

MATERIAL DATASHEET

HYCOMP COMPOSITES Wearcomp®

Features: Sheet molding compound, Polyimide material, Carbon Fibers (1" chopped)

Benefits: Ideal for low speed, high load, high impact applications, Hot compression molded (HCM), Low coefficient of friction

Properties	Degrees	Typical Values	Units
PHYSICAL			
Specific Gravity	-	1.55	-
Water Absorption	-	<0.5	% by wt.
MECHANICAL			
Tensile Strength			
RT	-	220 [32,000]	MPa [psi]
260°C [500°F]	-	186 [27,000]	
Tensile Modulus			
RT	-	33,784 [4,900,000]	MPa [psi]
260°C [500°F]	-	32,405 [4,700,000]	
Flexural Strength			
RT	-	345 [50,000]	MPa [psi]
260°C [500°F]	-	[45,000]	
Flexural Modulus			
RT	-	33,784 [4,900,000]	MPa [psi]
260°C [500°F]	-	32,405 [4,700,000]	
Compressive Strength			
RT	-	517 [75,000]	MPa [psi]
260°C [500°F]	-	345 [50,000]	
Izod impact, notched - RT	-	640 [12]	J/m [ft-lb/in]
THERMAL			
Thermal Expansion			
perpendicular	-	27 [15]	µm/m/°C [µin/in/°F]
parallel	-	3.6 [2]	
Temperature Range	-	315 [600]	°C [°F]
WEAR CHARACTERISTICS			
Coefficient of Friction	-	0.15 - 0.20	-
Limiting PV (Unlubricated)	-	2.8 [80,000]	MPa·m/s [psi·Sf/Min.]
GENERAL			
Reinforcing Materials	-	Carbon Fiber	-
Resin Matrix	-	Polyimide	-
CHEMICAL COMPATIBILITY			
Sea Water	-	Recommended	-
Dilute Acids	-	Recommended	-
Weak Bases	-	Recommended	-
Alcohols	-	Recommended	-
Hydrocarbons	-	Recommended	-
Strong Bases (pH>10)	-	Not Recommended	-

Measured by standard ASTM methods on machined, compression-molded test specimens.