



# TECHNICAL DATA SHEET

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## HI THERM<sup>®</sup> BC-346-A

### CLEAR BAKING VARNISH

#### PRODUCT DESCRIPTION

BC-346-A is a specially formulated, high temperature varnish which can be used in a wide range of dip and bake applications.

#### FEATURES & BENEFITS

- Excellent flexibility
- Excellent adhesion
- High film build
- Superior wetting properties
- Military approval - Qualified under MIL-I-24092, Grade CB, Class 155
- UL recognized varnish in systems up to 220°

#### TYPICAL APPLICATIONS

- Transformers
- Stators
- Form Wound Coils
- Random Wound Coils
- Armatures
- Relays

#### TYPICAL PROPERTIES

##### Physical

|  |                    |
|--|--------------------|
| <b>Color/Appearance</b>                                    | <b>Clear/Amber</b> |
| <b>Density @ 77°F (25°C), Lbs/gal</b>                      | <b>7.5 - 7.8</b>   |
| <b>Viscosity @ 77°F (25°C), Brookfield Viscometer, cps</b> | <b>150 - 320</b>   |
| <b>Flash Point, °F</b>                                     | <b>54</b>          |
| <b>Film Build, mils/side, ASTM D-115</b>                   | <b>2 - 3</b>       |
| <b>Thinner (solvent)</b>                                   | <b>T-200X</b>      |
| <b>Corrosive Effect on Copper</b>                          | <b>None</b>        |

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**Mechanical**

|  |        |     |
|--|--------|-----|
| Bond Strength, Helical Coil Method, lbs to break | @25°C  | 28  |
|  | @150°C | 2.5 |

**Electrical**

|   |     |       |
|---|-----|-------|
| Dielectric Strength ASTM D115, volts/mi | Dry | 4,000 |
|   | wet | 2,900 |

**Chemical Resistance**

|                              |           |
|------------------------------|-----------|
| Water                        | Excellent |
| Acid (10% Sulfuric Acid)     | Excellent |
| Alkali (1% Sodium Hydroxide) | Excellent |
| Salt Water                   | Excellent |
| Oil, ASTM D-115              | Passed    |

**Thermal Class (UL-1446)**

|              |      |     |
|--------------|------|-----|
| Twisted Pair | MW16 | 240 |
|              | MW24 | 155 |
|              | MW28 | 155 |
|              | MW30 | 180 |
|              | MW35 | 200 |
|              | MW76 | 180 |

**APPLICATION GUIDELINES****Following is a suggested dip and bake cycle.**

- Preheat parts to 250-325°F to remove moisture.  
*Note: If thermoset tapes are used, preset tapes according to tape manufacturer's recommendations.*
- Cool to 130°-140°F
- Dip until bubbling stops (15-30 minutes).
- Drain between 5-20 minutes
- Bake in a preheated oven at recommended time and temperature

**Suggested Bake Cycles\***

- 1-2 hours @ 325°F
- 2-3 hours @ 300°F
- 2-4 hours @ 275°F

\* Times are taken after unit reaches baking temperature

**STORAGE AND SHELF LIFE**

Shelf life is one year from date of shipment from our plant, when stored in closed containers at 70°F or below.

- Store in cool, dry place at 70°F/21°C or below.
- Protect from direct sunlight and sources of heat
- Keep away from heat, sparks and open flame.

**SAFETY AND ENVIRONMENT**

Avoid contact with skin and eyes. See Material Safety Data Sheet.

|                        |
|------------------------|
| AUTHORIZED DISTRIBUTOR |
|------------------------|