Iten Industries

Resiten® G10FR4 Performance Values

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

Properties	Test Condition		ASTM	Values
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"

Ashtabula, Ohio 44004 440-997-6134 Fax 440-992-3614

Addison,Illinois 60101 630-543-2820 Fax 630-543-1463

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

Imagineering With Plastics

December 4, 2013