



TECHNICAL DATA SHEET

JOHN C. DOLPH COMPANY

P.O. Box 267
320 New Road
Monmouth Junction, NJ
08852

Ph:(732) 329-2333
Fax:(732) 329-1143
info@dolphs.com
www.dolphs.com

DOLPHON[®] CC-1118LV

SOLVENTLESS VPI EPOXY RESIN

PRODUCT DESCRIPTION

CC-1118LV is a unique Thixotropic, low viscosity epoxy resin for vacuum pressure impregnation.

FEATURES & BENEFITS

- Excellent moisture resistance
- Excellent electrical properties
- Superior corona resistance
- Pre-catalyzed
- Impregnates and encapsulates in one cycle
- Exceptional tank stability
- Thixotropic
- Solventless

TYPICAL APPLICATIONS

- Motors
- DC Armatures
- Random wound coils
- Form wound coils
- Stators
- Pulp and paper mills
- High voltage
- Rotating fields

TYPICAL PROPERTIES

Physical

Color/Appearance		Translucent
Density @ 77°F (25°C), Lbs/gal		9.0 – 9.5
Viscosity, Brookfield, RVT#1, Spindle 2 @25°C cps	1 rpm 10 rpm	6,000-9,000 2,000-4,000
Flash Point, °F		>200°F
Gel Time @ 285°F (140.5°C), minutes		15 - 20
Film Build, mils per side		4.0
Hardness, Shore D, ASTM D676, @ 25°C,		85

Mechanical

Bond Strength, Helical Coil Method, lbs to break	25°C 150°	60 8
Tensile Strength, ASTM D638, psi		10,100
Tensile Modulus, ASTM D638, psi		4.72 x 10⁴
Flexural Strength, ASTM D790, psi		11,200
Flexural Modulus, ASTM D790, psi		0.68
Elongation at Break, ASTM D790, %		2.1
Coefficient of Expansion, ASTM D696, cm/cm/°C		76 x 10⁻⁶

All statements, technical information and recommendations related to Sellers' products are based on information believed to be reliable, but the accuracy or completeness thereof is not guaranteed. Before using the product, the user should determine the suitability of the product for its intended use. The user assumes all risks and liabilities whatsoever in connection with such use. The statements contained herein are made in lieu of all warranties, expressed or implied. Seller shall not be liable for any injury, loss or damage, direct or consequential, arising out of the use or inability to use its products. The sole liability of John C. Dolph Co., Inc. for any claims arising out of the manufacture, use or sale of its products shall be for the buyer's purchase price.

Mechanical

Shrinkage, Bar Test, cm/cm	0.01
Impact Strength, Izod. ASTM D256	0.68
Moisture Vapor Transmission, ASTM E-96, (gm/sq ft, 24 hours)	0.01
Thermal Conductivity, ASTM C 3111, BTU/hr/ft ² /°F/in	2.9

Electrical

Dielectric Strength, ASTM D115, volts/mil, (sample thickness 7 mils)	2,400
Insulation Resistance, ASTM D257 @ 25°C, mega ohms	5 x 10 ⁶
Surface Resistivity, 500V, ohms	1.5 x 10 ¹⁴

		25°C	55°C	90°C	105°C	130°C	155°C
Dielectric Constant, ASTM D150	60Hz	2.82	2.98	3.00	3.71	3.87	4.73
	120Hz	2.81	2.90	3.00	3.69	3.95	4.91
Dissipation Factor, ASTM D150	60Hz	.0031	.0053	.0079	.063	.091	.117
	120Hz	.0031	.0051	.0070	.071	.093	.118
Volume Resistivity, ohm-cm		1.3 x 10 ¹⁶	--	6.8 x 10 ¹⁴	5.1 x 10 ¹²	--	--

APPLICATION GUIDELINES

The following cycle is recommended as a starting point for vacuum pressure impregnation. Adjustments may be required to obtain desired results. 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 for 30 minutes at approximately 4 mm Hg pressure.
- 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) Immediately after mixing, transfer the resin to the vacuum chamber, allowing it to flow up from the bottom of the chamber to cover the unit by a depth of at least 1". Maintain vacuum for 20-60 minutes. Larger units, and units with more tape layers will require a longer time under vacuum.
- 5) Release vacuum, apply pressure of 90 psi for 30 minutes and release pressure. (Form wound coils require 15 minutes per layer of tape).
- 6) Remove the unit slowly from the resin (a rate of 4" per minute is recommended).
- 7) Suspend the unit at an angle over the tank for 30 minutes for

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 one year from date of shipment from our plant, when stored in closed containers at 70°F or below.

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

SAFETY ENVIRONMENT

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

AUTHORIZED DISTRIBUTOR