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 New Information
 Mailed to: E, D, C/2169/DB

B-527 Clear Baking Hermetic Varnish

General Description

Westinghouse B-527 is a modified epoxy insulating varnish developed specifically for the treatment of motor stator windings for hermetic use. Exhaustive tests have indicated superior properties (see data) in the way of Freon 22 resistance, helical coil bond strength, tank stability, hydrolytic stability, etc.

In addition to the treatment of hermetic motor windings, B-527 is recommended for the coating and bonding of lamination stacks in lieu of riveting, as well as a final dip over conventional alkyd or polyester varnishes where a high degree of chemical resistance is required.

Descriptive Information

Color Amber
 Non-Volatiles 35±1%
 Specific Gravity 0.975±0.20
 Viscosity (Demmler #1 @ 25°C.) 20 to 50 Seconds
 Recommended Thinner 2:1 Xylol/ Cellosolve
 Flash Point 81°F.
 ASTM Drying Time @ 135°C. 5 Minutes
 Corrosion Effect on Copper . None
 Gel Time @ 200°C. 15 to 25 Minutes
 Dielectric Strength - Dry ... 3500 Volts/Mil
 Dielectric Strength - Wet ... 2450 Volts/Mil
 Transformer Oil (24 Hr. Immersion) 2440 Volts/Mil
 Recommended Curing (at part temperature) 4 Hours @ 150°C.

Performance Information:

Toluol & Methanol Extractables:

Varnish coated on copper foil - cured for four (4) hours at 150°C. and extracted in a Soxhlet apparatus for 30 hours:

Toluol 1.1%
 Methanol 1.1%

Time @ 160° C.	OMEGA		PTZ 2000	
	25° C.	150° C.	25° C.	150° C.
0 Initial	35.5	15.0	21.9	16.1
8 Hours	36.7	13.8	22.7	18.4
24 Hours	35.0	14.5	24.3	19.6
100 Hours	33.8	15.0	26.4	20.7
200 Hours	33.9	19.0	28.0	22.4
500 Hours	32.5	20.9	21.8	29.5
1000 Hours	42.0	24.9	40.3	25.7

Flexibility Test (ASTM D-115):

Hours at 110° C. } No cracks with any diameter mandrel at
 Hours at 160° C. } either temperature up to 550 hours.

Freon R-22 Extraction Test:

Copper strips given three dips & bakes. First and second dip cured 1 hour 150°C. - final dip cured 4 hours @ 150°C. Strips were placed in a Parr Bomb and extracted for 16 hours with 800 grams of Freon 22 at a pressure of 580 psi at 100°C.

1. % extracted by weight of residue 0.6
2. % extracted by loss of weight of coated strips 0.10

Thermal Life

Westinghouse B-527 has a thermal life of 20,000 hours at 160°C, as determined by IEEE #57 test using MW-35 wire.

Bond Strength - Helical Coil

1 Mill per dip, reverse dip, cure 4 hours at 150°C per dip.

Room Temperature	150°C
36 lbs.	13 lbs.



Tube No.	Drops of Water Added	Changes		
		1 Day	3 Days	1 Week
1	0	None	None	None
2	1	None	None	None
3	3	None	None	None
4	5	None	None	None

Tank Stability (Rotating Wheel Test):

This test is conducted by placing a fixed volume of varnish in a beaker and recording its viscosity. The open beaker and contents are then placed on a titled, revolving wheel and the varnish solvent allowed to evaporate freely. After 24 hours, the beaker and contents are removed from the wheel, and the varnish brought back to its initial volume by the addition of the prescribed thinner and the viscosity again measured. This process is repeated each day for four (4) weeks. Four weeks of this test are considered equivalent to six months of actual tank life at room temperature. B-527 showed no increase in viscosity during the test period and thus should possess at least six months' tank stability.

Hydrolytic Stability:

Test consists of double reverse dipping lengths of rectangular wire in varnish and baking two (2) hours at 150° C. after each dip. Specimens then placed in dried glass tube, distilled water added, and tube sealed. Tubes aged in a 150° C. oven for two weeks and observations for any staining noted:

Packaging Information:

Westinghouse B-527 Clear Baking Hermetic Varnish is available in 1-gallon cans, 5-gallon pails, and 55-gallon drums.

The information contained herein is intended as a guide and should not be construed as a performance guarantee as the Company has no control over the manner in which others may employ the product.