Materials Data Sheet

			Aerospace Grade	Performance Bearing Materials			Insulating Materials
Property Description	**Degrees**	**Units**	**HyComp® 310**	**WearComp®**	**WearComp® 200**	**FibreComp®**	**HyComp® 320**
Raw Material Type			SMC	SMC	SMC	BMC	SMC
Specific Gravity		g/cm	1.55	1.55	1.59	1.50	1.88
Mechanical Properties							
Tensile Strength	73°F	PSI	49,000	32,000	20,000	12,000	34,000
	500°F		41,000	27,000	17,000	8,000	26,000
Tensile Modulus	73°F	PSI	5,700,000	4,900,000	4,300,000	2,300,000	2,700,000
	500°F		5,200,000	4,700,000	4,000,000	1,600,000	1,900,000
Flexural Strength	73°F	PSI	80,000	50,000	30,250	15,000	63,000
	500°F		75,000	45,000	25,000	12,000	54,000
Flexural Modulus	73°F	PSI	5,600,000	4,900,000	4,120,000	2,100,000	3,100,000
	500°F		5,200,000	4,700,000	3,920,000	1,500,000	2,800,000
Compressive Strength	73°F	PSI	104,000	75,000	43,000	36,000	48,000
	500°F		69,000	50,000	28,000	25,000	33,000
Izod Impact, Notched	73°F	ft-lb/in	12'	12'	6'	3'	25'
Thermal Properties							
Thermal Expansion	perpendicular	in/in/°F	15×10^{-6}	15×10^{-6}	15×10^{-6}	10×10^{-6}	24×10^{-6}
	parallel	in/in/°F	2×10^{-6}	2×10^{-6}	2×10^{-6}	10×10^{-6}	8×10^{-6}
Temperature Range			600°F	600°F	600°F	600°F	600°F
Wear Characteristics							
Coefficient of Friction			.15 -.20	.15 -.20	.15 -.20	.10 -.20	N/A
Limiting PV (unlubricated)		PSI*Sf/Min.	80,000	80,000	100,000	120,000	N/A
General							
Reinforcing Materials			Carbon Fiber	Carbon Fiber	C.F./Graphite	C.F./Graphite	Glass Fiber
Resin Matrix			Polyimide	Polyimide	Polyimide	Polyimide	Polyimide
Chemical Compatibility							
Sea Water			Recommended	Recommended	Recommended	Recommended	Recommended
Dilute Acids			Recommended	Recommended	Recommended	Recommended	Recommended
Weak Bases			Recommended	Recommended	Recommended	Recommended	Recommended
Alcohols			Recommended	Recommended	Recommended	Recommended	Recommended
Hydrocarbons			Recommended	Recommended	Recommended	Recommended	Recommended
Strong Bases (pH>10)			Not Recommended	Not Recommended	Not Recommended	Not Recommended	Not Recommended
Water Absorption		% by wt.	< 0.5%	< 0.5%	< 0.5%	< 0.5%	< 0.5%
COST RANGE			HIGH	HIGH	HIGH	MEDIUM	MEDIUM

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

Registered tradename of HyComp Inc. - Patents issued and pending

Saint-Gobain HyComp LLC.
17960 Englewood Drive Cleveland, Ohio 44130
(440) 234-2002
(440) 234-4911 Fax
www.hycompinc.com

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