

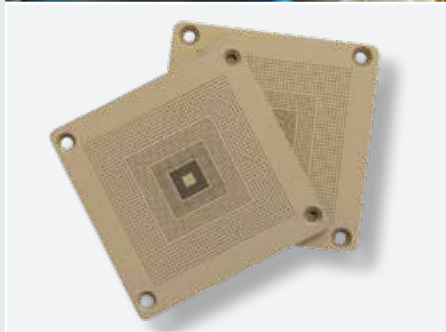
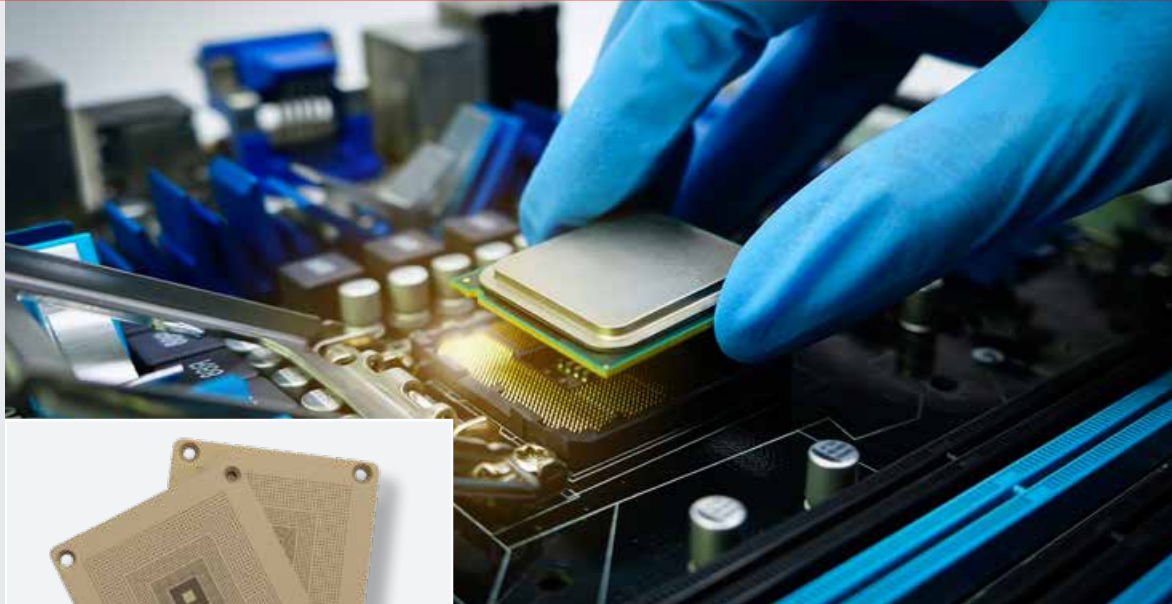
Kyron[®] GC-100

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(x10⁻⁵)

Test Socket Material

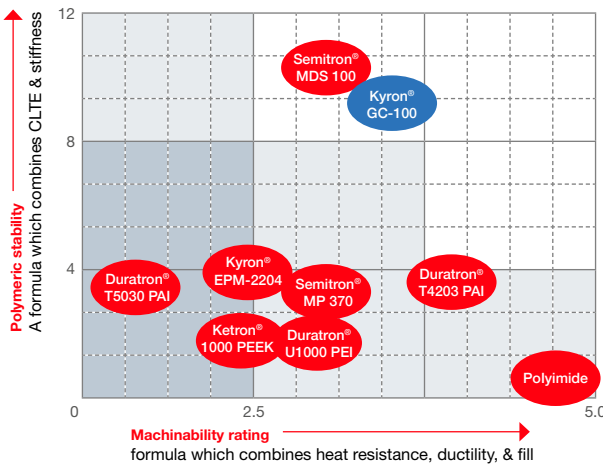
- **Versus GF-PAI** – Kyron[®] GC-100 provides the stiffness of GF PAI with improved small hole machinability & lower moisture absorption x 10" plates of 6mm, 9mm or 12mm thick
- **Versus Standard Polyimides** – Kyron[®] GC-100 offers 2X higher stiffness, 2.5X less moisture absorption, 35% lower CTE and 2X better hole accuracy
- **Versus MDS-100** – Designed to complement MDS-100, offers relatively similar properties but available in thicker cross sections



High-performance polymer solutions 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 require superior micro machinability.

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+



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	644	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 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	1,100,000
	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.2	ASTM D256 Type "A"	0.7
Thermal Properties	Coefficient of linear thermal expansion	in./in./°F	ASTM E-831 (TMA)	1.85 x 10 ⁻⁵
	Heat deflection temperature @ 264 psi	°F	ASTM D648	445
	Melting point (crystalline) peak	°F	ASTM D3418	644
	Continuous service temp in air (Max.) ⁽¹⁾	°F	-	480
	Thermal conductivity	BTU-in./hr-ft.2-°F	ASTM F433	2.36
Electrical Properties	Surface resistivity	ohms/square	EOS/ESD S11.11	>10 ¹³
	Flammability UL-94 @ 1.5mm (1/16 in.) ⁽²⁾⁽³⁾	-	UL-94	V-0
Other	Water absorption immersion, saturation ⁽²⁾	% by wt.	ASTM D570	0.44

(1) Data represents 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 the Advanced Materials Division of Mitsubishi Chemical Group for specific UL "Yellow Card" recognition number.

Europe
 Mitsubishi Chemical
 Advanced Materials NV
 Galgenveldstraat 12
 8700 Tielt, Belgium
 T +32[0] 51 42 35 11
 F +32[0] 51 42 33 10
 contact@mcam.com

North America
 Mitsubishi Chemical
 Advanced Materials Inc.
 2120 Fairmont Avenue
 PO Box 14235 - Reading, PA 19612-4235
 T 800 366 0300 | +1 610 320 6600
 F 800 366 0301 | +1 610 320 6638
 contact@mcam.com

Asia-Pacific
 Mitsubishi Chemical
 Advanced Materials Asia Pacific Ltd.
 Unit 7B, 35/F, Cable TV Tower,
 9 Hoi Shing Road, Tsuen Wan, Hong Kong
 T +852 2470 26 83
 F +852 2478 99 66
 contact@mcam.com

mcam.com

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