



ESTABLISHED 1935

# TECHNICAL BULLETIN HCR-1100 May 2008

## HCR-1100 Polyester Thick Film Coating

**GENERIC TYPE:** Unsaturated polyester filled with inert pigments.

**RECOMMENDED USAGE:** Primarily used for lining tanks, coating process equipment and as an industrial maintenance material. It is easily applied to metal, concrete and wood.

### CHEMICAL RESISTANCE GUIDE:

<u>EXPOSURE</u>	<u>IMMERSION</u>	<u>SPLASH &amp; SPILLAGE</u>
Acids	Good	Excellent
Alkalies	Good	Excellent
Petroleum Products	Good	Good
Saltwater	Excellent	Excellent
Water	Excellent	Excellent

### ORDERING INFORMATION:

#### Shipping Weight:

HCR-1100	Approx 11 lbs/gal
S-311 Solvent	Approx 8 1/2 lbs/gal

**Packaging:** HCR-1100 series is available in 1 gallon and 5 gallon kits.

#### Flashpoint (T.C.C):

HCR-1100	73°F (23°C)
S-311 Solvent	73°F (23°C)

### PHYSICAL DATA:

Solid by wt: approx 95%  
Solid by vol: approx 93%  
Note: Solids vary with color.

Pot life: 2 hrs @ 77°F  
Shelf life: 12 months @ 70°F in

**VISCOSITY:** 100-110 K.U. (Kreb Units)

**TEMPERATURE LIMITATION:** HERESITE HCR-1100 accepts dry heat temperatures up to 220°F. Temperature excursions up to 400°F can be tolerated for short durations.

**VOC:** 0.5 lbs/gal as supplied.

### STANDARD COLOR

HCR-1101 Red (Primer)  
HCR-1110 White (Finish)

**COVERAGE:** Theoretical coverage - 1488 sq ft per gallon per mil. At 35 mils DFT average coverage would be 34 sq ft per gallon. This includes a 20% loss factor. Recommended total DFT is as follows.

<u>Environment</u>	<u>DFT</u>	<u>No. of Coats</u>
Immersion	30-40 mils*	2*

\*15-20 mils primer; 15-20 mils finish

**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 and other contaminants. All seams should be continuously welded, weld splatter removed and all edges radiused. (See Bulletin #113, "Fabrication Specifications.")

**STEEL:**

**IMMERSION:** A white metal blast is required in accordance with NACE #1 or SSPC-SP-5-63 specifications.

**NON-IMMERSION:** A commercial blast is acceptable in accordance with NACE #3 or SSPC-SP-6-63 specifications.

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

**CONCRETE:** Remove all protrusions by sanding or grinding. Concrete must be cured 28 days @ 70°F (21°C) and 50% relative humidity.

**IMMERSION:** Dry abrasive blast to open all voids.

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

**PRIMER:** HCR-1101

**MIXING:** Stir Part A thoroughly. Add the contents of Part B to the container of Part A. Mix thoroughly. Mixed material must be used within 2 hours.

**THINNING:** The amount of thinner required is dependent upon temperature, ventilation, humidity; spray equipment used and desired film thickness. Suggested thinning at 75°F (24°C) is 15-20%.

**EQUIPMENT:**

1. All spray equipment shall be thoroughly cleaned and be free of old paint and other contaminants.
2. Use standard production type spray guns
3. Air supply shall be uncontaminated.
4. Airless spray equipment: 2400-2800 PSI liquid pressure. Tip size from .015" to .019". Thinning requirements are less than for conventional spray.

**APPLICATION:**

1. Do not apply if temperature is less than 5°F (2°C) above dewpoint.
2. Adjust air pressure to approx. 80 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.
3. Holding gun perpendicular to the surface at a distance of 12", apply a mist bonding pass.
4. Allow to flash off for several minutes, but not long enough to allow film to completely dry.
5. Apply 3-4 criss-cross multi-passes maintaining a wet appearing film.
6. Repeat Step #5 until desired film thickness is obtained.
7. Clean equipment immediately with HERESITE S-311 solvent.
8. Let first coat air dry with ventilation for approx. 16 hrs. but not more than 48 hrs.
9. For second coat, repeat steps #1-#7.
10. Coating should be final cured according to the following  
70°F (21°C) - 7 days  
50°F (10°C) - 14 days

**FORCE CURE:**

1. If force curing is required, air dry with ventilation for approx. 2 hrs.
2. After air dry period has elapsed the temperature should be raised in 40°F (22°C) increments every 30 minutes.
3. Hold at desired curing temperature according to the following: 160°F (71°C) 16-20 hrs.; 180°F (82°C) 4-8 hrs.; 200°F (82°C) 2-4 hrs.

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