>> EXCELLENT MACHINABILITY, STABILITY AND PERFORMANCE VALUE

SEMITRON® MP370

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

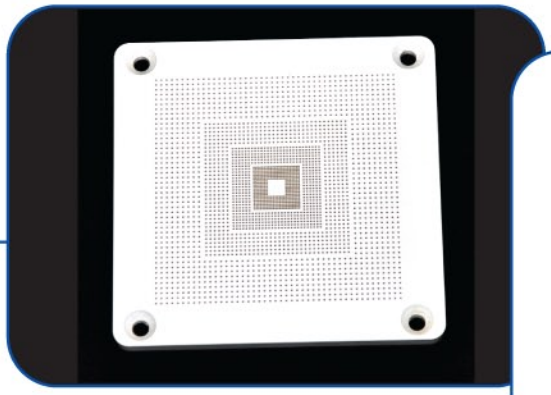
Common Applications

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

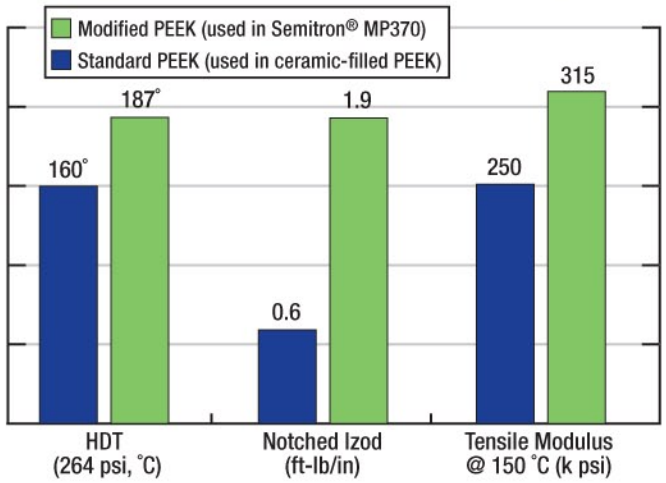
Semitron® MP370

Semitron® MP370 was developed to complement Quadrant's broad array of material choices for the design and manufacture of precision test sockets for the semiconductor manufacturing industry. It offers significant performance advantages over unfilled PEEK while maintaining the moisture resistance and relatively high thermal performance that makes PEEK an attractive material choice. Specifically, Semitron® MP370 gives the designer a machinable platform that has enhanced thermal, toughness and overall strength performance versus unfilled PEEK. This custom formulation offers the next level of performance without the failings of injection molded (high internal stress, inconsistent properties) and traditional ceramic-filled materials (poor machinability). Semitron® MP370 is available in several sheet thicknesses and full machining and technical support is available.

Learn more at www.quadrantplastics.com



Base Resin Comparison



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	2.5×10^{-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	$>10^{13}$
	Volume Resistivity	ohms/square	EOS/ESD S11.11	$>10^{15}$
	Dielectric Constant, 10^6 Hz	-	ASTM D150	4.13
	Dissipation Factor, 10^6 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	in^3 -min./ft. lbs. hr	QTM 55100	>500
Other	Water Absorption Immersion, 24 Hours @ 73° F (2)	% by wt.	ASTM D570	0.11
	Water 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.

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