



# TECHNICAL DATA SHEET

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## HI-THERM<sup>®</sup> BC-359

### CLEAR BAKING VARNISH

#### PRODUCT DESCRIPTION

BC-359 is a unique product that must be thinned before use. It offers energy savings and fast throughput.

#### FEATURES & BENEFITS

<ul style="list-style-type: none"> <li>• Fast curing</li> <li>• Low temperature cure (from 230°F)</li> <li>• Superior moisture resistance – no loss of dielectric strength after 24 hours humidity conditioning</li> <li>• Well suited for conveyorized systems</li> </ul>	<ul style="list-style-type: none"> <li>• Excellent abrasion and chemical resistance</li> <li>• Solderable</li> <li>• UL recognized systems to 180°C</li> <li>• Prevents lead wire embrittlement</li> </ul>
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#### TYPICAL APPLICATIONS

<ul style="list-style-type: none"> <li>• Coils</li> <li>• Chokes</li> <li>• Relays</li> <li>• Motors</li> </ul>	<ul style="list-style-type: none"> <li>• Printed Circuit Boards</li> <li>• Transformers</li> <li>• Armatures</li> <li>• Generators</li> </ul>	<ul style="list-style-type: none"> <li>• Random Wound Devices</li> <li>• Form Wound Coils</li> <li>• Stators</li> <li>• Solenoids</li> </ul>
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#### TYPICAL PROPERTIES

##### Physical

	As Shipped	Thinned 25% (by volume) w/T-100
Color/Appearance	Clear/Amber	Clear/Amber
Density @ 77°F (25°C), Lbs/gal	7.2 – 8.2	7.2 – 8.2
Viscosity @ 77°F (25°C) Brookfield Viscometer cps	180 - 340	20 - 80
Flash point, °F	60°F (15°C)	60°F (15°C)
Film Build, mils/side, ASTM D-115	1.5 – 2.0 mils	0.25 - 1 mils
Thinner	T-100	T-100
Corrosive Effect on Copper	None	None
VOC, Method 24, (Lbs/gal average)	4.4	--

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**Mechanical Properties**

Bond Strength, Helical Coil Method, lbs to break	@25°C	28
	@150°C	3.5

**Electrical**

Dielectric Strength, ASTM D-115, volts/mil	Dry	3,000
	Wet	3,000

**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	220
	MW24	155
	MW28	130
	MW35	180
	MW76	180

**APPLICATION GUIDELINES**

<p><b>Following is a suggested dip and bake cycle.</b></p> <ol style="list-style-type: none"> <li>Preheat parts to 250-325°F to remove moisture.</li> </ol> <p><i>Note: If thermoset tapes are used, preset tapes according to tape manufacturer's recommendations.</i></p> <ol style="list-style-type: none"> <li>Cool to 130°-140°F</li> <li>Dip until bubbling stops (15-30 minutes).</li> <li>Drain between 5-20 minutes</li> <li>Bake in a preheated oven at recommended time and temperature</li> </ol>	<p><b>Suggested Bake Cycles*</b></p> <p>1-2 hours @ 325°F</p> <p>2-3 hours @ 275°F</p> <p>3-4 hours @ 250°F</p> <p>6-9 hours @ 230°F</p> <p>* Times are taken after unit reaches baking temperature</p>
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**THINNING AND VARNISH MAINTENANCE**

BC-359 must be thinned to obtain proper cure. A 20% - 25% thinning is recommended as a starting point. Actual thinning is determined by the build required.

BC-359 may be thinned with either T-200X or T-100. For *Rule 66* requirements, T-100 must be used.

**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. Shelf Life (Spray) - 18 months @ 70°F (21°C) or cooler.

- 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

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