Technical Data Sheet

Material: Cirlex® Polyimide

Cirlex® is made from 100% DuPont Kapton® adhesiveless polyimide film. It is a product that delivers performance, value for all your demanding material applications, and an ideal match for environmental extremes. Fralock is Dupont's sole licensee for the production of Cirlex® worldwide.

Seamless integration in polyimide.

If you are looking to replace current applications using ceramic or Vespel®, or upgrade to a new high performance polyimide materials, Cirlex® offers material flexibility and an expanded range of thickness options unattainable with cast resins or laminated constructions using adhesives.

Mechanical Property	Temperature	ASTM	Units	Typical Values
Ultimate Compressive Strength	23°C (73.4°F) 100°C (212°F) 200°C (392°F)	D695-15	kpsi	45.26 42.79 35.61
Ultimate Tensile Strength	23°C (73.4°F) 100°C (212°F) 200°C (392°F) 250°C (482°F)	D638	kpsi	32.49 21.40 17.40 16.50
Tensile Modulus	23°C (73.4°F) 100°C (212°F) 200°C (392°F) 250°C (482°F)	D638	kpsi	330 488 402 381
Tensile Yield @ 3% Elongation	23°C (73.4°F) 200°C (392°F)	D638	kpsi	6.11 5.49
Shear Strength	23°C (73.4°F) 100°C (212°F) 200°C (392°F) 250°C (482°F)	D3846	kpsi	- 6.40 5.40 5.00
Poisson's Ratio	23°C (73.4°F)	D3039-17	-	.329

Physical Property	Temperature	ASTM	Units	Typical Values
Surface Roughness Average	-	-	µin	Ra ≤ 32
Specific Gravity	-	-	-	1.42

All information included in this document is "Confidential Information" and the property of Fralock, A division of Lockwood Industries Inc.

Electrical Property	Temperature	ASTM	Units	Typical Values
Dielectric Strength	-	-	V/mil	2790
Dielectric Constant DC @ 10KHz	25°C	ASTM D150	KHz	3.45
Dielectric Constant Dissipation Factor	-	ASTM D150	-	.0040

Thermal Property	Temperature	ASTM or Test Method	Units	Typical Values
Thermal Conductivity	-	-	W/m K	0.17
Glass Transition, Tg	-	-	°C	351
Specific Heat	-	-	J/g K	1.09
UL Rating	-	UL File # -E39505	-	UL 94V0
CTE In-plane	(23° – 350° C)	ASTM E831	µm/m °C	30
CTE Thru-thickness	(23° – 350° C)	ASTM E831	µm/m °C	118
Outgassing TML	-	ASTM E595	-	0.5%
Outgassing CVCM	-	ASTM E595	-	<0.01%
Outgassing Water Vapor Regain	-	ASTM E595	-	0.42%

Fralock
28525 West Industry Drive
Valencia, CA 91355
www.fralock.com

Warranty: User is responsible for determining whether the product is fit for a particular purpose and suitable for user's application.
Limitation of Liability: Fralock will not be liable for any loss or damage arising from the product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict

All information included in this document is "Confidential Information" and the property of Fralock, A division of Lockwood Industries Inc.