



# TECHNICAL DATA SHEET

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## **HI-THERM<sup>®</sup> BB-348 BLACK BAKING VARNISH**

### **PRODUCT DESCRIPTION**

HI-THERM BB-348 is a black solvent varnish. This varnish is specially formulated for a cosmetically pleasing black finish for transformers and coils.

### **FEATURES & BENEFITS**

- Good bond strength at elevated temperatures
- Excellent coverage on most substrates.
- UL Recognized
- Excellent Flexibility and adhesion

### **TYPICAL APPLICATIONS**

- Transformers
- Stators
- Generators
- Form Wound Coils

### **TYPICAL PROPERTIES**

#### **Physical**

<b>Color/Appearance</b>	<b>Black</b>
<b>Weight per Gallon @ 77°F (25°C), ASTM D 1475, lbs/gal</b>	<b>7.5 – 7.9</b>
<b>Viscosity, Brookfield @ 77°F (25°C), ASTM D 2196, cps</b>	<b>135 - 300</b>
<b>Curing Cycle @300°F (min.)</b>	<b>1 – 2 hours</b>
<b>Thinner (solvent)</b>	<b>T-200X</b>
<b>Film Build, ASTM D 115, mils/side,</b>	<b>1.0 – 3.0</b>
<b>Flash Point, °F</b>	<b>45</b>

#### **Mechanical**

<b>Helical Coil Bond Strength, ASTM D 2519, lbs</b>	<b>@ 25°C</b>	<b>28</b>
	<b>@ 150°C</b>	<b>2.5</b>

#### **Electrical**

<b>Dielectric Strength, ASTM D 115, volts/mil</b>	<b>Dry</b>	<b>4,000</b>
	<b>Wet</b>	<b>2,900</b>

#### **Chemical Resistance**

<b>Water, ASTM D 5638</b>	<b>Excellent</b>
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Water, ASTM D 5638	Excellent
Acid (10% Sulfuric Acid), ASTM D 5638	Excellent
Alkali (1% Sodium Hydroxide), ASTM D 5638	Excellent
Salt Water, ASTM D 5638	Excellent
Oil, ASTM D 115	Passed
Corrosive Effect on Copper	None

### Thermal Class (UL-1446)

Twisted Pair	Magnet Wire	Temp
	MW16	240
	MW35	200
	MW30	180
	MW76	180
	MW24	155
	MW28	155

## APPLICATION GUIDELINES

### Following is a suggested dip and bake cycle.

1. Preheat parts to 250-325°F to remove moisture.

*Note: If thermoset tapes are used, preset tapes according to tape manufacturer's recommendations.*

2. Cool to 130°-140°F

3. Dip until bubbling stops (15-30 minutes).

4. Drain between 5-20 minutes

5. 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

The shelf life of BB-348 is 12 months from the date of shipment from our plant, when stored in closed containers at 70°F/21°C or below.

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

AUTHORIZED DISTRIBUTOR

## SAFETY AND ENVIRONMENT

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