

# Tubes made of KRÜTEX 100®

Tubes made of cotton-fabric type Krütex 100 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 Krütex 100 consist of with phenolic resin impregnated cotton-fabric. They are parallel wound 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
Krütex 100	PF CC 22	Hgw 2085

## Normal sizes and tolerances:

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

Technical terms	Unit	Krütex 100
Compression, axial	MPa	100
Flexural strenght	MPa	80
Tensile strenght	MPa	90
Flexural Modulus	N/mm <sup>2</sup>	6.000
Friction against steel	$\mu$	0,25
Density	g/cm <sup>3</sup>	1,15-1,35
Linear expansion coefficient	1/C°	20-30*10 <sup>-6</sup>
Water absorbtion	Mg/cm <sup>3</sup>	10
Temperature restistance	°C	120
Ball pressure hardness, vertical	N/mm <sup>2</sup>	130
Ball pressure hardness, parallel	N/mm <sup>2</sup>	115
Voltage, vertical	kV/3mm	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!