



Epoxy Glass G10 FR4

Material Data Sheet

GENERAL INFORMATION:

Manufactured from woven glass cloth and impregnated with epoxy resin it is laminated at elevated pressures and temperatures. It is commonly known as FR4.

The resultant product displays excellent electrical and mechanical properties from cryogenic (-50°C) to elevated temperatures (155°C). Coupled with this is its excellent machinability, flame resistance, moisture, and chemical resistant properties.

APPLICATIONS:

Motor/generator slot wedges and packers, fabricated components in electrical switchgear, high frequency applications and in corrosive atmospheres. FR4 has higher mechanical strength (ambient) temperature and good electrical properties under dry and humid conditions

Colour	Green
Standard Thickness	0.2MM – 25MM
Sheet Size	1220 X 1020 MM

Electrical & Mechanical		Values
Impact Strength parallel to laminations (Charpy)	Normal Conditions	33MPa
Flexural Strength	Normal Conditions	340MPa
Insulation resistance after immersion in water	D- 24/23	$\geq 5.0 \times 10^8 \Omega$
Dielectric Strength perpendicular laminations. (In Transformer oil @90± 2°C, 1MM)		14.2MV/m
Breakdown voltage parallel to laminations (In Transformer oil @90± 2°C)		40KV
Permittivity (48- 62Hz)		≥ 5.5
Permittivity (1MHz)		≥ 5.5
Dissipation factor (48-62Hz)		≥ 0.04
Dissipation factor (1MHz)		≥ 0.04
Water Absorption	D-24 /23 1.6MM thick	19mg
Density		1.70-1.90 mg
Flammability	Class	FV0

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