TECHNICAL DATA SHEET

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DOLPHON® CC-1115

SOLVENTLESS VPI EPOXY RESIN

PRODUCT DESCRIPTION

CC-1115 is a unique Thixotropic epoxy resin for vacuum pressure impregnation of random wound motors and form wound coils.

FEATURES & BENEFITS

- Excellent moisture resistance
- Pre-catalyzed
- Excellent chemical resistance
- High flash point
- Good thermal shock properties
- Exceptional tank stability
- Improves impregnation and reduces processing time without affecting resin stability
- Thixotropic
- Minimum drain during cure
- Excellent appearance

TYPICAL APPLICATIONS

- Motors
- Stators
- Random wound coils
- Form wound coils
- DC Armatures
- Rotating fields

TYPICAL PROPERTIES

Physical

Color/Appearance		**Translucent**
Weight per Gallon @ 77°F (25°C), ASTM D 1475, lbs/gal		**9.0 – 9.8**
Viscosity, Brookfield @ 77°F (25°C), ASTM D 1638, cps	**1 rpm** **10 rpm**	**11,000 – 17,000** **4,000 – 6,000**
Thixotropic Index		**2.5 – 3.0**
Film Build, ASTM D 115, mils/side		**3 – 5**
Gel Time @ 285°F (140°C), ASTM D 3056, minutes		**15 – 23**
Flash Point, °F		**>200**

Mechanical

Helical Coil Bond Strength, ASTM D 2519, lbs Overnight cure at 325°F	**@ 25°C** **@ 150°C**	**50** **7**
Hardness, Shore D, ASTM D 2240		**80 – 90**

Electrical

Dielectric Strength, ASTM D 115, volts/mil 7 mil film on 5mil copper	**2,200**
Dielectric Constant @ 25°C, 100 Hz, ASTM D 150	**3.24**
Dissipation Factor @ 25°C, 100 Hz, ASTM D 150	**0.023**
Insulation Resistance , ASTM D 257 @ 25°C, mega ohms	**5×10^{6}**
Surface Resistivity, ASTM D 257, ohms	**3.7×10^{14}**
Volume Resistivity, ASTM D 257 ohm-cm	**2.74×10^{16}**

Thermal Class (UL-1446)

Twisted Pair	Magnet Wire	Temp
	MW16	**200**
	MW35	**180**
	MW28	**130**

APPLICATION GUIDELINES

Vacuum Pressure Impregnation (VPI)

The following cycle has been established as a starting point for using CC-1115 in VPI systems. Adjustments may be required to obtain desired results with your specific application. Please contact the JOHN C. DOLPH Company for more information about processing.

1. Preheat the unit to a temperature of 250° F - 325° F, cool 130° F to 150° F. The time required will depend on the size of the unit.
2. Place the 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.
3. During the dry vacuum cycle, mix the resin in the reservoir for 15 minutes. This procedure will reduce the viscosity of the resin allowing for maximum impregnation.
4. 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.
5. Maintain vacuum for 20-60 minutes. Larger units, and units with more tape layers will require a longer time under vacuum.
6. Release vacuum and apply pressure of 80 - 90 psi for 30-120 minutes.
7. For form wound coils, apply pressure for 15 minutes per half lap of tape. Release pressure.
8. Remove the unit slowly from the resin. A rate of 4 inches per minute is recommended.
9. Better drain will be obtained if the unit is suspended at an angle rather than level.
10. Bake at suggested bake cycles listed below.

Cure Time and Temperature *

7 - 9 hours @ 300°F or overnight

3 - 5 hours @ 325°F or overnight (for maximum chemical resistance)

**Time required after unit reaches temperature*

STORAGE AND SHELF LIFE

Shelf life is 12 months from 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

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