

VOLTIS® Hgw 2083.5 LE

Composition

VOLTIS® Hgw 2083.5 LE is a phenolic woven cotton cloth laminate conforming PF CC 204 acc. IEC 60893, Hgw 2083.5 acc. DIN 7735 and LE acc. NEMA LI 1. For this type a fine weave (≥ 30 threads/cm) is used.

Application

VOLTIS® Hgw 2083.5 LE is especially used in mechanical applications with high demand on electrical insulation, such as switch gears. Due to the construction with fine fabric this material is recommended for small parts.

Technical Data

Properties	Testmethod	Unit	Value
Density	ISO 1183 / A	g/cm ³	approx. 1,4
Flexural strength	ISO 178	MPa	130
Flexural modulus of elasticity	ISO 178	MPa	approx. 7000
Impact strength (Charpy) parallel to laminations	ISO 179/3 C	kJ/m ²	6,0
Tensile strength	ISO 527	MPa	60
Electric strength at 90°C in oil perpendicular to laminations (thickness 3mm)	IEC 243	kV/mm	3,0
Breakdown voltage at 90°C in oil parallel to laminations	IEC 243	kV	20
Permittivity at 50 Hz and 1 MHz	IEC 250	-	approx. 5
Insulation resistance after immersion in water	IEC 167	Ohm	$5 \cdot 10^7$
Comparative tracking index	IEC 112	-	CTI 100
Thermal endurance	IEC 216	T.I.	120
Water absorption (thickness 3 mm)	ISO 62 / 1	mg	100

Availability:	thickness:	0,2 - 200 mm
	thickness tolerances:	up to 29 mm thickness: according IEC 60893
		30 – 40 mm: +2,5/-0 mm
		45 – 60 mm: +3,0/-0 mm
		65 – 70 mm: +3,5/-0 mm
		75 – 80 mm: +4,0/-0 mm
		90 – 150 mm: +5,0/-0 mm
		160 - 200 mm: +7,0/-0 mm

sheet size:

thickness	standard size	on request	size tolerances
0,2 - 40 mm	2150 x 1250 mm	1450 x 950 mm 2140 x 1450 mm	+30/-10 mm
	2800 x 1240 mm	-	+20/-0 mm
41 - 100 mm	2150 x 1250 mm 1450 x 950 mm	-	±20 mm
101 - 200 mm	1450 x 950 mm	-	

Cuttings are available on request.