

# Round Tubes

## DELLITE PF CP 23 T



- Good mechanical strength
- Very good electrical properties in high voltage applications also at high relative humidity
- Standard type

### Description

Dellite PF CP 23 T consists of phenolic resin with a reinforcement of cellulose paper.

### Specifications

IEC/DIN EN 61212-3-2 PF CP 23  
NEMALI-1 similar XX

### RoHS Directive

Hazardous products listed in the EU-directive 2011/65/EU (RoHS-directive), annex II and amendment 2015/863/EU are not used as ingredients in this material.

### Colour

Brown

### Application

Winding tubes for highly sensitive foils  
Insulating pitch rings in traction transformers  
Tubes for oil insulated transformers

|                                                | Unit               | Value     | Test norm     |
|------------------------------------------------|--------------------|-----------|---------------|
| <b>Mechanical properties</b>                   |                    |           |               |
| Flexural strength                              | MPa                | 150       | ISO 178       |
| E-Modulus                                      | MPa                | 7500      | ISO 178       |
| Compressive strength axial                     | MPa                | 150       | ISO 604       |
| Cohesion between layers                        | MPa                | 165       | EN 61212-2    |
| <b>Electrical properties</b>                   |                    |           |               |
| Insulation resistance after immersion in water | Ohm                | 5.0E+6    | IEC 62631-3-3 |
| Breakdown voltage // 90°C in oil               | kV                 | 25        | IEC 20243-1   |
| Electric strength ⊥ 90°C in oil                | kV/mm              | 7         | IEC 20243-1   |
| <b>Thermal properties</b>                      |                    |           |               |
| Temperature index (TI)                         | °C                 | 120       | IEC 60216     |
| <b>Physical properties</b>                     |                    |           |               |
| Density                                        | g/cm <sup>3</sup>  | 1,2 – 1,3 | ISO 1183      |
| Water absorption (24 h 23°C)                   | mg/cm <sup>2</sup> | 4         | ISO 62        |

### Form of delivery

This type will be supplied in form of tubes and machined parts out of tubes.

Diameter from 3.5 mm to 450 mm.

The length is related to the diameter, approx. 1.000/1500/2000 mm

Other diameters and lengths on request.

Tolerances acc. to DIN EN 61212-3-1

The data supplied are typical values. They are not to be considered specification values. All of the information, suggestions, and recommendations about these properties and uses of the products herein are based on tests and data believed to be accurate; however, the final determination regarding the suitability of any material described herein for the contemplated application, the manner of such use, and whether the use infringes any patents is the sole responsibility of the user. There is no warranty - expressed or implied - including, without limitation, warranties of merchantability or fitness for a particular purpose. Under no circumstances shall we be liable for incidental or consequential loss or damage.

VRI Composites custom fabricates insulation materials to the exact specifications and drawings specified by our customers. We offer our customers the proper product for their specific application. A variety of dimensions and diameter sizes are available. Product colors vary according to material type.