



# MAHAVIR TECHNOTRADE

Insulation Papers | PCB Components |  
Transformers Parts | Epoxy Composite



# ABOUT US

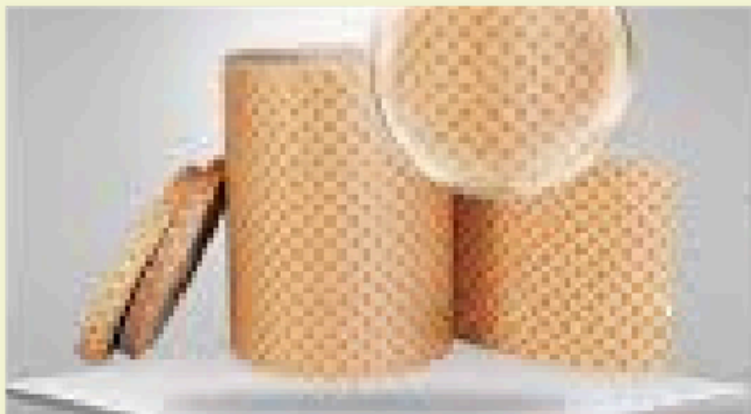
Mahavir Technotrade is a newly established company specializing in the manufacturing and supply of high-quality insulation materials for the transformers manufacturing industries. Our main products are high density transformers board including **Press Compressed Board, Diamond Dotted Paper, and Insulation Kraft Paper**, which are widely used as insulation components in transformers. Our focus is to provide reliable, durable, and high-performance insulation materials that meet industries standards and help to improve the safety and efficiency of transformers. We are committed to maintain quality, precision, and consistency in every product we deliver. At Mahavir Technotrade, customer satisfaction and long-term relationships are our top priorities. As a growing company, Our aim is to become a trusted and leading supplier of transformer insulation materials by continuously improving our products and services.



# Diamond Dotted Paper/Epoxy Dotted Paper

DiamondDottedPaper is manufactured using an electrical grade insulating kraft paper with thermostable 'B' stage resin dots applied in such a way that sufficient spaces exist between them for oil impregnation. It is used to electrically insulate and mechanically bond the winding layers, by this the winding layers are stuck together to become one solid block with noticeable improvements in short circuit strength of such windings.

Designation	Code	DDP 3 Mil	DDP 5 Mil	DDP 7 Mil	DDP 10 Mil
Reference Standard		IEC 60641-2:2002			
Tolerance	Mm	±0.005	±0.007	±0.010	±0.010
Density	g/cm <sup>3</sup>	0.90-1.10			
Water Content	%	4.0-8.0			
pH from Water Extract Oil	N/A	6.5-8.5			
Resin Layer (Approx.)	µm	20-25			
Chemical Family	Resin	Epoxy			
Reinforcement Type	Paper	Natural-coloured press-paper made of unbleached sulphate cellulose			
Colour		Natural, printed resin may be Red or Natural Color			
Tensile Strength	MPa	≈75	≈75	≈75	≈75
	MD CMD	≈35	≈35	≈35	≈35
Shrinkage	%	≈1	≈1	≈1	≈1
	MD CMD	≈1.5	≈1.5	≈1.5	≈1.5
Bonding Strength	kPa	≈650	≈650	≈650	≈650
Breakdown Voltage	kV	≈0.7	≈1.10	≈1.60	≈2.25
Breakdown Voltage 90°C, Oil	kV	≈4.0	≈7.0	≈9.0	≈11.0
Conductivity of the Aqueous Extract	mS/m	≈10.0	≈10.0	≈10.0	≈10.0



# Insulating Kraft Paper

Transformer insulationkraftpaper is a high-purity electrical-grade, Kraft pulp-based material designed for dielectric strength and thermal stability (Class A/105°C) in oil-filled units. Key specification include a thickness of (4mil- 20mil,26-40inch), high tensile strength, low moisture content, and, in some cases, high porosity for oil impregnation. It is commonly used for winding and layer insulation.

Technical data of Electrical Grade Insulating Kraft Paper					
Specified Properties	Unit	1.5mil	2mil	2.5mil	3mil
Thickness Tolerance	Micron	38±10%	50±10%	64±10%	75±10%
Substance (Grammage)	g / m <sup>2</sup>	30±10%	40±10%	51±5%	61±5%
Apparent Density	g / m <sup>3</sup>			0.8 ± 0.05	
Moisture Content	%			8 Max	
Moisture content	%			5 - 9	
-Water Absorption MD CD	Mm			10 Min.	
Air Permeability	m/Pa .Sec			0.5 to 1.0	
Tensile Index MD CD	Nm/g			78 Min 28 Min	
Elongation MD CD	%			2.0 Min 4.0 Min	
Tear Index MD CD	mN m <sup>2</sup> / g			5 Min	
Electric Strength in Air	KV/m m			7.0 Min	
Ash Content	%			1.0 Max	
Conductivity of 5% Aqueous Extract	Ms/m			10 Max	
Ph of 5% Aqueous Extract				6 - 8	
Heat Stability (150degC24hrs)	%			20 Max	



# High Density Transformer Board

We offer High Density Pre-Compressed Press board (Transformer Board) in sheets form with thickness (0.8 – 6.0)mm. The master sheet size offered 4000 X 2100 mm, which is cut into standard sheet size **4000 X 2100mm , 3200 X 2100mm, and 2000 X 1050mm**. Other sheet sizes are available on request with a minimum quantity of 5.0 MT. Characteristics : High Density Pre-Compressed Press board is produced with finest quality choice of sulphate wood pulp. 1. Made of 100 % sulphate wood pulp (Characterized by high chemical purity) 2. Natural color 3. High purity and mechanical strength. 4. Low shrinkage and Compressibility. 5. Good compatibility with liquid dielectrics strength 6. Thickness: 0.80 - 6 mm in single Sheet, 7-40mm Laminated Boards as per IEC 60673 made with polyester glue in between and hot pressed).

Characteristics :

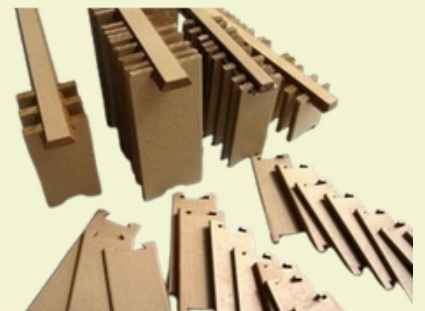
High Density Pre-Compressed Press board is produced with finest quality choice of sulphate wood pulp.

1. Made of 100 % sulphate wood pulp (Characterized by high chemical purity)
2. Natural color
3. High purity and mechanical strength.
4. Low shrinkage and Compressibility.
5. Good compatibility with liquid dielectrics strength
6. **Thickness:**

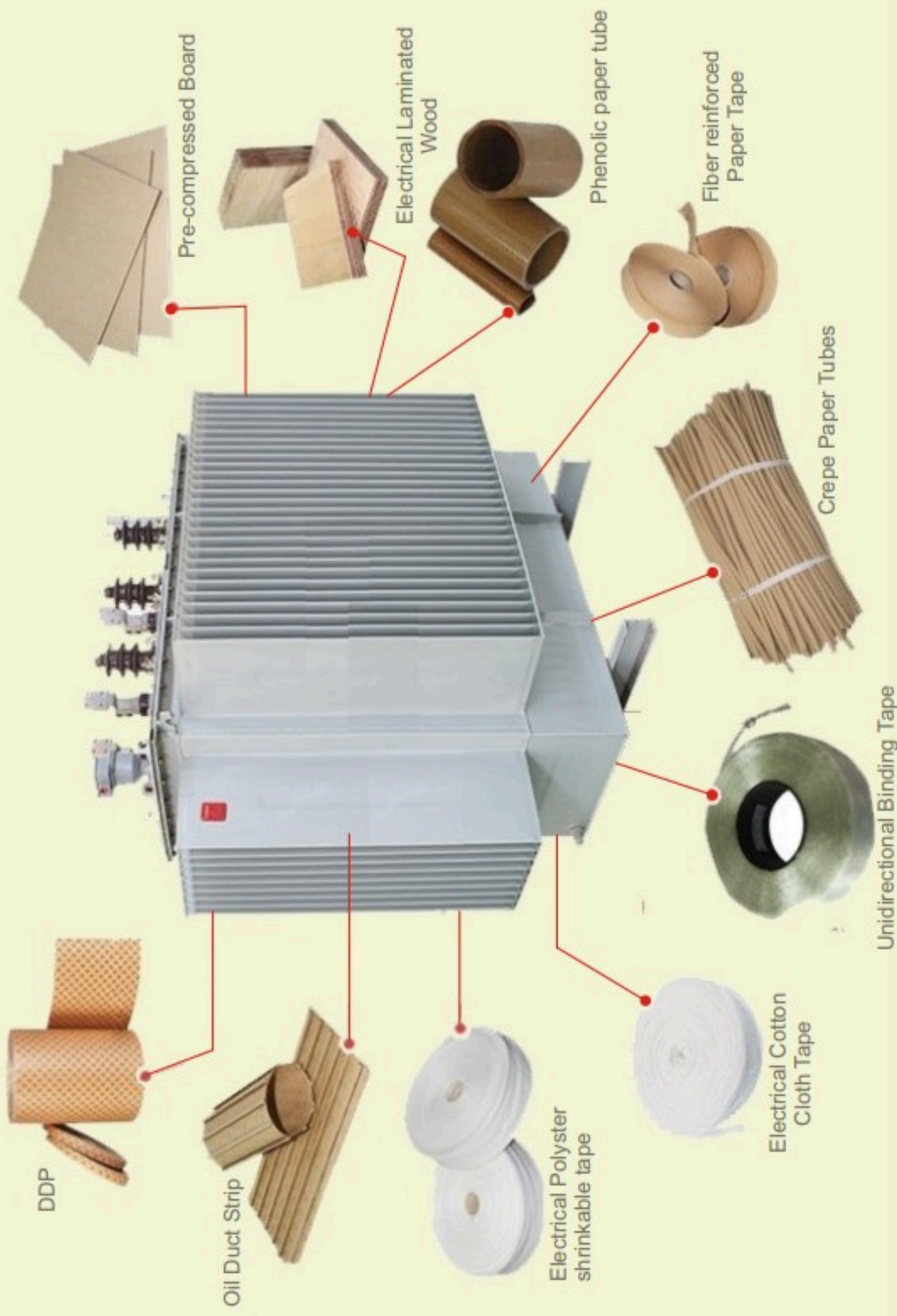
6(a). 0.80 - 6 mm in single Sheet,

6(b). 7-40mm Laminated Boards as per IEC 60673 made with polyester glue in between and hot pressed.

Property		UNIT	PCB 3.0 mm	PCB 1.0 mm
Standard			IEC:60641: TYPE B.3.1A	
Thickness		mm.	3.00 (±5%)	1.00 (±7.5%)
Apparent Density		g/cm <sup>3</sup>	1.10 -1.25	1.00 -1.20
Tensile Strength	MD	Mpa	Min 105	Min 100
	CMD	Mpa	Min 80	Min 75
Elongation	MD	%	Min 2.5	Min 2.5
	CMD	%	Min 3.5	Min 3.5
Compressibility in Air		%	Max 7.5	Max 10
Reversible Compressibility in Air		%	Min 50	Min 45
Shrinkage in Air	MD	%	1.5 Max	0.5 Max
	CMD	%	0.7 Max	0.7 Max
	PD	%	6.0 Max	1.6 6.0 Max
Plybond Resistance		N/30mm	Min 250	Min 250
Moisture Content		%	Max 6.0	Max 6.0
Ash Content		%	Max 0.7	Max 0.5
Conductivity of Aqueous Extract		mS /m	Max 6.0	Max 6.0
PH of Aqueous Extract		-	6 - 9	6 - 9
Oil Absorption		%	Min 9	Min 11
Electrical Strength (in air) BDV		KV/mm	Min 12	Min 12
Electrical Strength (in oil) BDV		KV/mm	Min 35	Min 45



# INSULATING MATERIAL FOR TRANSFORMERS



# Machined, Milled & Moulded Components

## Characteristics:

- 100 % Electrical grade Sulphate Pulp
- Natural –coloured
- Made of Transformers Boards components with Insulation paper
- High Purity and oil absorption
- Insulation class A ( 105°C)
- Good compatibility with liquid dielectrics strength

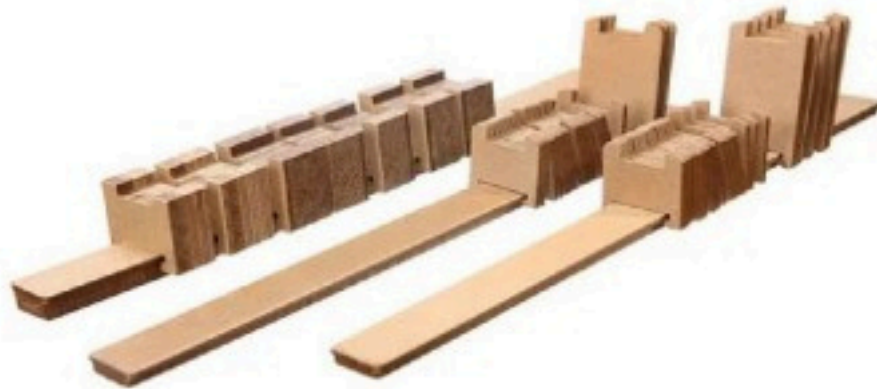
## Variants :

- Rectangular Strips
- Rectangular strips with rounded edges
- Rectangular strips with rounded edges with calibrated with special tolerance
- V – Strips
- Trapezoidal T – Strips
- T – Strips

End Cap & Snouts



T Shaped Runner & Spacers



Couched High Voltage Terminal Leads



End Rings



V Shaped Dovetail Runner & Spacers



Spacer Ring



Cylinders



Duct Spacing



# Connect with Us!

Feel free to reach out to us for further information!



सत्यमेव जयते

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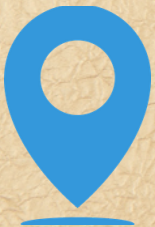


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