

## Flexible Insulation

### “Hyply” - Elephantide / Polyfilm

#### GENERAL

Elephantide / Polyfilm “Hyply” composites are flexible sheet materials with high mechanical strength produced by bonding polyester film to Elephantide electrical paper using synthetic adhesive. The polyester film enhances the electrical characteristics of the Elephantide and also greatly increases bursting strength. The electric strength is of the order of 12 kV per millimetre.

Elephantide / Polyfilm is rated as a Class E (120°C) insulation.

#### APPLICATIONS

Elephantide / Polyfilm composites find use predominantly as electric motor slot and overhang insulation on Class E rated machines. These composite materials are also used in air and oil cooled transformers and on domestic appliances, as terminal shields, etc.

Elephantide / Polyfilm composites being mechanically strong are able to withstand the rigours of automatic slot liner insertion machines and also the subsequent automatic winding of stators, etc. The composites will punch and ‘crease’ form into finished components without major loss of electric strength.

#### PROPERTIES

Property	Value
Thermal -	Class E (120°C)
Max. Short Term temperature -	150°C
Dielectric strength at 20°C (40mm dia. electrodes) -	12kV per millimetre
Chemical Resistance -	Unaffected by hot or cold water, most dilute acids, brine solutions, common insulating varnishes and solvents
Oil Resistance -	Resistant to transformer oil and lubricating grease

#### CONSTRUCTION

Nominal Overall Thickness (mm)	Type (Grade)	Elephantide (mm)	Polyester Film (mm)
0.19	5+2	0.13	0.050
0.24	7+2	0.18	0.050
0.31	10+2	0.25	0.050
0.36	12+2	0.30	0.050
0.46	16+2	0.40	0.050
0.56	20+2	0.50	0.050