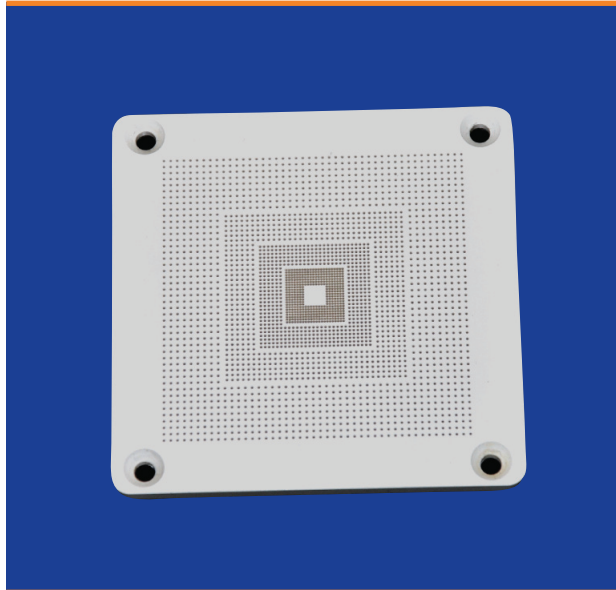


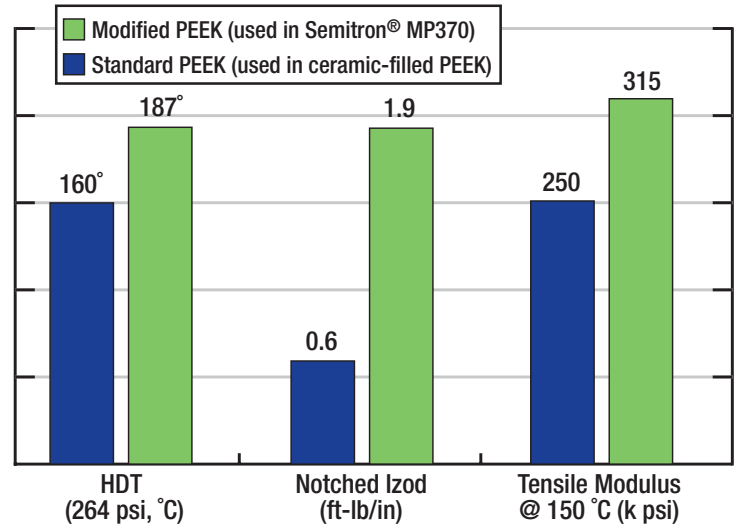
Excellent Machinability,
Stability and Performance Value

**SIMPLY NO
SUBSTITUTE**

Semitron® MP370



Base Resin Comparison



Competitive Advantage

- Base Resin- Semitron® MP370 uses modified PEEK as a base resin offering higher heat for improved ability to machine clean fine features and improved toughness to resist breakage in use when compared to ceramic filled PEEK materials.
- Processing- Semitron® MP370 uses extrusion to manufacture ultra low stress consistent plate as compared to typical injection molded ceramic filled materials. Extruded material provides far better dimensional stability during machining allowing for finer features while maintaining tighter tolerances.

Key Benefits

- Very low moisture absorption
- Finer, cleaner detail possible
 - excellent machinability
- Very high level of precision possible
 - low internal stresses
- Good value
 - an ideal choice for specific application environments

Common Applications

- IC test sockets for semiconductor manufacturing equipment
- Structural parts in electronics and telecom equipment
- Insulating blocks and fixtures in diagnostic equipment



QUADRANT

Data Sheet - Semitron® MP370

	Property	Units	Test Method	Typical Average Value
Mechanical Properties	Specific Gravity @ 73°F	-	ASTM D792	1.62
	Ultimate Tensile Strength	psi	ASTM D638	11,500
	Tensile Modulus	psi	ASTM D638	640,000
	Elongation, at break	%	ASTM D638	3
	Shear Strength	psi	ASTM D732	11,300
	Flexural Strength	psi	ASTM D790	16,750
	Flexural Modulus of Elasticity	psi	ASTM D790	625,000
	Compressive Strength @ 10% Deformation	psi	ASTM D695	18,200
	Compressive Modulus	psi	ASTM D695	600,000
	Hardness, Rockwell	-	ASTM D785	M98
Notched Izod Impact (1/8")	ft. lb./in. of notch	ASTM D256	0.4	
Thermal Properties	Coefficient of Liner Thermal Expansion (-40°F to 300°F)	in./in./°F	ASTM E831	2.5 x 10-5
	Deflection Temperature @ 264 psi	°F	ASTM D648	300
	Tg-Glass Transition (amorphous)	°F	ASTM D3418	320
	Continuous Use Temperature (1)	°F	-	480
	Thermal Conductivity	BTU in./(hr. ft.2 °F)	ASTM F433	2.36
Electrical Properties	Dielectric Strength	Volts/mil	ASTM D149	376
	Surface Resistivity	ohms/square	EOS/ESD S11.11	>1013
	Volume Resistivity	ohms/square	EOS/ESD S11.11	>1015
	Dielectric Constant, 106 Hz	-	ASTM D150	4.13
	Dissipation Factor, 106 Hz	-	ASTM D150	0.004
Flammability	@ 1.5 mm (1/16 in.) estimated rating based on available data (3)	-	UL-94	V-0
Tribological	Coefficient of Friction - Static (50 lb. load, 90° rotation)	-	QTM 55007	-
	Coefficient of Friction - Dynamic (unlub.)	20 ft./min. x 250 psi	QTM 55007	-
	Limiting PV with 4:1 safety factor applied	ft. lbs./in.2 -min.	QTM 55007	2,200
	Wear Factor x 10-10, at 50 psi x 100 fpm	in3 -min./ft. lbs. hr	QTM 55100	>500
Other	Water Absorption Immersion, 24 Hours @ 73° F (2)	% by wt.	ASTM D570	0.11
	Absorption Immersion, Saturation @ 73° F (2)	% by wt.	ASTM D570	0.50
Solvents	Acids, Weak, 73° F; acetic, dilute hydrochloric or sulfuric acid		-	A
	Acids, Strong, 73° F; conc. hydrochloric or sulfuric acid		-	L
	Alkalies, Weak, 73° F; dilute ammonia or sodium hydroxide		-	L
	Alkalies, Strong, 73° F; conc. ammonia or sodium hydroxide		-	U
	Hydrocarbons, Aromatic, 73° F; conc. benzene, toluene		-	A
	Hydrocarbons, Aliphatic, 73° F; gasoline, hexane, grease		-	A
	Ketones, Esters, 73° F; acetone, methyl ethyl ketone		-	A
	Ethers, 73° F; diethyl ether, tetrahydrofuran		-	A
	Chlorinated Solvents, 73° F; methylene chloride, chloroform		-	A
	Alcohols, 73° F; methanol, ethanol, antifreeze		-	A
	Inorganic Salt Solutions, 73° F; sodium chloride, potassium chloride		-	A
	Continuous Sunlight, 73° F		-	A

(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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