

**FW-PFCP201**  
**Phenolic Paper Laminated sheet**

**Ref: ISO-1642 and UNE-53189 Part 1 – Type PF-CP-1; DIN-7735 – Type Hp-2061; NEMA-XP**

**1. COMPOSITION AND PRESENTATION**

**FW-PFCP201** 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.**

- Excellent mechanical properties for general industrial applications than other PFCP types.
- Poor electrical properties under normal humidity.

**3. APPLICATIONS.**

Mechanical applications, also available in hot-punching versions.

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

| Thickness d<br>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<br>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                        |
|---|-----------------------------|-----------------|-------------------------------|
| Flexural strength<br>( perpendicular )              | 20 °C                       | IEC 60893-2-5.1 | ≥1.5mm 135 MPa min.           |
| Electric strength<br>(perpendicular )               | In transformer oil at 90 °C | IEC 60893-2-6.1 | ≤3.0 mm 0.5KV/mm min.         |
| Breakdown voltage<br>(parallel)                     | In transformer oil at 90 °C | IEC 60893-2-6.1 | --                            |
| Insulating resistance<br>after impregnated in water | in water                    | IEC 60893-2-6.3 | --                            |
| Thermic Class                                       | --                          | CEI Pub.85      | E – 120 °C                    |
| Water absorption                                    | 24 h.                       | IEC 60893-2-8.2 | 2 mm – 500 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 | --                            |