

**FW-PFCP202**  
**Phenolic Paper Laminated sheet**

**Ref: ISO-1642 and UNE-53189 Part 1 – Type PF-CP-2; DIN-7735 – Type Hp-2061.5; NEMA-XX**

**1. COMPOSITION AND PRESENTATION**

FW-PFCP202 is a stratified insulator made from kraft paper and phenolic resin.  
 At delivery time the presentation of the sheets is as follows:

- Maximum sizes: 1020 X 2040 mm.
- Color: Brown
- On demand we can deliver strips or finished components.
- Thickness: From 0.20 mm
- Surfaces: Shining

**2. PROPERTIES.**

- High electric strength when submerged in oil
- Excellent mechanical properties for general industrial applications

**3. APPLICATIONS.**

High voltage applications at power frequencies, good electric strength in air under normal humidity.

**4. FLATNESS (test method: see 4.2 of IEC60893-2)**

Thickness d mm	Length of straight edge – mm	
	1000	500
3 < d < 6	10	2.5
6 < d < 8	8	2.0
8 < d	6	1.5

**5. TOLERANCES ON WIDTH OF CUT STRIPS (minus tolerance only)**

Nominal thickness d – mm	Nominal width					
	3<d≤50	50<d≤100	100<d≤160	160<d≤300	300<d≤500	500<d≤600
0.4	0.5	0.5	0.5	0.6	1.0	1.5
0.5	0.5	0.5	0.5	0.6	1.0	1.5
0.6	0.5	0.5	0.5	0.6	1.0	1.5
0.8	0.5	0.5	0.5	0.6	1.0	1.0
1.0	0.5	0.5	0.5	0.6	1.0	1.0
1.2	0.5	0.5	0.5	1.0	1.2	1.2
1.5	0.5	0.5	0.5	1.0	1.2	1.2
2.0	0.5	0.5	0.5	1.0	1.2	1.5
2.5	0.5	1.0	1.0	1.5	2.0	2.5
3.0	0.5	1.0	1.0	1.5	2.0	2.5
4.0	0.5	2.0	2.0	3.0	4.0	5.0
5.0	0.5	2.0	2.0	3.0	4.0	5.0

NOTE: unilateral, all-negative tolerances are normally applied to the width of cut strips, and are given in the above table. Other tolerance may be agreed between purchaser and supplier

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**6. NORMAL THICKNESS (mm)-- (test method: see: 4.1 of IEC 60893-2)**

Normal Thickness	Tolerance	Normal Thickness	Tolerance
0.2; 0.3	±0.05	6.0	±0.37
0.4	±0.07	8.0	±0.47
0.5	±0.08	10	±0.55
0.6	±0.09	12	±0.62
0.8	±0.10	14	±0.69
1.0	±0.12	16	±0.75
1.2	±0.14	20	±0.86
1.6	±0.16	25	±1.00
2.0	±0.19	30	±1.15
2.5	±0.22	35	±1.25
3.0	±0.25	40	±1.35
4.0	±0.30	45	±1.45
5.0	±0.34	50	±1.55

If need un-normal thickness, the tolerance will be confirmed by the seller and the buyer each other before placing the order .

**7. MAIN TECHNICAL CHARACTERISTICS**

ITEMS	CONDITIONS	NORMS	VALUES
Resistance to flexion ( perpendicular )	20 °C	IEC 60893-2-5.1	120 MPa min.
Electric strength (perpendicular )	In transformer oil at 90 °C before shall be preconditioned in air for 96h at 105 °C ±5K	IEC 60893-2-6.1	≤3.0 mm 13KV/mm min.
Breakdown voltage (parallel)	In transformer oil at 90 °C before shall be preconditioned in air for 96h at 105 °C ±5K	IEC 60893-2-6.1	60KV min.
Insulating resistance after impregnated in water	in water	IEC 60893-2-6.3	5.0 X 10 <sup>7</sup> Ω min.
Thermic Class	--	CEI Pub.85	E – 120 °C
Water absorption	24 h.	IEC 60893-2-8.2	2 mm – 220 mg max.
Specific weight	20 °C	IEC 60893-2	1.30 – 1.40 g/cm <sup>3</sup>
Flammability	UL94	IEC 60893-2-7.2	--