



MICAM's EFR4 is a FR-4 epoxy laminate, with excellent electrical, mechanical and flame resistant properties.

Characteristics	Excellent electrical and mechanical properties, flammability rating UL 94 V-0
Colours	Translucent Green, Black and other colours available on request
Thickness	0.1 mm to 100mm available on request
Sheet Size	1220mm x 920mm, 1220mm x 1060mm (panel sizes cut on request)

		<i>units</i>	<i>test method</i>
GENERAL PROPERTIES			
Relative Density	1.95	-	IEC 1183-A
Thermal Index (20,000 hrs)	130	°C	IEC 216
Water Absorption	10	mg/50x50x3 mm	IEC 62-1
Flammability	V-0	-	UL 94
MECHANICAL PROPERTIES			
Flexural Strength	470	MPa	ISO 178
Flexural Modulus	20,000	MPa	ISO 178
Izod Impact Strength	65	kJ/m ²	ISO 180/2A
Shear Strength, parallel	55	MPa	EN60893-2
Tensile Strength	350	MPa	ISO 527
Compressive Strength Flatwise	500	MPa	ISO 604
ELECTRICAL PROPERTIES			
Insulation Resistance	10 ⁵	MΩ	IEC 167
Dielectric Strength Flatwise (in oil at 90°C)	14	MV/m (1.6 mm)	IEC 243-1
Dielectric Strength Edgewise (in oil at 90°C)	60	kV (3mm)	IEC 243-1
Dissipation Factor at 50Hz	0.006	-	IEC 250
Dissipation Factor at 1 MHz	0.008	-	IEC 250
Permittivity at 50Hz	4.5	-	IEC 250
Permittivity at 1 MHz	4.5	-	IEC 250

SPECIFICATION COMPLIANCE

EN 60893-3-2:2004/EP GC 202; NEMA L1-1-1998 FR-4; ISO 1642:EP-GC-2; DIN 7735: 1975 Hgw 2372.1; BS 3953: 1990 EP-4

ENVIRONMENTAL COMPLIANCE

RoHS compliant; REACH compliant

QUALITY SYSTEM APPROVAL

Certified by NSAI to I.S. EN ISO 9001:2008