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

B-540-1 Low Heat Curing Varnish

Description

Westinghouse B-540-1 is a modified polyester varnish designed for use in Class A, B, F, and H insulation systems. It is designed to cure quickly and develop quick bond strength at a lower cure temperature than conventional varnishes. B-540-1 exhibits excellent compatibility with Amide-Imide type wire enamels, as well as conventional enamels.

Features

- Excellent bond strength
- Excellent adhesion
- Good Build-up
- Fast gel time - conserves energy
- Excellent oil and chemical resistance
- MIL-I-24092B approved 180°C

Properties

Non-Volatiles	45±1%
Color	Amber
Specific Gravity @ 25° C.	.936 - .956
Viscosity (Demmler #1 @ 25° C.)	25-50 Seconds
Build-Up, ASTM D 115	0.8 - 1 Mil
Thinner	Xylol
Flash Point of Thinner	77° F.
ASTM Drying Time @ 135° C.	5-10 Minutes
Gel Time @ 135° C.	25-40 Minutes
Cake Hardness, 6 Hrs. @ 135° C., ASTM D-115	82/49 Shore A
Oil Resistance, 48 Hrs. @ 110° C., ASTM D-115	90/82 Shore A
Dielectric Strength, Volts/Mil (Dry)	4000
Dielectric Strength, Volts/Mil (Wet)	3200
Recommended Curing Cycle	2 Hrs @ 100° C.

Bond Strength - Helical Coil:

1 Mil Cured 1 Hour @ 300° F.	
2 Mils Cured 1 Hour/Dip @ 300° F.	
2 Mils Cured 2 Hours/Dip @ 300° F.	

Chemical Resistance

Water	Excellent
Acid (10% Sulfuric)	Excellent
Alkali (1% Sodium Hydroxide)	Excellent
Salt Water	Excellent
Oil, ASTM D-115	Excellent

Westinghouse B-540-1 is recommended for treating the following types of electrical apparatus:

- Transformers (distribution, power, instrument)
- Stators
- Armatures
- Form Wound Coils
- Random Wound Coils

Method Of Application

A typical cycle for treating many types of wound apparatus:

1. Preheat units to 200° F.
2. Cool to 150 - 170° F.
3. Immerse in varnish 2-5 minutes
4. Drain 15 minutes
5. Bake according to the following schedule:
 - * 1-2 Hours at 275° F.
 - * ½-1 Hour at 300° F.
 - * 25-45 Minutes at 325° F.

* After unit is up to temperature

Bond Strength Broken at Room Temp.

13 Lbs.	3 Lbs.
21 Lbs.	3 Lbs.
40 Lbs.	4 Lbs.

150° C.

General Properties

Westinghouse B-540-1 is compatible with most magnet wire enamels including:

Polyamide
Polyvinyl Formal
Polyvinyl Formal-Polyamide
Polyurethane
Epoxy
Textile
Polyurethane-Polyamide
Polyester-Amide-Imide
Polyester
Polyimide
Plain Enamel
Amide-Imide

Thermal Life

Westinghouse B-540-1 has a thermal life of 20,000 hours at 197°C as determined by IEEE #57 test using MW-35 wire.

Solvent - Xylol

Impregnating Ability

Excellent wetting properties - good penetration at atmospheric or vacuum impregnation.

Dip Tank Stability

B-540-1 has excellent tank stability.

Packaging Information

Westinghouse B-540-1 Low Heat Curing 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.