

Technical data **isola**

Data sheet No: IPC-4101/21
 Core material: E-glass fabric
 Resin system: Epoxy, flame retardant
 UL-File No: E41625, V-0 acc. To 94

Explanations:

C = preconditioning in humidity chamber
 E = preconditioning at temperature

The figures below following the letter symbols indicate with the first digit the duration of the preconditioning in hours, with the second digit the preconditioning temperature in °C and with the third digit the relative humidity.

Properties	Unit	Quality 104 Isola-Value
1. Peel Strength , minimum		
A. Low profile copper foil and very low profile copper foil Weights > 17microns	N/mm	-
B. Standard profile copper foil (35 microns)		
1. After thermal stress	N/mm	2.00
2. At 125 °C	N/mm	1.90
3. After process solutions	N/mm	2.00
2. Volume Resistivity , minimum		
A. C-96/35/90	M W.cm	-
B. After moisture resistance	M W.cm	8.0.10 ⁸
C. At elevated temperature E-24/125	M W.cm	8.0.10 ⁶
3. Surface Resistivity , minimum		
A. C-96/35/90	M W.cm	-
B. After moisture resistance	M W.cm	4.0. 10 ⁶
C. At elevated temperature E-24/125		7.0. 10 ⁴
4. Moisture Absorption , maximum	%	0.25
5. Dielectric Breakdown , minimum	kV	45
6. Permittivity @ 1 MHz , maximum		4.6-4.9
7. Loss Tangent @ 1 MHz , maximum		0.019
8. Flexural Strength , minimum		
A. Length direction	N/mm ²	600
B. Cross direction	N/mm ²	480
9. Flexural Strength @ Elevated Temperature		
Length direction, minimum	N/mm ²	-
10. Thermal Stress @ 288 °C , minimum		
A. Unetched	s	≥10
B. Etched	s	≥10
11. Electric Strength , minimum	V/mm	-
12. Flammability		
A. Average burn time, maximum	s	3
B. Individual burn time, maximum	s	6
13. Glass Transition Temperature (T_g) DSC	°C	135
14. Coefficient of Thermal Expansion (α)TMA		
Weft direction (below T _g /above T _g)	ppm/K	16/14
Warp direction (below T _g /above T _g)	ppm/K	13/7
Vertical (below T _g /above T _g)	ppm/K	70/280

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