

# Physical properties Cevodur WHA - tube

comparable standards:

ISO-description (ISO)  
description (to DIN 7735)

PF CC 21  
Hgw 2086 (tube)

Property	Method of testing	Unit	max./min.	Ref. Value DIN-EN 60893-3-4	Test value Median
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### Mechanical properties

Flexural stress at rupture perpendicular to laminations	ISO 178	MPa	min.	90	
Compressive strength parallel to laminations (axial)	ISO 604	Mpa	min.	110	140.31
Cohesion between layers	ISO 61212-2	Mpa	min.	90	142.41

### Electrical properties

Electric strength at 90°C in oil perpendicular to laminations	IEC 60243-1	kV/mm	min.	1.6	1.85
Breakdown voltage at 90°C in oil parallel to laminations	IEC 60243-1	kV	min.	10	25
Insulation resistance after immersion in water	IEC 60167	Mohm	min.	10	36
Proof tracking index PTI	IEC 60112	PTI			
Comparative tracking index CTI	IEC 60112	CTI	min.		
Tracking resistance	IEC 60112	Klasse	min.		

### Other properties

Thermal endurance	IEC 60216	T.I.		120*	
Density	ISO 1183	g/cm <sup>3</sup>		1.15 – 1.35*	1.240
Water absorption, absolute	ISO 62	mg	max..	5	3.94
Coefficient of friction $\mu$	DIN 5510 T.2				0.272
Linear rate of wear		mg/kg			2.55

Base material: Fine woven cotton cloth  $\geq 30 \times 30$  threads/cm  
Matrix resin: Phenolic

\* Are typical values intended to give only general guidance and are not to be considered as requirement of this standard.

This table is a valuable help in the choice of a material. The data listed here fall within the normal range of products properties, but they should not be used to establish material specification limits nor used alone as the basis of design.