



Rigid Insulation Epoxy Glass FR-4.

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 retardance, 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 at room (ambient) temperatures and good electrical properties under both dry and humid conditions.

TYPICAL PROPERTIES:

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 to laminations. (In transformer oil @ 90±2°C, 1mm thick)		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		1.70-1.90mg
Flammability	Class	FVO
Physical		
Colour		Green
Standard Thicknesses		0.2mm – 50mm
Sheet Size		1220 x1020mm
NOTE: Also manufactured in tubes from 4.75mm ID up to 250mm OD x 915mm long. Refer your local sales office.		