TECHNICAL DATA SHEET

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DOLPHON® CC-1105-0PT

ONE-PART SOLVENTLESS TRICKLE RESIN

PRODUCT DESCRIPTION

CC-1105-OPT is a 100% reactive, pre-catalyzed, low odor polyester resin formulated specifically for the trickle impregnation of electric motor armatures and stators. It is also suitable for use by immersion techniques.

FEATURES & BENEFITS

- One-Part System (pre-catalzyed, requires no catalyst, no mixing errors)
- High bond strength at elevated temperatures
- Free of styrene or other monomers of strong odor
- Fast cure at low temperatures
- Included in UL-Approved Systems up to 220℃
- Does not boil under vacuum
- High flash point

TYPICAL APPLICATIONS

- Armatures
- Automotive Alternators
- Appliance Motors
- Power Tool Motors
- Stators
- Dip or VPI Applications
- Static and Rotating Windings

TYPICAL PROPERTIES

Physical

Color/Appearance	**Light-Dark Amber**
Density @ 77℉ (25℃), Lbs/gal	**9.6 – 10.0**
Viscosity, Brookfield Model RVT #1 Spindle @ 77℉ (25°C), cps 10 RPM	**400 – 800**
Flash Point, ºF,	**> 200**
Gel Time @ 212 ºF (100°C), minutes	**14 - 18**
Film build, mils/side	**0.3 – 0.5**
VOC, ASTM D6053, lbs/gal	**1.0**
Vapor Pressure @ 70℉ (20℃), mmHg	**<0.01**

MECHANICAL

Bond Strength (Helical Coil Method), lbs to break	**@ 77℉ @ 300℉**	**30 10**
Thermal Conductivity, BTU-in./hr-ft^2-°F		**0.53**

Electrical

Dielectric Strength, 0.3 mil thickness, volts/mil	**5,300**
Dielectric Constant	**3.14**
Volume Resistivity @ 77℉ (25℃) ohm/cm	**7 x 10^{16}**

THERMAL Class (UL1446)

Twisted Pair	**MW16 MW28 MW35**	**220 130 200**
Helical Coil	**MW16 MW28 MW35**	**220 130 200**

APPLICATION GUIDELINES

Trickle Impregnation:

NOTE: Continuous rotation of the component during application and cure will ensure maximum build and retention.

1. Preheat component to 250-285℉ (120°- 140℃) dep ending on slot length.
2. Trickle resin onto windings for 10 - 15 seconds.
3. Heat component to 300℉ (150℃) lamination tempe rature.
4. Cure at 300℉ (150℃) for 10 - 20 minutes.

Cure Cycles: The cure cycle for CC-1105-OPT will vary with the size and weight of part and type of equipment used. On reaching the temperature indicated, the following times may be used as a general guide:

Resistance Heating	5-10 Minutes @ 285°F (140°C)
Oven Heating	10-20 Minutes @ 300°F (150°C) 30 minutes @ 285°F (140°C) 1 Hour @ 265°F (130°C)

Following is a suggested dip and bake cycle.

1. Preheat parts to 250-325℉ to remove moisture.

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

2. Cool to 80 - 90°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*

2 hours @ 130-135℃ (266-275℉)
4 hours @ 120℃ (248℉)

* *Times are taken after unit reaches baking temperature*

EQUIPMENT RECOMMENDATIONS AND PRECAUTIONS

CC-1105OPT may react with copper, copper alloys and natural rubber. Therefore, do not use these materials in the tank or recirculating system. Tanks should be constructed of black iron or stainless steel and flexible fittings should be made of synthetic rubber or plastic.

Bare copper conductor: *When used with bare copper, a green discoloration may form. This is more likely to occur when the insulation system has a high moisture content. Windings that include bare copper require longer bake time and/or higher oven temperature. Please contact the DOLPH Company for information on adjusting resin application and cure cycles.*

STORAGE AND SHELF LIFE

Shelf life is 3 months from date of shipment from our plant, when stored in closed containers at 70℉ or below.

1. Store in cool, dry place at 70℉/21℃ or below.
2. Protect from direct sunlight and sources of heat

SAFETY ENVIRONMENT

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

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