



## PES (Polyethersulfone) General Material Properties

Property	Metric	units	English	units
<b>General</b>				
Density	1.37e3 - 1.46e3	kg/m <sup>3</sup>	0.0495 - 0.0527	lb/ft <sup>3</sup>
<b>Mechanical</b>				
Yield Strength	8.41e7 - 8.96e7	Pa	9.8 - 13.8	ksi
Tensile Strength	6.76e7 - 9.52e7	Pa	11.8 - 15.7	ksi
Elongation	0.06 - 0.8	% strain	6. - 80	% strain
Hardness (Vickers)	2.47e8 - 2.64e8	Pa	25.2 - 26.9	HV
Impact Strength (unnotched)	1.9e5 - 2e5	J/m <sup>2</sup>	90.4 - 95.2	ft.lbf/in <sup>2</sup>
Fracture Toughness	1.14e6 - 2.26e6	Pa/m <sup>0.5</sup>	1.04 - 2.06	ksi/in <sup>0.5</sup>
Young's Modulus	2.41e9 - 2.83e9	Pa	0.35 - 0.41	10 <sup>6</sup> psi
<b>Thermal</b>				
Max Service Temperature	150 - 180	°C	302 - 356	°F
Melting Temperature		°C		°F
Insulator or Conductor	Insulator		Insulator	
Specific Heat Capability	1.37e3 - 1.42e3	J/kg °C	0.327 - 0.34	BTU/lb. °F
Thermal Expansion Coefficient	9.7e-5 - 1.01e-4	strain/°C	53.9 - 56.1	μstrain/°F
<b>Eco</b>				
CO2 Footprint	7 - 7.73	kg/kg	7 - 7.73	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 (7-30-12). Specific material properties vary by manufacturer. Please contact a Dielectric application engineer for help in choosing the optimal material for your application and budget.