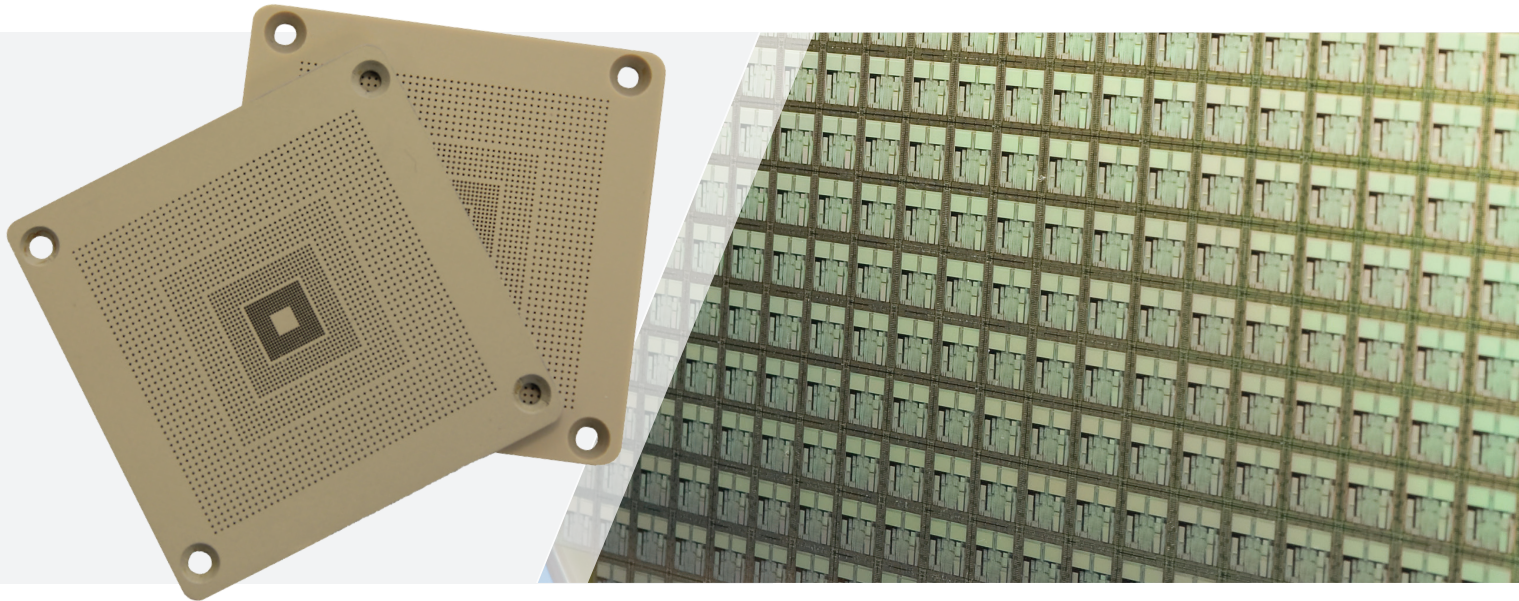


# Kyron® GC-100

## For the Burn In and Test Socket Market

Kyron® GC-100 is a non fiber filled injection molded polymer designed specifically for burn in & test socket applications that require an extremely high degree of stability yet also requires superior micro machinable.



### Key Benefits

- Flexural modulus of over 1,000,000 psi
- Available in 10" x 10" plates of 6mm, 9mm or 12mm thick
- Tensile elongation of 3.0% for precise hole placement
- Extremely stable during usage, CTE of 1.85(x10<sup>-5</sup>th)

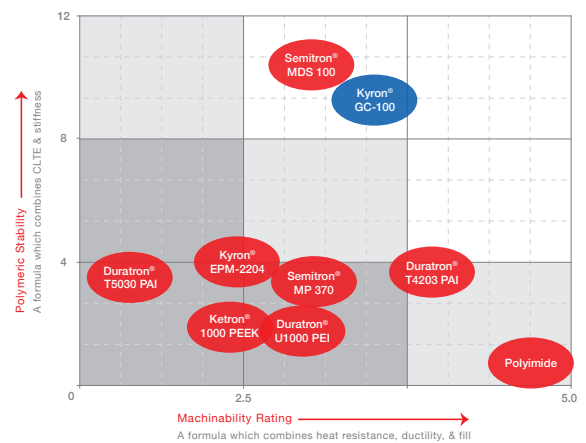
### Kyron® GC-100 vs. Other High End Materials

Properties	Method	Kyron® GC-100	Semitron® MDS-100	Vespel® SCP-5000	Vespel® SP1	Semitron® MP-370	Kyron® EPM-2204
Flexural Modulus (psi)	D790	1,100,000	1,400,000	836,000	450,000	625,000	750,000
Tensile Elongation	D638	3.0%	1.5%	7.5%	7.5%	3%	21%
CTE in/in °F, x 10, *X&Y axis	E831	1.85	1.1	2.6	3.05	2.5	2.0
HDT @ 264 psi (°F)	D648	445°	410°	632°	600°+	410°	410°
Water Absorption	D570	0.09%	0.1%	0.1%	0.24%	0.1%	0.37%
Relative Cost		\$\$\$	\$\$\$\$	\$\$\$\$\$\$\$\$	\$\$	\$	\$\$

Kyron® GC-100 provides engineers with a more stable material than Vespel® SCP-5000 at a reduced cost.

= Superior Performance

### Kyron® GC-100 Product Positioning



Socket Type	Basic	Challenging	Demanding
Hole Size	0.6 - 0.4	0.4 - 0.3	0.3 - 0.1
Pitch Size	1.0 - 0.35	0.35 - 0.25	0.25 - 0.18
Wall	0.2	0.2 - 0.1	0.05 - 0.01
I/O Count	1000	2500	2500+

## Test Socket Material

- **Versus GF-PAI** – Kyron® GC-100 provides the stiffness of GF PAI with improved small hole machinability & lower moisture absorption
- **Versus Standard Polyimides** – Kyron® GC-100 offers 2X higher stiffness, 2.5X less moisture absorption, 35% lower CTE and 2X better hole accuracy
- **Versus MDS-100** – Designed to complement MDS-100, offers relatively similar properties but available in thicker cross sections

## Kyron® GC-100 Data Sheet

	Property	Units	Test Method	Typical Average Value
Mechanical Properties	Specific Gravity @ 73°F	-	ASTM D792	1.52
	Tensile Strength (at break) @ 73°F	psi	ASTM D638	16,000
	Tensile Modulus of Elasticity @ 73°F	psi	ASTM D638	1,100,000
	Tensile Elongation (at break) @ 73°F	%	ASTM D638	3
	Shear Strength @ 73°F	psi	ASTM D732	11,000
	Flexural Strength @ 73°F	psi	ASTM D790	24,000
	Flexural Modulus of Elasticity @ 73°F	psi	ASTM D790	1,100,000
	Compressive Strength @ 10% Deformation @ 73°F	psi	ASTM D695	23,000
	Compressive Modulus of Elasticity @ 73°F	psi	ASTM D695	600,000
	Hardness, Rockwell @ 73°F	-	ASTM D785	M100/R123
	Notched Izod (notched) @ 73°F	ft. lb./in. <sup>2</sup>	ASTM D256 Type "A"	0.7
Thermal Properties	Coefficient of Linear Thermal Expansion	in./in./°F	ASTM E-831 (TMA)	1.85 x 10 <sup>-5</sup>
	Heat Deflection Temperature @ 264 psi	°F	ASTM D648	445
	Melting Point (crystalline) peak	°F	ASTM D3418	644
	Continuous Service Temp in Air (Max.) <sup>(1)</sup>	°F	-	480
	Thermal Conductivity	BTU-in./hr-ft. <sup>2</sup> -°F	ASTM F433	2.36
Electrical Properties	Surface Resistivity	ohms/square	EOS/ESD S11.11	>10 <sup>13</sup>
	Flammability UL-94 @ 1.5mm (1/16 in.) <sup>(2)(3)</sup>	-	UL-94	V-0
Other	Water Absorption Immersion, Saturation <sup>(2)</sup>	% by wt.	ASTM D570	0.44

(1) Data represents Mitsubishi Chemical Advanced Materials 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.

Contact Mitsubishi Chemical Advanced Materials for specific UL "Yellow Card" recognition number.

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