TECHNICAL DATA SHEET

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DOLPHON® CC-1305

HIGH FLASH, SOLVENTLESS POLYESTER RESIN

PRODUCT DESCRIPTION

CC-1305 is a versatile, flexible, high build solventless polyester resin. It is suitable for a wide range of impregnation applications.

FEATURES & BENEFITS

- High flash point
- Solventless
- Versatile
- Flexible
- Included in UL-Approved Systems up to 220º C
- 100% reactive
- High bond strength
- Moisture resistant
- Excellent tank stability
- Low odor

TYPICAL APPLICATIONS

- Solenoids
- Transformers
- Rotors
- Armatures
- Inductors
- Form wound coils
- Ferro Resonant Transformers
- Stators
- Motors
- Chokes
- Brake coils
- DC traction coils

TYPICAL PROPERTIES

Physical

Color/Appearance	**Clear/Amber**
Density @ 77°F (25°C), Lbs/gal	**9.2 - 9.6**
Viscosity, Brookfield, @ 77º F, cps	**1,000 - 2,500**
Film build, mils/side	**0.5 - 1.0**
Flash Point, ºF,	**> 200**
Gel Time @ 212 ºF, minutes	**110 - 150**
Gel Time @ 230 ºF, minutes	**40 - 55**
VOC'S, EPA Method #24, #/gal	**1.0**

Mechanical

Bond Strength, Helical Coil Method	**@ 25°C (pounds to break)**	**40**
	@ 150°C (pounds to break)	**12**

Electrical

Dielectric Strength, ASTM D-115 (volts/mil)	**3,500**
Dielectric Constant, ASTM D-150, 1 Khz, 50% RH, 23°C	**3.9**
Volume Resistivity, ASTM D-257, ohm-cm, 50% RH, 23°C	**5.0×10^{15}**
Surface Resistivity, ASTM D-257, ohms, 50%, 23°C	**2.5×10^{14}**
Dissipation Factor @ 1 kHz, 50% RH, 23º C, ASTM D-150	**0.01**
Thermal conductivity ASTM C1113, BTU-in./hr-ft^2-°F	**2.75**

Thermal Class (UL-1446)

Twisted Pairs,	**MW16**	**220**
	MW28	**130**
	MW76	**180**
Helical Coil,	**MW76**	**180**

APPLICATION AND CURE

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

Suggested Bake Cycles*

1-2 hours @ 325°F
2-3 hours @ 300°F

* *Times are taken after unit reaches baking temperature*

Vacuum Pressure Impregnation (VPI)

The following cycle has been established as a starting point for using CC-1305 in VPI systems. Adjustments may be required to obtain desired results with your specific application

1. Place preheated unit in the vacuum chamber and apply dry vacuum at approximately 1-4 mm Hg for 30-60 minutes. For form wound coils use 20 minutes per half lap of tape.
2. Transfer the resin to the chamber still under vacuum. It is best to have the resin flow up around the unit from the bottom of the chamber. Allow the resin to cover the unit by a depth of at least 1 inch.
3. Maintain vacuum for 20-60 minutes.
4. Release vacuum and apply pressure of 80- 90 psi for 30-120 minutes.
5. For form wound coils, apply pressure for 15 minutes per half lap of tape. Release pressure.
6. Remove the unit slowly from the resin. A rate of 4 inches per minute is recommended.
7. Better drain will be obtained if the unit is suspended at an angle rather than level.
8. Bake at suggested bake cycles listed above

FLEXIBLE COIL APPLICATIONS: For flexible form wound coil applications, cure part 40-60 minutes at 235º F, to set the resin. After coils are installed, the completed equipment should be given a full impregnation and cure cycle to seal the unit, and develop full bond strength.

EQUIPMENT RECOMMENDATIONS AND PRECAUTIONS

Dolphon CC-1305 will 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.

STORAGE AND SHELF LIFE

The shelf life of the resin is 12 months when stored at room temperature 70°F or lower.

ENVIRONMENTAL SAFETY

See Material Safety Data Sheet

Cc1305ds/805

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