

## ISOVAL® A

ISOVAL® A corresponds to the types according to the following international standards:

IEC 60893	EP GC 201
DIN 7735	Hgw 2372
NEMA LI 1	G10
BS 3953	EP 3

### Composition

ISOVAL® A is prepared from glasscloth impregnated with the standard version of the ISOVAL® epoxy system. Laminates exhibit high mechanical strength with good dynamic properties up to 120°C, very good chemical resistance as well as excellent thermal endurance properties up to 155°C. The fine glass fabric combined with a special epoxy resin gives a very smooth surface and enables finest drillings to be done.

### Application

ISOVAL® A is used where very fine drillings together with high dimension stability are required, e.g. for the production of adapter sheets for test equipments for the testing of printed circuitboards.

### Machining recommendation

Due to the strength and hardness of the laminate and also the high glass content the tools used can be subject to a great degree of abrasion. We therefore advise that only diamond carbide tipped tools and high speed machinery are used.

### Availability

Thickness:	0,3 - 10 mm
Tolerances:	acc. IEC 60893
Sheet size:	1300 +30/-0 mm x 1065 ±10 mm
Colour:	slightly green

Machined parts and cuttings are available on request.

## Technical Data

Values in the table are mean values of our production. Values according to the standards are guaranteed.

Properties	Testmethod	Unit	Value
Density	ISO 1183 / A	g/cm <sup>3</sup>	approx. 2,0
Flexural strength at 23°C / 100°C / 120 °C	ISO 178	MPa	450 / 350 / 200
Flexural modulus of elasticity	ISO 178	MPa	approx. 22000
Impact strength (Charpy) parallel to laminations	ISO 179/3 C	kJ/m <sup>2</sup>	33
Tensile strength	ISO 527	MPa	280
Compressive strength perpendicular to laminations	ISO 604	MPa	500
Insulation resistance after immersion in water	IEC 167	Ohm	10 <sup>12</sup>
Electric strength at 90°C in oil perpendicular to laminations (thickness 3mm)	IEC 243	kV/mm	13
Breakdown voltage at 90°C in oil parallel to laminations	IEC 243	kV	40
Permittivity at 50 Hz and 1 MHz	IEC 250	-	5,5
Dissipation factor at 50 Hz and 1 MHz	IEC 250	-	0,04
Comparative tracking index	IEC 112	-	CTI 180
Thermal endurance	IEC 216	T.I.	155
Water absorption (thickness 10 mm)	ISO 62 / 1	mg	20
Thermal conductivity	DIN 52612	W/mK	0,3
Linear coefficient of expansion	VDE 0304/2	1/K	1,3.10 <sup>-5</sup>