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TECHNICAL DATA

HI-THERM® BC-346/A

Solvent-Based Polyester Baking Varnish Clear

DESCRIPTION

BC-346/A is a specially formulated high temperature polyester varnish, which can be used in a wide variety of applications.

ADVANTAGES

→ UL Certified – File OBOR2.E317427
→ Included in UL Electrical Insulation Systems up to 220°C – File OBJS2.E317429
→ Good flexibility
→ Excellent adhesion
→ High film build
→ Superior wetting properties
→ US Military approval to MIL-V-1137A Grade CB, Type M & MIL-I-24092 Type M, Class 180

APPLICATIONS

BC-346/A is used to impregnate a wide variety of components requiring high temperature resistance, such as:

→ Transformers
→ Random wound coils
→ Generators
→ Stators
→ Armatures & rotors
→ Relays

PHYSICAL PROPERTIES	
Colour	Clear/Amber
Specific gravity @ 25°C	970 ± 20g/L
Viscosity, Ford No4 Cup @ 25°C	46 - 58 seconds
Build, DFT (ASTM D-115)	0.075 - 0.100mm
Solids content	46 - 50%
Corrosive effect on copper	None
Baking time on copper strip @ 150°C (ASTM D-115-55)	30 minutes
Baking time in a 20g test cup @ 150°C	65 minutes
Thinner	PAR M6039 or Dolph's T-200
Shelf life @ 25°C in original closed containers	36 months
Pack sizes	5, 25, 200 Litre
MECHANICAL PROPERTIES	
Bond strength, helical coil @ 25°C (ASTM D-2519)	12.70 Kgs
Bond strength, helical coil @ 155°C (ASTM D-2519)	1.10 Kgs
ELECTRICAL PROPERTIES	
Electric strength, dry (ASTM D-115)	4,000 Volts/0.025mm
Electric strength, 24 hours in water (ASTM D-115)	2,900 Volts/0.025mm
CTI (IEC 60112)	600 Volts
CHEMICAL RESISTANCE	
Water	Excellent
Acid, 10% sulphuric	Excellent
Alkali, 1% sodium hydroxide	Excellent
Salt water	Excellent
Mineral oil (ASTM D-115)	Passed

THERMAL CLASSIFICATION (UL 1446)		
ANSI Wire Type	**Twisted Pair**	**Helical Coil**
MW16	240°C	200°C
MW24	155°C	180°C
MW28	155°C	130°C
MW30	180°C	180°C
MW35	200°C	200°C

APPLICATION

DIP IMPREGNATION

1. Pre-heat unit to 110°C.
2. Cool unit to 25 - 40°C.
3. Dip units into varnish for 15 - 30 minutes (until bubbling stops).
4. Drain for 15 - 30 minutes. (Shorter draining times provide higher film builds).
5. Cure in the oven as recommended.

For vacuum pressure impregnation (VPI) or specific impregnation cycles, please consult us.

CURE SCHEDULE	
1 - 2 hours	165°C
2 - 4 hours	150°C
3 - 5 hours	135°C

Time must be taken after the entire unit reaches cure temperature.

COMPATIBILITY

BC-346/A is compatible with all common types of magnet wire enamel.

MASKING

7776/A Masking Grease or Dolph's MR-737 Red Masking Lacquer are suitable for the masking of all metal surfaces and prevent adhesion of the varnish to components without contamination of the resin or tank.

STABILITY

Experience over many years has proven BC-346/A to be extremely stable in atmospheric dip tanks.

HEALTH & SAFETY

Before use, please refer to Material Safety data Sheets (MSDS).