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TECHNICAL DATA

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FR-4 - FLAME RETARDANT EPOXY GLASS LAMINATE

DESCRIPTION

Flame retardant epoxy glass fabric laminate. Very good electrical & mechanical properties, Class B insulation.

APPLICATIONS

- High voltage insulation
- Transformer spacers
- Terminal boards & tag strips
- Motor slot wedging
- Precision machined parts
- Cryogenic components
- Phase barriers
- Electromagnet coil insulation
- Chemical resistant components

TECHNICAL DATA

PHYSICAL PROPERTIES

Specification	BS EN 60893-3-2-EP GC 202 (Formally BS 3953 EP4) NEMA FR4
Body colour	Pale Green
Cover colour	Pale Green
Standard finish	Satin/glossy
Standard thicknesses	0.40 - 100mm (Others on request)
Standard sheet size	1220mm x 1220mm (Others on request)
Density	1.90 g/cm ³
Water absorption	7 mg

ELECTRICAL PROPERTIES

IR, 24 hours water immersed	30,000 GΩ
Electric strength, flat rapid	25 MV/m
Electric strength, flat step by step	16 MV/m
Breakdown voltage, edge step by step	89 kV
Relative permittivity @ 1MHz	4.8
Dissipation factor @ 1 MHz	0.02
Tracking index	210 V

MECHANICAL PROPERTIES

Flexural strength	492 Mpa
Tensile strength	220 Mpa
Impact, notched CHARPY	45 kJ/m ²

THERMAL PROPERTIES

Thermal rating continuous	130°C
Thermal rating intermittent	140°C

* Tests carried out on 3mm thick specimens unless otherwise stated.

* Colour variation is normal on industrial laminates, and some resins will darken with age with no detriment to the material properties.

MACHINING

FR-4 can be machined to customer requirements.

RODS

FR-4 is available in rod format.

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