Dielectric CORPORATION

Teflon® (Polytetrafluoroethylene, PTFE)

General Material Properties

Property	Metric	units	English	units
General				
Density	2.14e3 - 2.2e3	kg/m^3	0.0773 - 0.0795	lb/ft^3
Mechanical				
Yield Strength	1.97e7 - 2.17e7	Pa	2.86 - 3.15	ksi
Tensile Strength	2.07e7 - 3.45e7	Pa	5-Mar	ksi
Elongation	2.0 - 4.0	% strain	200 - 400	% strain
Hardness (Vickers)	5.79e7 - 7e6	Pa	5.9 - 6.5	HV
Impact Strength (notched)	1.5e4 - 1.7e4	J/m^2	7.14 - 8.09	ft.lbf/in^2
Fracture Toughness	1.32e6 - 1.8e6	Pa/m^0.5	1.2 - 1.64	ksi/in^0.5
Young's Modulus	4e8 - 5.52e8	Pa	0.058 - 0.0801	10^6 psi
Thermal				
Max Service Temperature	250 - 271	°C	482 - 520	°F
Melting Temperature	315 - 339	°C	599 - 642	°F
Insulator or Conductor	Insulator		Insulator	
Specific Heat Capability	970 - 1.09e3	J/kg °C	0.232 - 0.26	BTU/lb. °F
Thermal Expansion Coefficent	1.2e-4 - 1.7e-4	strain/°C	66.7 - 94.4	µstrain/°F
Eco				
CO2 Footprint	7.06 - 7.8	kg/kg	7.06 - 7.8	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.