

# TECHNICAL BULLETIN

## VRL-500

October 2002

### VRL-500 Series Air Dry Phenolic Coatings

**GENERAL DESCRIPTION:** VOC compliant phenolic coating specially formulated to cure as an air drying system.

**RECOMMENDED USAGE:** HERESITE VRL-500 Series air dry phenolic coatings are formulated to permit application by brush, spray, or roller. Some of their outstanding properties are excellent durability, good adhesion, good film building characteristics and flexibility. All are self priming to steel.

When thoroughly aged, they produce hard corrosion resistant films. Recommended as a heavy duty maintenance coating for exposures to splash, spillage and fumes. VRL-514 is a primer/finish combination specially formulated for salt water fumes services.

Successful applications include: Fans, duct, fume hoods, marine finishes, swimming pools, steel plants, wastewater treatment plants, textile industry, chemical storage areas, battery storage areas and ventilating systems.

When finished product is going to be exposed to UV rays, one topcoat of Heresite UC-5500 is recommended.

#### **PHYSICAL DATA:** (depends on color)

Solids:

60 - 70 % by volume

70 - 75 % by weight

Approximately Shipping Weights:

VRL-500: 10 lbs. per 1 gallon pail

50 lbs. per 5 gallon pail

S-440: 8.4 lbs. per 1 gallon pail

35.5 lbs. per 5 gallon pail

#### **COLORS**

VRL-500 Clear                      VRL-514 Brown (Matte)

VRL-502 Black                      VRL-523 Red

VRL-504 Brown                      VRL-547 Yellow

VRL-506 Gray                      VRL-549 Green

VRL-508 Ivory                      VRL-554 Dark Brown

VRL-509 Machine Gray              VRL-579 Maroon

(Other Colors Available/We Also Will Match Colors)

#### **GENERAL CHEMICAL RESISTANCE:**

This coating has excellent resistance to atmospheres that are acidic, swimming pool areas and salt air. The following is a brief listing of the chemical resistance:

<u>EXPOSURE</u>	<u>SPLASH &amp; SPILLAGE</u>	<u>FUMES</u>
Acids (dilute)	Good	Excellent
Alkalis (dilute)	Good	Good
Solvents	Fair	Good
Inorganic Salts	Good	Excellent
Water	Good	Excellent

#### **COVERAGE:**

Theoretical coverage is 1040 sq. ft. per gallon per mil. This equates to 166 sq. ft. per gallon at 5 mils dry film thickness with a 20% loss factor.

#### **RECOMMENDED DRY FILM THICKNESS:**

4 to 6 mils (100-150 microns). This can be accomplished in a 2 to 3 coat application at 75EF (24EC). An additional coat may be necessary with cooler application temperatures. Approximately 5 wet mils will achieve 3 dry mils.

#### **VOC INFORMATION:** (varies with color)

Range = 2.4 lbs. - 3.4 lbs. per gallon as applied

#### **ABRASION RESISTANCE:**

120 mg weight loss per 100 cycles cs-17 wheel with 1000 gram weight.

#### **TEMPERATURE LIMITATION:**

HERESITE VRL-500 accepts dry heat temperatures up to 150EF (66EC)

#### **SHELF LIFE**

2 years from the date of purchase stored at 70EF (21EC)

#### **STORAGE CONDITIONS**

Keep temperatures around 70EF whenever possible to maximize the shelf life.

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#### **APPLICATION INSTRUCTIONS**

These instructions are not intended to show product recommendations for specific service. They are issued as an aid in determining correct surface preparation, mixing instructions and application. It is assumed that the proper product recommendations have been made. These instructions should be followed closely to obtain the maximum service from the materials.

**CAUTION:** CONTAINS FLAMMABLE SOLVENTS. KEEP AWAY FROM SPARKS AND OPEN FLAMES. IN CONFINED AREAS WORKMEN MUST WEAR FRESH AIR LINE RESPIRATORS. HYPERSENSITIVE PERSONS SHOULD WEAR GLOVES OR USE PROTECTIVE CREAM. ALL ELECTRICAL EQUIPMENT AND INSTALLATIONS SHOULD BE MADE AND GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. IN AREAS WHERE EXPLOSION HAZARDS EXIST, WORKMEN SHOULD BE REQUIRED TO USE NONFERROUS TOOLS AND TO WEAR CONDUCTIVE AND NONSPARKING SHOES.

**SURFACE PREPARATION:** Remove all oil, grease from the surface with an appropriate solvent, such as Heresite S-330.

**STEEL: (NON-IMMERSION)** A commercial blast is acceptable in accordance with NACE #3 or SSPC-SP-6 specifications. Surface profile or anchor pattern shall be 20-25% of the recommended dry film thickness.

Surface profile or anchor pattern should be 20 - 25% of the recommended dry film thickness.

**CONCRETE:** Remove protrusions by sanding or grinding. Concrete must be cured at 70EF (21EC) and 50% relative humidity for 28 days.

**(NON-IMMERSION)** Surfaces must be acid etched or abrasive blasted to remove laitance.

**PRIMER:** While VRL-500 Series are self-priming on steel, four primers are available.

VRL-502P, VRL-504P, VRL-506P are inhibitive primers to be used for maximum corrosion resistance.

On concrete or porous surfaces, two (2) coats of primer with two (2) coats of finish are recommended. The first coat shall be thinned one (1) part primer to one (1) part S-240 solvent.

**THINNER:** Recommend thinner is Heresite S-440.

**THINNING:** The amount of thinner required is dependent upon temperature, ventilation, humidity, spray equipment used and desired film thickness.

**SPRAY:** VRL-500 series coatings are normally diluted for spraying. It is recommended that 10% thinning with Heresite S-440 to achieve an application viscosity of 25 to 35 seconds on a Zahn #2.

**BRUSH OR ROLLER:** HERESITE VRL-500 series coatings may be applied without dilution. If desired, a small amount of S-440 solvent may be used.

**APPLICATION:**

1. Do not apply if temperature is less than 5EF (2EC) above dewpoint or if temperature is below 45EF (7EC).
2. All spray equipment shall be thoroughly cleaned and the hoses in particular shall be free of old paint film and other contaminants.
3. Use standard production type spray guns:
 

Guns	Fluid	Air
DeVilbiss JGA-502	E	704
Binks #62	66-SS	66-SD
Graco P800	04	02

 May also be used with airless spray equipment.
4. Air supply shall be uncontaminated. Adjust air pressure to approx. 50 lbs. at the gun and provide 15-20% pot pressure. Adjust spray gun by first opening liquid valve and then adjust air valve to give approx. an 8"-12" fan, holding gun perpendicular to the surface at a distance of 12".
5. Apply a mist bonding pass.
6. Allow to flash off for several minutes, but not long enough to allow film to completely dry.
7. Apply 3-4 criss-cross multi-passes maintaining a wet appearing film approx. 5 mils wet film thickness equals approx. 3 mils dry film thickness.
8. Air dry with ventilation.

**CURING SCHEDULE VRL-500 @ 70EF (21EC)**

Recoat: 6 - 8 hours per coat

Dry to handle: 24 hours

Full Cure: 7 to 14 days

**FORCE CURE:** Let part flash off solvent for at least 15 minutes then place in cold oven and bring the oven temperature up to 250EF (121EC). Remove part as soon as you reach temperature. The coating will be soft until it cools.

**CLEAN UP:** Use HERESITE S-440 solvent.

**STORAGE:** Coating should not be stored longer than 24 months. Storage at 80EF (27EC) may shorten shelf life.

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