (°F)	185
DSC	Glass transition temperature (°F)	178
D696	Coefficient of linear thermal expansion (mm/mm-°C)	5.1×10 ⁻⁵
UL 94	Flammability	
	At .125" thickness	94 V-2
	At .045" thickness	94 HB
D2863	Oxygen index (%)	
ELECTRICAL		
D149	Dielectric strength (kV/mm)	16.1
D150	Dielectric constant	
	At 1 kHz	2.6
D150	Dissipation factor	
	At 1 kHz	0.005
D257	Volume resistivity (ohm-cm)	10 ¹⁵

TYPICAL PROPERTIES OF POLYETHYLENE TEREPHTHALATE GLYCOL MODIFIED (PETG)		
ISO Test	Property	Values
PHYSICAL		
ISO1183	Specific gravity (g/cm ³)	1.27
MECHANICAL		
ISO178	Tensile strength (MPa)	26.20
ISO527	Elongation at break (%)	
	At 3 mm thickness	54
	At 2 mm thickness	210
ISO178	Flexural strength (Mpa)	77
ISO178	Flexural modulus (Mpa)	3.12×10 ⁵
ISO180	Unnotched impact (J/m)	No break
ISO179	Notched impact, Charpy (kJ/m ²)	2.2
ISO2039	Hardness, Rockwell R	106
THERMAL		
ISO75	Deflection temperature (°C)	
	At 0.45 MPa	70
ISO306	Vicat softening point (°C)	85
DSC	Glass transition temperature (°C)	81
ASTM	Coefficient of linear thermal expansion (mm/mm-°C)	5.1×10 ⁻⁵
D696		
UL 94	Flammability	
	At 3.1 mm thickness	94 V-2
	At 1.1 mm thickness	94 HB
ISO4589	Oxygen index (%)	
ELECTRICAL		
IEC250	Dielectric strength (kV/mm)	16.1
IEC250	Dielectric constant	
	At 1 kHz	2.6
IEC250	Dissipation factor	
	At 1 kHz	0.005
IEC093	Volume resistivity (ohm-cm)	10 ¹⁵