

# Maverick Superimide® SC-510

*HIGH TEMP ~ LIGHT WEIGHT ~ EXTENDED LIFE*

## BALANCED PERFORMANCE

Superimide® SC-510 is a polyimide composite developed for extreme applications, including jet engine and industrial bushings and washers. Components fabricated from SC-510 offer an optimal blend of mechanical, thermal and wear performance to over 700°F.

Superimide® SC-510 is available exclusively from Maverick Molding Co. as engineered, net molded components designed to exceed customer requirements.

## Typical Properties

Mechanical Properties	Temperature	Test Method	Units	Typical Values
Tensile Strength	RT	ASTM D638	Ksi	14.4
Tensile Modulus	RT	ASTM D638	Msi	1.45
Tensile Elongation @ Break	RT	ASTM D638	%	1.5
Tensile Strength	500°F	ASTM D638	Ksi	8.0
Tensile Modulus	500°F	ASTM D638	Msi	0.99
Tensile Elongation @ Break	500°F	ASTM D638	%	2.4
Compressive Strength	RT	ASTM D695	Ksi	36.0
Compressive Modulus	RT	ASTM D695	Msi	1.2
Compressive Strength	500°F	ASTM D695	Ksi	21
Compressive Modulus	500°F	ASTM D695	Msi	1.0

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## Typical Properties

Mechanical Properties	Temperature	Test Method	Units	Typical Values
Flexural Strength	RT	ASTM D790	Ksi	12.0
Flexural Modulus	RT	ASTM D790	Msi	1.1
Flexural Strength	500°F	ASTM D790	Ksi	7.5
Physical Properties	Temperature	Test Method	Units	Typical Values
Density	RT	ASTM D792	(g/cm <sup>3</sup> )	1.51
Hardness, Rockwell "E"	RT	ASTM D785	-	90
Glass Transition Temperature, T <sub>g</sub>	RT – 750°F	ASTM E1640	°F	700
CTE Parallel to Molding Direction	RT to 450°F	ASTM E831	In-inE-6/°F	27
CTE Transverse to Molding Direction	RT to 450°F	ASTM E831	In-inE-6/°F	15
TOS (700°F, 100 hrs, 70 psi) Weight Loss	700°F	Pressurized TOS E50TF534	%	1.5
TOS (600°F, 120 hrs, 150 psi) Weight Loss	600°F	Pressurized TOS E50TF534	%	0.2

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Wear Properties	Temperature	Test Method	Units	Typical Values
Coefficient of Friction	RT to 700°F	ASTM G99	-	0.1
Wear @ Temp 30N Load, 500 rpm, 2 hours	400°F	ASTM G99	μm	3.2
Wear (μm) @ Temp 30N Load, 500 rpm, 2 hours	500°F	ASTM G99	μm	11
Wear (μm) @ Temp 30N Load, 500 rpm, 2 hours	600°F	ASTM G99	μm	14
Thermal Conductivity	RT	ASTM E1225-04	BTU/Hrs.ft°F	0.89

Disclaimer: The data listed herein fall within the normal range of properties but should not be used to establish specification limits or used alone as the basis of design. Maverick Molding Co. assumes no obligations or liabilities for any advice furnished or for any results obtained with respect to this information. All such advice is given and accepted at buyer's risk.



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