Omniseal Solutions
SAINT-GOBAIN

BEYOND
the boundaries of possible

MATERIAL DATASHEET

Hycomp™ Composite Wearcomp®

Features & Benefits:

- Black color, sheet molding compound, proprietary custom polyimide, Hot Compression Molded (HCM), carbon fibers (1" chopped)
- Ideal for low speed, high load, high impact applications, low coefficient of friction

Properties	Test Methods	Typical Values	Units
	PHYSICAL		
Specific Gravity	ASTM D792	1.55	-
Water Absorption	-	<0.5	% by wt.
	MECHANICAL		
Tensile Strength			
RT	ASTM D638	220 [32,000]	MPa [psi]
260°C [500°F]		186 [27,000]	
Tensile Modulus			
RT	ASTM D638	33.8 [49.0]	GPa [psi x 10^5]
260°C [500°F]		32.4 [47.0]	
Flexural Strength			
RT	ASTM D790	345 [50,000]	MPa [psi]
260°C [500°F]		[45,000]	
Flexural Modulus			
RT	ASTM D790	33.8 [49.0]	GPa [psi x 10^5]
260°C [500°F]		32.4 [47.0]	
Compressive Strength			
RT	ASTM D695	517 [75,000]	MPa [psi]
260°C [500°F]		345 [50,000]	
Izod impact, notched - RT	ASTM D256	640 [12]	J/m [ft-lb/in]
	THERMAL		
Thermal Expansion*	ASTM E831		
perpendicular	ASTM E831	27 [15]	m/m/°C [in/in/°F] x 10^{-6}
parallel		3.6 [2]	
Temperature Range	-	315 [600]	°C [°F]
	WEAR CHARACTERISTICS		
Coefficient of Friction**	ASTM D3702	0.15 - 0.20	-
Limiting PV (Unlubricated)	-	2.8 [80,000]	MPa·m/s [psi*Sf/Min.]
	GENERAL		
Reinforcing Materials	-	Carbon Fibers	-
Resin Matrix	-	Polyimide	-
	CHEMICAL COMPATIBILITY		
Sea Water	-	Recommended	-
Dilute Acids	-	Recommended	-
Weak Bases	-	Recommended	-
Alcohols	-	Recommended	-
Hydrocarbons	-	Recommended	-
Strong Bases (pH>10)	-	Not Recommended	-

*Measurements were conducted in a 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

Patents issued and pending. This information is based on our experience to date and we believe it to be reliable.
It is intended to be used only as a guide for use at your discretion and risk.

None of this information is to be taken as a license to operate under, or a recommendation to infringe any patents.

The table above represents typical values, intended for reference only. They should NOT be used as a basis for design specifications or quality control.

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