>> HIGH PERFORMANCE, LOW MOISTURE ABSORPTION, EASILY MACHINED

SEMITRON® MDS 100

Key Benefits

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

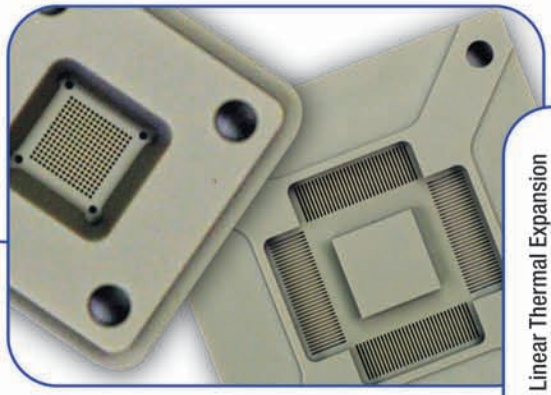
Common Applications

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

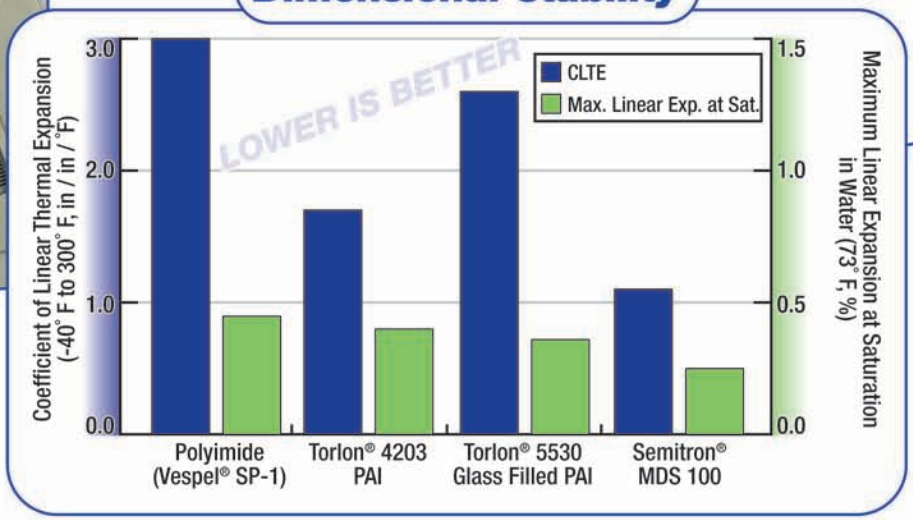
Semitron® MDS 100

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, 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.

Learn more at www.quadrantplastics.com



Dimensional Stability



QUADRANT

Data Sheet - Semitron® MDS 100

	Property	Units	Test Method	Typical Average Value
Mechanical Properties	Specific Gravity, 73˚F	-	ASTM D792	1.51
	Tensile Strength, 73˚F	psi	ASTM D638	14,700
	Tensile Modulus of Elasticity, 73˚F	psi	ASTM D638	1,500,000
	Tensile Elongation (at break), 73˚F	%	ASTM D638	1.5
	Flexural Strength, 73˚F	psi	ASTM D790	20,500
	Flexural Modulus of Elasticity, 73˚F	psi	ASTM D790	1,420,000
	Shear Strength, 73˚F	psi	ASTM D732	-
	Compressive Strength, 10% Deformation, 73˚F	psi	ASTM D695	-
	Compressive Modulus of Elasticity, 73˚F	psi	ASTM D695	-
	Hardness, Rockwell, Scale as noted, 73˚F	-	ASTM D785	R121
	Hardness, Durometer, Shore "D" Scale, 73˚F	-	ASTM D2240	-
	Izod Impact (notched), 73˚F	ft. lb./in.	ASTM D256 Type "A"	-
	Coefficient of Friction (Dry vs. Steel) Dynamic	-	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	-
Thermal Properties	Coefficient of Liner Thermal Expansion (-40˚F to 300˚F)	in./in./˚F	ASTM E-831 (TMA)	1.1 x 10^{-5}
	Heat 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 Service Temperature in Air (Max.) (1)	˚F	-	480
	Thermal Conductivity	BTU in./(hr. ft.^{2} ˚F)	-	
Electrical Properties	Dielectric Strength, Short Term	Volts/mil	ASTM D149	362
	Service Resistivity	ohms/square	EOS/ESD S11.11	>10^{13}
	Dielectric Constant, 10^6 Hz	-	ASTM D150	3.37
	Dissipation Factor, 10^6 Hz	-	ASTM D150	0.007
	Flammability @ 3.1 mm (1.8 in.) (3)		UL94	
Miscellaneous	Water Absorption Immersion, 24 Hours	% by wt.	ASTM D570 (2)	0.10
	Water Absorption Immersion, Saturation	% 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 UL94 Test is a laboratory test and does not relate to actual fire hazard. Contact Quadrant for specific UL "Yellow Card" recognition number.

Distributed by: