

# 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.

### **TYPICAL APPLICATIONS**

- Transformers
- Stators

# TYPICAL PROPERTIES

- UL Recognized
- Excellent Flexibility and adhesion
- Generators
- Form Wound Coils

#### Physical

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

#### Mechanical

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

#### Electrical

Dielectric Strength, ASTM D 115, volts/mil	Dry	4,000
Dielectric Strength, ASTM D 115, Voltsmin	Wet	2,900

#### **Chemical Resistance**

Water, ASTM D 5638	Excellent
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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 I30°-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

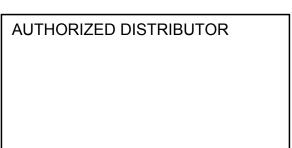
## STORAGE AND SHELF LIFE

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.

## SAFETY AND ENVIRONMENT

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



#### 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