



## Ultem® (Polyetherimide, PEI)

### General Material Properties

Property	Metric	units	English	units
<b>General</b>				
Density	1.26e3 - 1.28e3	kg/m <sup>3</sup>	0.0455 - 0.0462	lb/ft <sup>3</sup>
<b>Mechanical</b>				
Yield Strength	7.35e7 - 8.11e7	Pa	10.7 - 11.8	ksi
Tensile Strength	9.19e7 - 1.01e8	Pa	13.3 - 14.7	ksi
Elongation	0.558 - 0.645	% strain	55.8 - 64.5	% strain
Hardness (Vickers)	2.17e8 - 2.38e8	Pa	22.1 - 24.3	HV
Impact Strength (notched)	3.81e3 - 4.2e3	J/m <sup>2</sup>	1.81 - 2.0	ft.lbf/in <sup>2</sup>
Fracture Toughness	1.99e6 - 4.03e6	Pa/m <sup>0.5</sup>	1.81 - 3.67	ksi/in <sup>0.5</sup>
Young's Modulus	2.89e9 - 3.04e9	Pa	0.419 - 0.441	10 <sup>6</sup> psi
<b>Thermal</b>				
Max Service Temperature	161 - 179	°C	322 - 354	°F
Insulator or Conductor	Insulator		Insulator	
Specific Heat Capability	1.47e3 - 1.53e3	J/kg °C	0.352 - 0.366	BTU/lb. °F
Thermal Expansion Coefficient	8.46e-5 - 1.01e-4	strain/°C	47 - 56	μstrain/°F
<b>Eco</b>				
CO2 Footprint	6.93 - 7.66	kg/kg	6.93 - 7.66	lb/lb
Recycleable	Yes		Yes	

The information on this page is intended as general guidance only and is only accurate at the time of posting (8-16-12). Specific material properties vary by manufacturer. Please contact a Dielectric application engineer for help in choosing the optimal material for your application and budget.