

**PETT**  
(Polyethylene terephthalate  
copolyester)



**Technical Data Sheet**

Tensile Properties		
ASTM D638 - Type V		
Property	Imperial	Metric
Toughness*	7.5 ft·lb/in <sup>2</sup>	15.7 KJ/m <sup>2</sup>
Tensile Modulus	80,315 psi	554 MPa
Ultimate Tensile Strength	7080 psi	48.8 MPa
Tensile Strength at Yield	11,500 psi	79.3 MPa
Elongation at Yield	4%	4%
Elongation at Break	8%	8%
3D Printing Properties		
Property	Imperial	Metric
Expected Max Linear Print Speed	2.36 in/s	60 mm/s
Hardness, <b>ASTM D2240</b>	87D	87D
Solid Density, <b>ASTM D792</b>	4.59 x 10 <sup>-2</sup> lb/in <sup>3</sup>	1.27 g/cc
Impact Properties		
Property	Imperial	Metric
Notched Izod (machined), 23 C, <b>ASTM D256</b>	0.7 f·lb/in	37 J/m
Gardner Impact, 23 C, <b>ASTM D3029</b>	27.3 ft·lb	37 J
Thermal Properties		
Property	Imperial	Metric
Glass Transition by DSC, <b>ASTM E1356</b>	169 F	76 C
Glass Transition by DMA, <b>ASTM D792</b>	154 F	68 C
Heat Deflection Temperature, <b>ASTM D648</b>	149 F	65 C
Coefficient of Thermal Expansion, <b>ASTM E832</b>	39 x 10 <sup>-6</sup> in/in·°F	70 x 10 <sup>-6</sup> m/m·K
Heat Capacity, <b>ASTM E1269</b>	0.11 Btu/lb·°F	439 J/kg·K
Thermal Conductivity, <b>ASTM C518</b>	1.0 Btu·in/hr/ft <sup>2</sup> /°F	0.15 W/m·K
Available Colors		
Black, Blue, Clear, Green, Red, White		
Suggested Uses		
<p>PETT is FDA approved and is a great polymer for making containers to hold fluids.** With excellent clarity and reflectivity, clear PETT is considered one of the best high transmission light-pipe polymers available for 3D printing.</p>		

\*Toughness is not defined in ASTM D638 though can be calculated by taking the integral of the stress-strain curve collected by tensile data.

\*\*Due to the glass transition temperature of PETT, this material is not considered dishwasher safe and must be handwashed between uses.

Visit [www.sd3d.com/materials](http://www.sd3d.com/materials) to learn more