

Tubes made of cotton-fabric are mainly used in machine construction but also in the electronic industry as construction material. Another main field of usage are the hydraulic and the bearing production. Because of the fabric-strength in combination with the phenolic resin you can put much weight on it, and so is used as substitute to metallic materials many areas.

Structure: Tubes made of type 100 or type 102 consists of with phenolic resin impregnated cotton-fabric-sheets. The quality type 100-M has additional MOS as gliding substance. They are parallel winded on winding machines, where the resin and fabric glues together under the influence of heat and pressure. At the following hardening process the layers get indissoluble. The finished tubes then get grinded and mechanically worked as the customer wishes.

Type	DIN ISO EN 61212	DIN 7735
100	PF CC 22	Hgw 2085
100-M	PF CC 22	Hgw 2085
102	PF CC 21	Hgw 2086

Normal sizes and tolerances:

Inside diameter: from \varnothing 5 mm to ca. \varnothing 850 mm, Special sizes on request
Wall thickness: from 1,0 mm, depending on the diameter
Length: from 500 mm to ca. 1500 mm depending on type and diameter
Tolerances: according to EN 61212-3-1 bzw. or after agreement

Technical terms	Unit	Type 100	Type 100-M	Type 102
Compression, axial	MPa	100	100	120
Flexural strength	MPa	80	80	90
Tensile strength	MPa	90	90	90
Flexural Modulus	N/mm ²	6.000	6.000	6.000
Friction against steel	μ	0,25	0,15	0,25
Density	g/cm ³	1,15-1,35	1,2-1,3	1,15-1,35
Water absorption	Mg/cm ³	10	10	5
Temperature resistance	°C	120	120	120
Ball pressure hardness, vertical	N/mm ²	130	130	130
Ball pressure hardness, parallel	N/mm ²	115	120	120
Voltage, vertical	kV/3mm	10	10	10

The above called specifications were made to the best of our knowledge. It is recommended to prove the material in case of doubt for special applications. All values are the minimum requirement!