

# MATERIAL DATASHEET

# HYCOMP™ COMPOSITES H320®

**Features:** Sheet molding compound, Polyimide material, Glass Fiber filling (e-glass, 1" long)

**Benefits:** Low to moderate speed, high temperature, high load, wear resistant, good thermal/electrical insulation, Hot compression molded (HCM)

Properties	Degrees	Typical Values	Units
<b>PHYSICAL</b>			
Specific Gravity	-	1.88	-
Water Absorption	-	<0.5	% by wt.
<b>MECHANICAL</b>			
Tensile Strength			
RT	-	234 [34,000]	MPa [psi]
260°C [500°F]	-	179 [26,000]	
Tensile Modulus			
RT	-	18,616 [2,700,000]	MPa [psi]
260°C [500°F]	-	13,100 [1,900,000]	
Flexural Strength			
RT	-	434 [63,000]	MPa [psi]
260°C [500°F]	-	372 [54,000]	
Flexural Modulus			
RT	-	21,374 [3,100,000]	MPa [psi]
260°C [500°F]	-	19,305 [2,800,000]	
Compressive Strength			
RT	-	231 [48,000]	MPa [psi]
260°C [500°F]	-	228 [33,000]	
Izod impact, notched - RT	-	1333 [25]	J/m [ft-lb/in]
<b>THERMAL</b>			
Thermal Expansion			
perpendicular	-	43.2 [24]	µm/m/°C [µin/in/°F]
parallel	-	14.4 [8]	
Temperature Range	-	315 [600]	°C [°F]
<b>WEAR CHARACTERISTICS</b>			
Coefficient of Friction	-	-	-
Limiting PV (Unlubricated)	-	-	MPa·m/s [psi·Sf/Min.]
<b>GENERAL</b>			
Reinforcing Materials	-	Glass Fiber	-
Resin Matrix	-	Polyimide	-
<b>CHEMICAL COMPATIBILITY</b>			
Sea Water	-	Recommended	-
Dilute Acids	-	Recommended	-
Weak Bases	-	Recommended	-
Alcohols	-	Recommended	-
Hydrocarbons	-	Recommended	-
Strong Bases (pH>10)	-	Not Recommended	-

\*Measurements were conducted in temperature range from 40°C to 260°C.  
 \*\*Values were obtained under thrust washer test PV conditions: pressure (P) 100 psi, velocity (V) 100 f/m.  
 Measured by standard ASTM methods on machined, compression-molded test specimens.  
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