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

B-540-1-B Black Low Heat Curing Varnish

Description

Westinghouse B-540-1-B is a black version of B-540-1. This modified polyester varnish is designed to cure quickly, and develop quick bond strength at a lower cure temperature than conventional varnishes. B-540-1-B 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

Properties

Non-Volatiles	45 ± 1%
Color	Black
Specific Gravity @ 25° C.	.920 - .930
Viscosity (Demmler #1 @ 25° C.)	30-55 Seconds
Build, ASTM 115	1.0 Mil
Thinner	Xylol
Flash Point of Thinner	77° F.
ASTM Dry Time @ 135° C.	10-15 Minutes
Gel Time @ 135° C.	25-40 Minutes
Cake Hardness: 6 Hrs. @ 135° C., ASTM D115	70/50 SHORE A
Oil Resistance: 48 Hrs. @ 110° C., ASTM D115	90/82 SHORE A
Dielectric Strength, Volts/Mil (Dry)	3400
Dielectric Strength, Volts/Mil (Wet)	3300
Recommended Curing Cycle	2 Hrs. @ 100° C.

Bond Strength - Helical Coil:

	Bond Strength Broken At Room Temp	150° C.
1 Mil Cured 1 Hour @ 300° F.	13 Lbs.	3 Lbs.
2 Mils Cured 1 Hour/Dip @ 300° F.	21 Lbs.	3 Lbs.
2 Mils Cured 2 Hours/Dip @ 300° F.	40 Lbs.	4 Lbs.

Chemical Resistance

Water	Excellent
Acid (10% Sulfuric)	Excellent
Alkali (1% Sodium Hydroxide)	Excellent
Salt Water	Excellent
Oil, ASTM D115	Excellent

Application and Uses

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

- Transformers (distribution, power, instruments)
- 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.
 - *1/2-1 Hour at 300° F.
 - *25-45 Minutes at 325° F.

*After unit is up to temperature

Bond Strength Broken At Room Temp

General Properties

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

Impregnating Ability

B-540-1-B has excellent wetting properties - good penetration at atmospheric or vacuum impregnation.

Dip Tank Stability

B-540-1-B has excellent tank stability.

Packaging Information

B-540-1-B Black 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.