



Materials Data Sheet



			Aerospace Grade	Performance Bearing Materials			Insulating
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	23 °C	MPa	338	220	138	83	234
	260 °C	Mpa	283	186	117	55	179
Tensile Modulus	23 °C	Mpa	39300	33784	29648	15858	18616
	260 °C	MPa	35853	32405	27580	11032	13100
Flexural Strength	23 °C	MPa	552	345	209	103	434
	260 °C	MPa	517	310	172	83	372
Flexural Modulus	23 °C	MPa	38611	33784	28407	14479	21374
	260 °C	MPa	35853	32405	27028	10342	19305
Compressive Strength	23 °C	MPa	717	517	296	248	331
	260 °C	MPa	476	345	193	172	228
Izod Impact, Notched	23 °C	J/m	640.00	640.00	320.00	160.00	1333.00
Thermal Properties							
Thermal Expansion	Perpendicular	m/m/°C	27 X 10 ⁻⁶	27 X 10 ⁻⁶	27 X 10 ⁻⁶	18 X 10 ⁻⁶	43.2 X 10 ⁻⁶
	Parallel	m/m/°C	3.6 X 10 ⁻⁶	3.6 X 10 ⁻⁶	3.6 X 10 ⁻⁶	18 X 10 ⁻⁶	14.4 X 10 ⁻⁶
Temperature Range			315 °C	315 °C	315 °C	315 °C	315 °C
Wear Characteristics							
Co-efficient of Friction			0.15-0.20	0.15-0.20	0.15-0.20	0.10-0.20	N/A
Limiting PV (unlubricated)		MPa·m/s	2.8	2.8	3.5	4.2	N/A
General							
Reinforcing Materials			Carbon Fiber	Carbon Fiber	Carbon Fiber/ Graphite	Carbon Fiber/ 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
Alcohol			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%

Measured by standard ASTM on machined, compression-molded test specimens.
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The information is based on our experience to date and we believe it is reliable. It is intended 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.

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