



SEMITRON® MDS 100

Characteristics

- * Very Low Moisture Absorbtion
- * Easily Machined to Precise Dimensions
- * Very Strong and Stiff
- * Low CLTE - Means That Parts Stay in Spec.
- * Available in Thin Cross-sections

Description

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

Common Applications

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

Typical Property Values

MECHANICAL @ 73°F

Property	Units	Semitron MDS 100
Specific Gravity		1.51
Tensile Strength	psi	14,700
Tensile Modulus of Elasticity	psi	1,500,000
Tensile Elongation (at Break)	%	1.5
Flexural Strength	psi	20,500
Flexural Modulus of Elasticity	psi	1,420,000
Shear Strength	psi	-
Compressive Strength, 10% Deformation	psi	-
Compressive Modulus of Elasticity	psi	-
Rockwell Hardness	R Scale	121
Izod Impact Strength, Notched	ft-lbs/in. of notch	-
Coefficient of Friction, Dynamic (Dry vs. Steel)		-
Limiting PV (4 :1 Safety Factor Applied)	ft.lbs/in. ² min	-
Wear Factor	in ³ -min/ft.lbs. hr.	-
Water Absorption 24 hrs	% by wt.	0.10

THERMAL

Coefficient of Linear Expansion (-40°F to 300°F)	in./in./°F	1.1 x 10 ⁻⁵
Heat Deflection Temperature @264 psi	°F	410
Tg-Glass Transition (amorphus)	°F	n/a
Melting Point (crystaline) peak	°F	635
Continuous Service Temperature in Air	°F	480
Thermal Conductivity	°F	-

ELECTRICAL

Dielectric Strength, Short Term	Volts/mil	362
Surface Resistivity	Ohms/Sq.	>10 ¹³
Dielectric Constant	1 MHz	3.37
Dissipation Factor	1 MHz	0.0070

(Semitron is a registered trademark of the Quadrant group of companies - Data provided by Quadrant EPP)
 (Properties listed above are provided for reference only, they should not be used for design specifications or quality control)