

## TECHNICAL DATA

### ELEPHANTIDE® GRADE K - Multi-ply Electrical Presspaper

#### DESCRIPTION

Elephantide® Grade K is produced from 100% electrical grade kraft wood pulp. This grade is referred to in many countries as 'Presspahn' and is available in a natural buff colour, but can be dyed to achieve any shade. The production techniques and quality in all cases are identical, except dyed material contains an innocuous aniline dye.

#### MANUFACTURING PROCESS

Grade K is manufactured on a multi-vat cylinder machine, which enables a continuous web of processed fibres to be built-up in homogenous layers on successive cylinders. This construction provides maximum electrical and mechanical strength.

#### APPLICATIONS

Grade K is most frequently used in oil immersed transformers and capacitors. Due to its purity of finish, it can also be used in monoisopropylbiphenyl (mipb's) and silicone based fluid impregnants.

Grade K is also widely used in the insulation of fhp motors either unsupported, or in combination with polyester film, providing a Class E (130°C) thermal rating. (See technical data sheet entitled 'HYPLY K').

The excellent physical, electrical and mechanical properties of this grade make it ideally suited for punching, creasing and folding into components used in an infinite variety of applications.

#### PROPERTIES

Physical Properties	Unit	Values
Apparent density	g/cm <sup>3</sup>	1.05 - 1.15
Tensile strength - MD	N/mm <sup>2</sup>	80 - 120
Tensile strength - CMD	N/mm <sup>2</sup>	40 - 60
Conductivity	mS/m	2.0 - 4.0
pH of aqueous extract	pH	7.0 - 8.5
Ash content	%	0.20 - 0.50
Standards		BS EN 60641 Part 4.1A JIS C 2305 PB-2
Colour		Buff

Electrical Strength	Unit	In Air	In Oil
0.10mm ± 10%	kV/mm	11 - 15	98 - 101
0.127mm ± 10%	kV/mm	11 - 16	75 - 86
0.20mm ± 10%	kV/mm	11 - 16	72 - 88
0.25mm ± 10%	kV/mm	10 - 14	65 - 79
0.30mm ± 10%	kV/mm	10 - 13	68 - 72
0.40mm ± 10%	kV/mm	10 - 11	58 - 69
0.45mm ± 10%	kV/mm	9 - 11	56 - 62
0.50mm ± 10%	kV/mm	9 - 10	57 - 60
0.60mm* ± 10%	kV/mm	/	/
0.70mm* ± 10%	kV/mm	/	/
0.80mm* ± 10%	kV/mm	/	/
1.00mm* ± 10%	kV/mm	/	/
1.50mm* ± 10%	kV/mm	/	/

\*Combined laminate

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