



**南興積層板有限公司**  
**NAM HING INDUSTRIAL LAMINATE LIMITED**



**PRODUCTS**

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**Copper-Clad Glass-Epoxy Laminates :**

Conditions

Type NHL-4806

ANSI (NEMA) FR4

UL File No. E74035

Colour Natural

0.4mm (0.016 in) +/- 0.063mm (0.0025 in)	Nominal Thickness and Tolerance
0.6mm (0.023 in) +/- 0.063mm (0.0025 in)	
0.8mm (0.031 in) +/- 0.089mm (0.0035 in)	Nominal Thickness and Tolerance
1.2mm (0.047 in) +/- 0.130mm (0.0051 in)	
1.6mm (0.062 in) +/- 0.130mm (0.0051 in)	Nominal Thickness and Tolerance
1.8mm (0.071 in) +/- 0.130mm (0.0051 in)	

Standard Sheet Size 1,020mm x 1,220mm +/- 5mm

Copper Cladding  
 135 g/m<sup>2</sup> (1/2 oz/ft<sup>2</sup>), 18 μm ;  
 305 g/m<sup>2</sup> (1 oz/ft<sup>2</sup>), 35 μm ;  
 610 g/m<sup>2</sup> (2 oz/ft<sup>2</sup>), 70 μm ;  
 one- or two-sided electrolytic copper cladding

Max. Operating Temp (Tg) 140 °C (Electrical) +/- 5 °C  
 110 °C (Mechanical) +/- 5 °C

Flame Class 94-VO

UL-94

Water Absorption 0.10% (For 1.6mm)

Solder Float (260 °C) Over 12 sec

Peel Strength 1.8 N/mm (Normal state)  
 1.7 N/mm (Thermal shock, 550 °F 10s)  
 1.6 N/mm (Post exposure to process solution)

Flexural Strength 618.3 N/mm<sup>2</sup> For 0.8mm  
 735.1 N/mm<sup>2</sup> For 1.6mm

ASTM D 790

Insulation Resistivity 8.47 x 10<sup>11</sup> Ω (Normal state)

IPC-TM-650

Volume Resistivity	7.5 x 10 <sup>10</sup> Ω m (Normal state, 500Vdc)	
	5.2 x 10 <sup>10</sup> Ω m (Damp resistance test)	
Dielectric Constant	4.3 (Damp heat, steady state 96h, 1Mhz)	IPC-TM-650
Dielectric Strength	29.4kV/mm (Normal state)	ASTM D
	24.0kV/mm (Moist state)	149
Dissipation Factors	0.0265 (Damp heat, steady state 96h, 1Mhz)	IPC-TM-650
Bow & Twist	0.31% Bowed and No Twist	IPC-TM-650
High Current Arc Resistance Test	17 arc for 0.8mm	UL 746
	18 arc for 1.6mm	
Hot Wire Ignition	120+ sec to ignition for 0.8mm	UL 746
	120+ sec to ignition for 1.6mm	
Arc Resistance	93 sec	ASTM D
		495
High Voltage Arc Resistance	300+ sec	UL 746
Arc Tracking Rate	368mm/min for 0.8mm	UL 746
	267mm/min for 1.6mm	
Comparative Tracking Index	175	IEC 112

The properties described herein are based upon test data generated at independent laboratories and is believed to be accurate. However, the final determination regarding the suitability of the material described herein for any contemplated use is the sole responsibility of the end user. There is no warranty, expressed or implied.

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