

## TECHNICAL INFORMATION 技術資料

### KB-3150 Unclad 阻燃電木板

KB-3150 is paper based phenolic resin unclad laminate, suitable for precise instruments such as crust of switch. It has excellent performance in flame resistance and dimensional stability. It is suitable for cold punching.

KB-3150是針對開關面盒(如：琴鍵式開關、推置式開關)等精密元件而開發的紙基酚醛樹脂絕緣積層板。具有優異的阻燃性能以及尺寸穩定性，並且適用於低溫沖孔加工作業。

Type 型號	Grade 級別	Construction 組成
KB-3150	ANSI ( NEMA ) FR-1	Paper, Phenolic resin 紙、酚醛樹脂
<p><b>Features</b></p> <ul style="list-style-type: none"> <li>◆ Suitable for punching at Room Temperature ~ 70°C</li> <li>◆ Warpage and twist are small and stable</li> <li>◆ Excellent heat and humidity resistance</li> <li>◆ Excellent flexibility</li> </ul> <p><b>特點</b></p> <ul style="list-style-type: none"> <li>◆ 適合之沖孔溫度為 室溫 ~ 70°C</li> <li>◆ 彎曲度、扭曲度小且穩定</li> <li>◆ 良好的耐濕、熱性能</li> <li>◆ 優異的柔韌性</li> </ul> <p><b>Standard Configuration 標準數據</b></p> <ul style="list-style-type: none"> <li>◆ Thickness 厚度 : 0.4mm - 3.0mm (IPC-4101 Class B/L)</li> <li>◆ Regular Size(mm)常規尺寸 : 1020x1020 , 1020x1220</li> <li>◆ Other Size其他尺寸 : As specified by customers</li> </ul>		



# 建滔積層板有限公司 KINGBOARD LAMINATES LTD

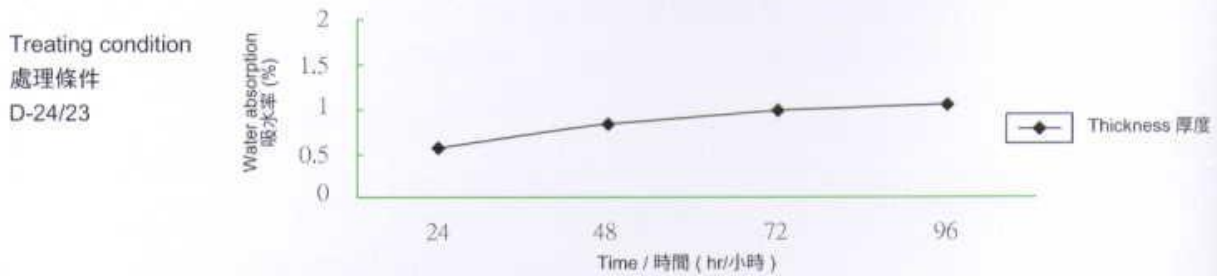
香港新界沙田火炭坳背灣街 2-12號威力工業中心五字樓K座  
5/F., Block K, Valiant Industrial Centre, 2-12 Au Pui Wan St., Fo Tan, Shatin, NT, Hong Kong.  
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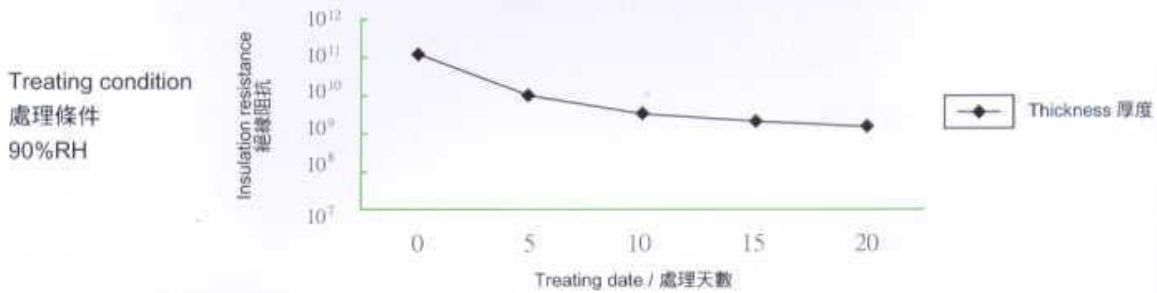
### KB-3150 Unclad 阻燃電木板

### Performance 性能

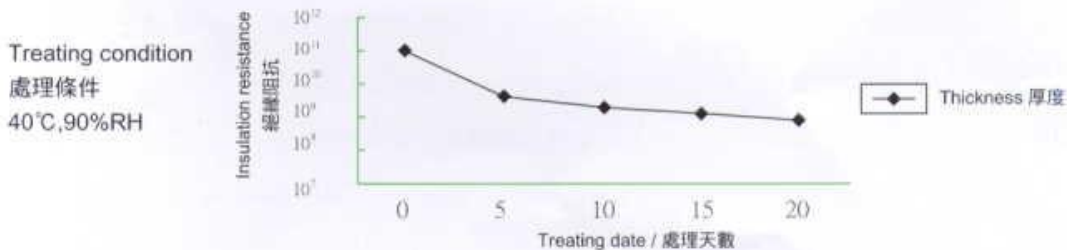
Water absorption Vs. Time / 吸水率：時間



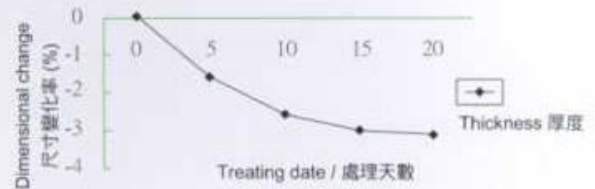
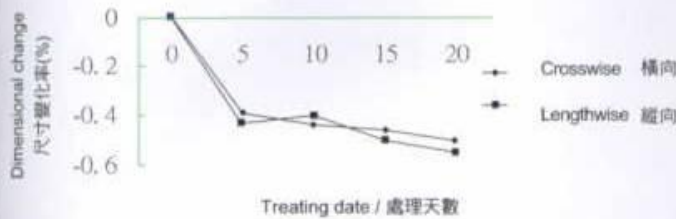
Insulation resistance after humidity treatment / 濕度處理後絕緣阻抗變化



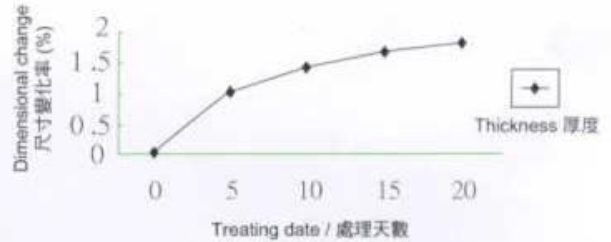
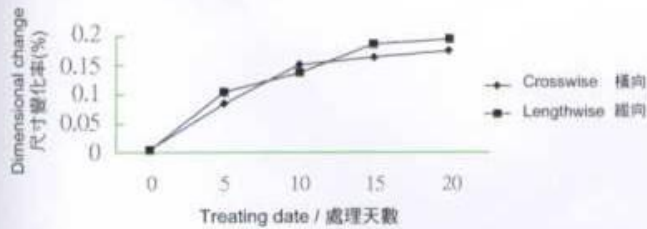
Insulation resistance after Temperature treatment / 溫度處理後阻抗變化



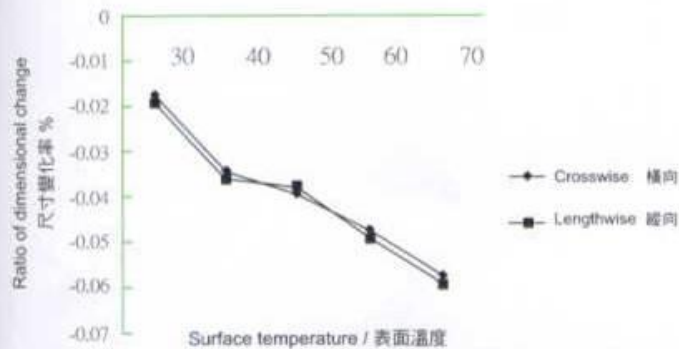
### Dimensional change after heat treatment / 熱處理後尺寸變化率 Treating condition / 處理條件 100°C



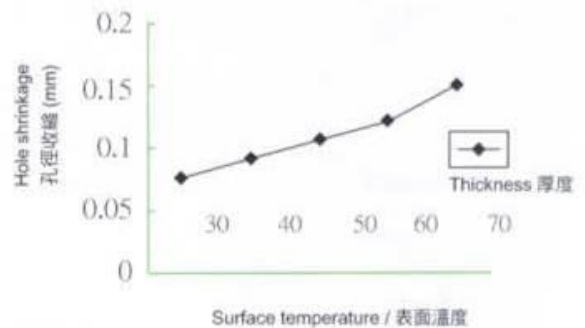
### Dimensional change after heat treatment / 濕度處理後板材尺寸變化率 Treating condition / 處理條件 40°C, 90%RH



### Dimensional change of punched PCB / 沖孔後尺寸變化率



### Punched hole shrinkage / 沖孔後孔徑收縮



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#### General Properties 一般特性

TEST ITEM 特性	UNIT 單位	TEST CONDITION 處理條件	TESTING METHOD 測試方法	TYPICAL VALUE 典型值	
Heat Resistance 耐熱性	—	200°C 30min	JIS C 6481	No Change 無異常	
Flexural Strength 屈曲強度	Lengthwise 縱向	Kgf/mm <sup>2</sup>	A	JIS C 6481	15~19
	Crosswise 橫向				14~18
Volume Resistivity 體積電阻率	Ω-cm	C-96/20/65	JIS C 6481	1.0 x 10 <sup>11</sup> ~ 10 <sup>12</sup>	
		C-96/20/65+C-96/40/90		1.0 x 10 <sup>10</sup> ~ 10 <sup>11</sup>	
Surface Resistance 表面電阻	Ω	C-96/20/65	JIS C 6481	1.0 x 10 <sup>11</sup> ~ 10 <sup>12</sup>	
		C-96/20/65+C-96/40/90		1.0 x 10 <sup>9</sup> ~ 10 <sup>10</sup>	
Insulation Resistance 絕緣電阻	Ω	C-96/20/65	JIS C 6481	1.0 x 10 <sup>11</sup> ~ 10 <sup>12</sup>	
		C-96/20/65+D-2/100		1.0 x 10 <sup>9</sup> ~ 10 <sup>10</sup>	
Chemical Resistance 耐化學性	—	3%的NaOH溶液40°C恒溫 3min	JIS C 6481	No Change 無異常	
Moisture Absorption 吸水性	%	E-24/50+D-24/23	JIS C 6481	0.8-1.1	
Flammability 阻燃性	Sec/秒	A	UL94	94V0	
Punching Temperature 沖孔溫度	°C	A	KB-QA-007	Room Temp ~ 70 室溫 ~ 70	

Remarks: Typical Values for reference only 註：典型值只作參考