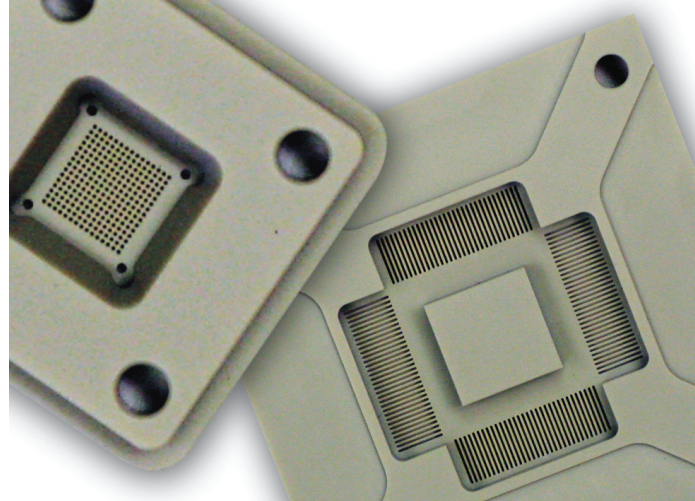
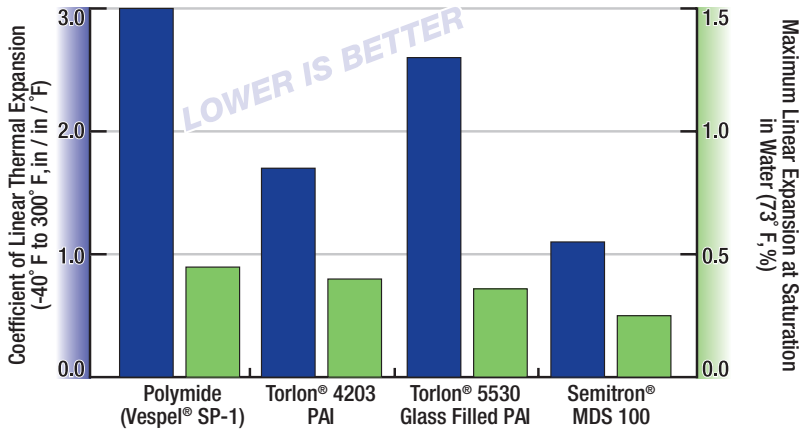


Excellent Machinability,
Stability and Performance Value

**SIMPLY NO
SUBSTITUTE**

Semitron® MDS 100

Dimensional Stability



Competitive Advantage

Quadrant Semitron® MDS 100 was developed specifically to provide a highly rigid, stable, moisture-resistant platform for precision structural applications. Its unique, proprietary polymer matrix makes it ideal for use in parts where fine machining and precise tolerances are critical. With flexural modulus performance greater than 1,000,000 psi, Quadrant Semitron® MDS 100 sets a new performance level for machinable polymers. Quadrant's new technology allows the production of shapes that reduce the amount of machining required for thinner parts.

Key Benefits

- Very low moisture absorption
- Easily machined to precise dimensions
- Very strong and stiff
- Low CLTE means parts stay in spec
- Available in thin cross-sections

Common Applications

- Test sockets for the semiconductor manufacturing industry
- Fixtures for electronics testing
- Mounting points for precision diagnostic equipment
- Positioning platforms for miniature motion control devices



QUADRANT

Data Sheet - Semitron® MDS 100

	Property	Units	Test Method	Typical Average Value
Mechanical Properties	Specific Gravity @ 73°F	-	ASTM D792	1.51
	Ultimate Tensile Strength	psi	ASTM D638	14,700
	Tensile Modulus	psi	ASTM D638	1,500,000
	Elongation, at break	%	ASTM D638	1.5
	Flexural Strength	psi	ASTM D790	20,500
	Flexural Modulus of Elasticity	psi	ASTM D790	1,420,000
	Shear Strength	psi	ASTM D732	-
	Compressive Strength @ 10% Deformation	psi	ASTM D695	-
	Compressive Modulus	psi	ASTM D695	-
	Hardness, Rockwell	-	ASTM D785	R121
	Hardness, Durometer, "D" scale	-	ASTM D2240	-
	Notched Izod Impact (1/8")	ft. lb./in. of notch	ASTM D256 Type "A"	-
Thermal Properties	Coefficient of Liner Thermal Expansion (-40°F to 300°F)	in./in./°F	ASTM E831 (TMA)	1.1 x 10 ⁻⁵
	Deflection Temperature @ 264 psi	°F	ASTM D648	410
	Tg-Glass Transition (amorphous)	°F	ASTM D3418	N/A
	Melting Point (crystalline) peak	°F	ASTM D3418	635
	Continuous Use Temperature (1)	°F	-	480
	Thermal Conductivity	BTU in./(hr. ft.2 °F)	-	-
Electrical Properties	Dielectric Strength	Volts/mil	ASTM D149	376
	Surface Resistivity	ohms/square	EOS/ESD S11.11	>10 ¹³
	Dielectric Constant, 106 Hz	-	ASTM D150	3.37
	Dissipation Factor, 106 Hz	-	ASTM D150	0.007
	Flammability @ 3.1mm (1.8 in) (3)		UL94	
Tribological	Coefficient of Friction - Dynamic (Dry vs Steel)	-	QTM 55007	-
	Limiting PV with 4:1 safety factor applied	ft. lbs./in. ² -min.	QTM 55007	-
	Wear Factor "k" x 10 ⁻¹⁰	in ³ -min./ft. lbs. hr	QTM 55010	-
Other	Water Absorption Immersion, 24 Hours @ 73° F (2)	% by wt.	ASTM D570 (2)	0.10
	Absorption Immersion, Saturation @ 73° F (2)	% by wt.	ASTM D570 (2)	

(1) Data represents Quadrant's estimated maximum long-term service temperature based on practical field experience.

(2) Specimens: 1/8" thick x 2" diameter or square.

(3) Estimated rating based on available data. The UL-94 Test is a laboratory test and does not relate to actual fire hazard.

All statements, technical information and recommendations contained in this publication are presented in good faith, based upon tests believed to be reliable and practical field experience. The reader is cautioned, however, that Quadrant Engineering Plastic Products does not guarantee the accuracy or completeness of this information and it is the customer's responsibility to determine the suitability of Quadrant's products in any given application.

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