

## H3025-A Phenolic Cloth Laminated Sheet Technical Data Sheet

### 1 .Define and purpose

This product is formed into laminated board through drying and heat pressing after cotton cloth dips into PF resins. It is suitable as the structural components with a certain mechanical performance and electric performance for machinery, electric engine and electric equipment.

### 2 .Technical requirement

#### 2.1 Outside appearance:

The surface of laminated board should be flat and smooth, no bubble, no wrinkle or crackle, and properly free from other defects such as scrape, impress, dirt spot and uneven color, but a little color sports is allowed.

#### 2.2 Main performance index

Table 1 : Performance index

Sr.	Performance	Unit	Test method	Index value
1	Vertical layer direction bending strength	MPa	GB/T5130 section 5.1	≥ 50
2	Parallel layer direction compact strength (Simple strut-beam, notch specimen)	KJ/m <sup>2</sup>	GB/T5130 section 5.5	≥ 8
3	Parallel layer direction compact strength (Suspended arm beam, notch specimen)	KJ/m <sup>2</sup>	GB/T5130 section 5.5	≥ 4
4	Parallel layer shearing strength	MPa	GB/T5130 section 5.6	≥ 25
5	Vertical layer direction electric strength at (90±2) °C oil.	MV/m	GB/T5130 section 6.1	Refer to table 2
6	Parallel layer direction breakdown voltage at (90±2) °C oil.	kV	GB/T5130 section 6.1	≥ 2
7	Insulation resistance after water dipping	Ω	GB/T5130 section 6.3	≥ 1 × 10 <sup>7</sup>
8	Density	g/cm <sup>3</sup>	GB/T5130 section 8.1	1.3-1.6
9	water absorption	mg	GB/T5130 section 8.2	Refer to table 3

Table 2 : Vertical layer direction electric strength

Average thickness mm	Electric strength	Average thickness mm	Electric strength MV/m
0.8	≥ 0.89	2	≥ 0.65
0.9	≥ 0.84	2.2	≥ 0.61
1	≥ 0.82	2.4	≥ 0.58
1.2	≥ 0.80	2.6	≥ 0.56
1.4	≥ 0.76	2.8	≥ 0.53
1.6	≥ 0.7	3	≥ 0.50
1.8	≥ 0.69		

#### Note:

1. For the vertical layer direction electric strength at 90°C±2°C oil, you can select either in 20s pressure rising-up gradually test requirement or in 1mm withstand pressure test requirement. For the material meeting with requirement of either one, its vertical layer direction electric strength at 90°C ±2°C oil is deemed to meet with this standard requirement.

2. If the arithmetical mean of measured thickness of specimen (specimen) is between two thickness values in table, its indicated value should be calculated out by interpolation. If the arithmetical mean of measured thickness is less the min. thickness indicated in table, its limit value of electric strength is equal to the value of min. thickness. If the nominal thickness is 3mm and the arithmetical mean value of measured thick is more than 3mm, its electric strength is taken out according to 3 mm thickness limit value.

Table 3 : Water absorption

Sample thickness mean value (d) mm	Water absorption mg	Sample thickness mean value (d) mm	Water absorption
			mg
0.8 <= d <= 1.0	≤ 380	3.0 < d ≤ 6.0	≤ 500
1.0 < d <= 2.0	≤ 420	6.0 < d ≤ 10	≤ 550
2.0 < d <= 3.0	≤ 450	10 < d ≤ 20	≤ 600

#### Statement:

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Energetic will not provide any legally binding guarantee of certain properties, or any suitability.