Dielectric CORPORATION

PEEK (Polyetheretherketone)

General Material Properties

Property	Metric	units	English	units
General				
Density	1.23e3 - 1.32e3	kg/m^3	0.047 - 0.0477	lb/ft^3
Mechanical				
Yield Strength	8.7e7 - 9.52e7	Pa	12.6 - 13.8	ksi
Tensile Strength	7.03e7 - 1.03e8	Pa	10.2 - 14.9	ksi
Elongation	0.3 - 1.5	% strain	30 - 150	% strain
Hardness (Vickers)	2.56e8 - 2.79e8	Pa	26.1 - 28.5	HV
Impact Strength (unnotched)	1.9e5 - 2e5	J/m^2	90.4 - 95.2	ft.lbf/in^2
Fracture Toughness	2.73e6 - 4.3e6	Pa/m^0.5	2.49 - 3.91	ksi/in^0.5
Young's Modulus	3.76e9 - 3.95e9	Pa	0.545 - 0.573	10^6 psi
Thermal				
Max Service Temperature	239 - 260	°C	462 - 500	°F
Melting Temperature	322 - 346	°C	612 - 655	°F
Insulator or Conductor	Insulator		Insulator	
Specific Heat Capability	1.34E+03	J/kg °C	0.32	BTU/lb. °F
Thermal Expansion Coefficent	5e-5 - 6e-5	strain/°C	27.8 - 33.3	µstrain/°F
Eco				
CO2 Footprint	12.3 - 13.6	kg/kg	12.3 - 13.6	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.