

# Maverick Superimide® SC-610

*HIGH TEMP ~ LIGHT WEIGHT ~ EXTENDED LIFE*

## FOR DEMANDING TEMPERATURE APPLICATIONS

Superimide® SC-610 is a polyimide composite designed for applications requiring maximum service temperature coupled with superior thermal oxidative stability (TOS). Common applications include variable stator vane (VSV) bushings and washers in jet engines where other materials fall short in performance. SC-610 is a great alternative to ceramics and other existing materials in high temperature environments.

Superimide® SC-610 is available exclusively from Maverick Molding Co. as fully certified engineered components designed to exceed customer requirements.

## Typical Properties

Mechanical Properties	Temperature	Test Method	Units	Typical Values
Tensile Strength	RT	ASTM D638	Ksi	11.1
Tensile Modulus	RT	ASTM D638	Msi	1.04
Tensile Elongation @ Break	RT	ASTM D638	%	1.3
Tensile Strength	500°F	ASTM D638	Ksi	7.2
Tensile Elongation @ Break	500°F	ASTM D638	%	3.1
Compressive Strength	RT	ASTM D695	Ksi	29
Compressive Modulus	RT	ASTM D695	Msi	1.8
Compressive Strength	500°F	ASTM D695	Ksi	18.7
Compressive Modulus	500°F	ASTM D695	Msi	0.99

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## Typical Properties

<b>Mechanical Properties</b>	<b>Temperature</b>	<b>Test Method</b>	<b>Units</b>	<b>Typical Values</b>
Flexural Strength	RT	ASTM D790	Ksi	14.3
Flexural Modulus	RT	ASTM D790	Msi	1.05
Flexural Strength	500°F	ASTM D790	Ksi	9.5
<b>Physical Properties</b>	<b>Temperature</b>	<b>Test Method</b>	<b>Units</b>	<b>Typical Values</b>
Density	RT	ASTM D792	(g/cm <sup>3</sup> )	1.49
Hardness, Rockwell "E"	RT	ASTM D785	-	89
Glass Transition Temperature, T <sub>g</sub>	RT – 750°F	ASTM E1640	°F	700
Moisture Absorption, weight change	RT	ASTM D570	%	1.33
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	16
TOS (700°F, 100 hrs, 70 psi) Weight Loss	700°F	Pressurized TOS E50TF534	%	0.7

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Wear Properties	Temperature	Test Method	Units	Typical Values
Coefficient of Friction	RT to 700°F	ASTM G99	-	0.15
Wear @ Temp 30N Load, 500 rpm, 2 hours	400°F	ASTM G99	µm	3
Wear @ 375°C 30N Load, 500 rpm, 2 hours	500°F	ASTM G99	µm	5
Thermal Conductivity	RT	ASTM E1225-04	BTU/Hrs.ft°F	0.93
Thermal Conductivity	662°F	ASTM E1225-05	BTU/Hrs.ft°F	1.08
Specific Heat Capacity	RT	ASTM E1269-05	W/mK	1.45
Specific Heat Capacity	662°F	ASTM E1269-06	J/kg°C	2

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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