

Continuous Carbon/PEEK Composite Typical Material Properties

Material Properties	
Color	Black
Density	0.058 lb/in ³
Specific Gravity (liquid)	1.603
Fiber Weight Percentage	68%
Fiber Volume Percentage	61%
Glass Transition Temperature (T_g)	289°F
Crystallization Temperature (T_c)	552°F
Melting Temperature (T_m)	653°F
Water Absorption (212°F, 15 days)	+0.23% Weight Change
Shore D Hardness (Unidirectional Laminate)	95
Coefficient of Friction	0.10 to 0.33

Mechanical Properties						
Temp.	0° Tensile Strength	0° Tensile Modulus	0° Comp. Strength	0° Comp. Modulus	90° Tensile Strength	90° Tensile Modulus
-67°F	300 ksi	20.0 Msi	-	-	14.3 ksi	1.52 Msi
73°F	300 ksi	20.0 Msi	197 ksi	18.0 Msi	12.5 ksi	1.48 Msi
180°F	295 ksi	20.0 Msi	182 ksi	18.0 Msi	12.0 ksi	1.39 Msi
250°F	290 ksi	20.0 Msi	170 ksi	18.0 Msi	-	-
IL Shear Strength (Unidirectional Sample, 73°F, In-situ process)					9.0 ksi	
In-Plane Shear Strength (+/- 45° Sample, 73°F)					24.9 ksi	

Coefficient of Thermal Expansion (CTE, α)		
	Longitudinal (0°)	Transverse (90°)
-67°F	0.006 x 10 ⁻⁶ in/in/°F	15.0 x 10 ⁻⁶ in/in/°F
73°F	0.15 x 10 ⁻⁶ in/in/°F	17.0 x 10 ⁻⁶ in/in/°F
250°F	0.28 x 10 ⁻⁶ in/in/°F	24.0 x 10 ⁻⁶ in/in/°F
450°F	0.56 x 10 ⁻⁶ in/in/°F	42.0 x 10 ⁻⁶ in/in/°F

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