

## **VOLTIS® HP P 1015D / 2062.8**

### Composition

VOLTIS® HP P 1015D / 2062.8 is a phenolic paper laminate conforming PFCP 206 acc. to IEC 60893 and Hp 2062.8 acc. DIN 7735, but shows higher thermal properties.

### Application

HP P 1015D / 2062.8 has exceptionally high temperature and moisture resistance and good punching characteristics at elevated temperatures. The extremely low water absorption of the material together with the outstanding electrical insulating properties makes VOLTIS® HP P 1015D / 2062.8 an ideal material for use in the field of telecommunications, signaling equipment and high frequency units and also the potentiometer industry.

It is also recommended for use in components operating in extreme climatic conditions as the excellent insulating properties of the material are not affected by moisture or variations in temperature.

The material displays good property retention even after short term exposure to high temperatures. For example VOLTIS® HP P 1015D / 2062.8 will exhibit good punching properties after 1 hour at 200°C, but the smooth surface becomes marginally rougher.

### Availability

Thickness: 0,2 - 2,5 mm, tolerances according IEC 60893

Colour: dark brown

Sheet size: 1070 x 1070 mm

2170 x 1070 mm

sheet size tolerance +10 / - 30 mm

Strips and punched parts available on request.

## Technical Data

Properties	Testmethod	Unit	Value
Density	ISO 1183 / A	g/cm <sup>3</sup>	1.36
Flexural strength	ISO 178	MPa	120
Flexural modulus of elasticity	ISO 178	MPa	9000
Tensile strength	ISO 527	MPa	110
Compressive strength perpendicular to laminations	ISO 604	MPa	250
Electric strength at 90°C in oil perpendicular to laminations (thickness 1,5 mm)	IEC 243	kV/mm	10
Breakdown voltage at 90°C in oil parallel to laminations	IEC 243	kV	25
Permittivity at 1 MHz	IEC 250	-	< 5.5
Dissipation factor at 1 MHz	IEC 250	-	< 0.05
Insulation resistance after immersion in water	IEC 167	Ohm	5 x 10 <sup>10</sup>
Comparative tracking index	IEC 112	-	CTI 100
Thermal endurance	IEC 216	T.I.	120
Water absorption (thickness 1,5 mm)	ISO 62 / 1	mg	approx. 40

Special test for potentiometer use (Roughness of the surface (Rz)): as supplied: 1.5 – 2.5 µm  
after 1h / 200°C: 3 - 5 µm

Temperature resistance: No delamination after 1h at 200°C

Solvent resistance: No change after treatment with: acetone, alcohols and glycols, benzines and ketons.

Adhesion of inks: Good adhesion of varnishes and printing inks, based on epoxy or urethane resins.

## Processing

We recommend that HP P 1015D / 2062.8 is cut with hard metal saws and punched in thickness up to 2 mm after pre-heating to 120°C.