

# HyComp<sup>®</sup> Materials Data Sheet

TriStar

Engineered Plastic Solutions™

			Aerospace Grade	Performance Bearing Materials			Insulating Materials
Properties	Degrees	Units	HyComp <sup>®</sup> 310	WearComp <sup>®</sup>	WearComp <sup>®</sup> 200	FibreComp <sup>®</sup>	HyComp <sup>®</sup> 320
Raw Material Type			SMC	SMC	SMC	BMC	SMC
Cost Range			High	High	High	Medium	Medium
Specific Gravity		g/cm	1.55	1.55	1.59	1.50	1.88
Water Absorption		% by wt.	< 0.5%	< 0.5%	< 0.5%	< 0.5%	< 0.5%
<b>Mechanical Properties</b>							
Tensile Strength	73°F 500°F	PSI	49,000 41,000	32,000 27,000	20,000 17,000	12,000 8,000	34,000 26,000
Tensile Modulus	73°F 500°F	PSI	5,700,000 5,200,000	4,900,000 4,700,000	4,300,000 4,000,000	2,300,000 1,600,000	2,700,000 1,900,000
Flexural Strength	73°F 500°F	PSI	80,000 75,000	50,000 45,000	30,250 25,000	15,000 12,000	63,000 54,000
Flexural Modulus	73°F 500°F	PSI	5,600,000 5,200,000	4,900,000 4,700,000	4,120,000 3,920,000	2,100,000 1,500,000	3,100,000 2,800,000
Compressive Strength	73°F 500°F	PSI	104,000 69,000	75,000 50,000	43,000 28,000	36,000 25,000	48,000 33,000
Izod Impact, Notched	73°F	ft-lb/in	12'	12'	6'	3'	25'
<b>Thermal Properties</b>							
Thermal Expansion	perp. parallel	in/in/°F	15 x 10 <sup>-6</sup> 2 x 10 <sup>-6</sup>	15 x 10 <sup>-6</sup> 2 x 10 <sup>-6</sup>	15 x 10 <sup>-6</sup> 2 x 10 <sup>-6</sup>	10 x 10 <sup>-6</sup> 10 x 10 <sup>-6</sup>	24 x 10 <sup>-6</sup> 8 x 10 <sup>-6</sup>
Temperature Range			600 °F	600 °F	600 °F	600 °F	600 °F
<b>Wear Characteristics</b>							
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
<b>General</b>							
Reinforcing Materials			Carbon Fiber	Carbon Fiber	C.F./Graphite	C.F./Graphite	Glass Fiber
Resin Matrix			Polyimide	Polyimide	Polyimide	Polyimide	Polyimide
<b>Chemical Compatibility</b>							
Sea Water			Recommended	Recommended	Recommended	Recommended	Recommended
Dilute Acids			Recommended	Recommended	Recommended	Recommended	Recommended
Weak Acids			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

Measured by standard ASTM on machined, compression-molded test specimens. Product names are registered trademarks of HyComp Inc. – Patents issued and pending. 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.

We're ready to put our engineering expertise to work for you from prototype to production.

Engineering | Custom Fabrication | Manufacturing



### CJ Composite

- Self-Lubricating
- Low weight | High Strength
- Chemical Resistance
- Direct replacement for Bronze



### Ultracomp<sup>®</sup>

- Self-Lubricating
- High Load | Low Speed
- 54,400 PSI Compressive Strength
- Exceptional Resistance to Vibration and Impact



### TriSteel<sup>™</sup>

- Self-Lubricating
- High Load | High Speed
- Metal Backed Bearing System
- 100% Lead Free



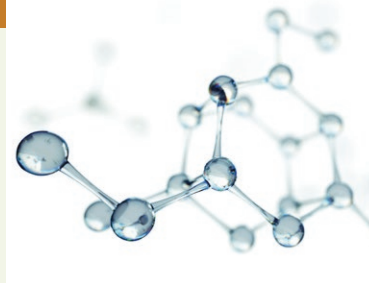
### Rulon<sup>®</sup>

- Self-Lubricating
- Low weight | High Strength
- Low Coefficient of Friction
- Chemically Resistant



### Enhanced Materials Division

- Plasma Surface Treatment
- Asymmetric & Symmetric Membranes
- Specialized Primers & Coatings
- Material ID & Selection



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