

Iten Industries

Resiten® G10FR4 Performance Values

An all purpose flame retardant NEMA FR4 glass epoxy sheet with exceptional electrical and mechanical properties

<u>Properties</u>	<u>Test Condition</u>	<u>ASTM</u>	<u>Values</u>
Thickness			.125 inches
Tensile Strength:	Condition A	Lengthwise D638	58,500 psi
		Crosswise	39,000 psi
Flexural Strength:	Condition A	Lengthwise D790	84,800 psi
		Crosswise	66,100 psi
	D48/50	Lengthwise	80,500 psi
		Crosswise	60,000 psi
Compressive Strength:	Condition A	Lengthwise D695	43,000 psi
		Crosswise	42,200 psi
		Flatwise	48,500 + psi
Izod Impact (notched):	Condition A	Lengthwise D256	15.9 ft.lb./in.
		Crosswise	9.7 ft.lb./in.
	D48/50	Lengthwise	15.4 ft.lb./in.
		Crosswise D256	9.1 ft.lb./in.
	E48/50	Lengthwise	16.5 ft.lb./in.
		Crosswise	9.6 ft.lb./in.
Water Absorption		D570	.08% of weight
Specific Gravity		D792	1.96
U.L. Subject 94		UL94	VO
Dielectric Strength		D149	488 Vpm
Dielectric Breakdown:	Condition A	D149	80+ kV
	D48/50		45.2 kV
Arc Resistance:	Condition A	D495	126 seconds
	D48/50		117 seconds
Comparative Track Index (CTI)		U.L. 746A	440 Volts
U.L HV Track Rate		U.L. 746A	2.2 mm/Min.
Permittivity, 1MHz:	Condition A	D150	4.79
	D24/23		4.89
Dissipation Factor, 1MHz:	Condition A	D150	0.016
	D24/23		0.016
Permittivity, 1KHz:	Condition A	D150	5.04
	D24/23		5.17
Dissipation Factor, 1KHz:	Condition A	D150	0.005
U.L. Hot Wire Ignition		U.L. 746A	120+ seconds
U.L. High Amp Ignition		U.L. 746A	200 + Exposure
Shear Strength		D732-90	21,000 PSI
Coefficient of Thermal Expansion			1 x 10 ⁻⁵ cm/cm/°C
Thermal Conductivity = 7 x 10 ⁻⁴ /calories per sec. /sq.cm /degree C/cm of thickness			
Youngs Modulus			2,500,000 psi
U.L. temperature Index:		Electrical	130° C
		Mechanical	140° C
UL Listed		File #E37920	

Coefficient of Friction with semi gloss finish is ≈ .25 to .300

Standard Sheet sizes are 36" x 48", 48" x 48", 48" x 72", & 48" x 96"

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All values are average test results from typical production material. No warranty is implied or guaranteed and testing is recommended for each application.