LAMINATE SHEETING

FR4-10

GENERAL DESCRIPTION

FR4 (G10) Epoxy Glass Cloth Base Rigid Laminated Sheet consists of a continuous filament glass cloth material with an epoxy resin binder, laminated under high temperature and pressure. The sheet possesses high mechanical strength at room temperature, good dielectric properties under humid or moist conditions.

Performance Requirements for Sheets

1. Appearance

The surface of sheet shall be flat and smooth, free of air bubbles, wrinkles or cracks and reasonably free of other small imperfections such as scratches, dents, etc…

2. Dimensions.

Width 1220mm x 1020mm

2.2 Thickness of Sheets

Nominal Thickness mm	Allowed deviation mm	Nominal Thickness mm	Allowed deviation mm
0.2, 0.3	0.04	2.5, 3.0	0.22
0.4, 0.5	0.06	4, 5	0.35
	0.10	6, 8	0.50
0.6, 0.8	0.15	10, 12	0.65
	0.18	15, 20	0.80
1.0, 1, 2			
1.5, 2.0			
Note: For sheets of nominal thickness not listed in this Table, the allowed deviation shall be the same as the next greater thickness.			

3. Physical, mechanical and dielectric performance requirements.

No.	Properties	Units	Values
1	Flexural strength lengthwise	M P a	>or340
2	Withstand Voltage, parallel to laminations in transformer oil at 90degC +_ 2degC for 1 min	K V	>or.35
3	Water absorption	mg	<or25
4	Density	g/cm3	1.8-2.1
5	Dielectric strength, perpendicular to lamination, in transformer oil at 90degC +- 2degC	Kv/mm	
6	Flammability, Vertical	Classificatio n	FV0
Note: The other technical requirements can be settled upon negotiation between sellers and buyers.			

Dielectric strength, perpendicular to laminations

Nominal thickness mm	Dielectric strength Kv/mm	Nominal thickness mm	Dielectric strength Kv/mm	Nominal thickness mm	Dielectric strength Kv/mm
0.40	>or 16.9	1.00	>or 14.2	2.20	>or 11.4
0.50	>or 16.1	1.20	>or 13.7	2.40	>or 11.1
0.60	>or 15.6	1.40	>or 13.2	2.50	>or 10.9
0.70	>or 15.2	1.60	>or 12.7	2.60	>or 10.8
0.80	>or 14.8	1.80	>or 12.2	2.80	>or 10.5
0.90	>or 14.8	2.00	>or 11.8	3.00	>or 10.2