ZINC CLAD® III HS 100
ORGANIC ZINC-RICH EPOXY PRIMER

PRODUCT DESCRIPTION
ZINC CLAD III HS 100 is a three-component, polyamide epoxy, zinc-rich coating. It has a low VOC level and contains 90.3% by weight of zinc dust pigment in its dried film.

- Meets Class B requirements for Slip Coefficient and Creep Resistance
- Provides cathodic protection
- Damaged film exhibits "self-healing" properties
- Fast Recoat Time
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish: Flat
Color: Gray-green
Volume Solids: 70% ± 2%, mixed, ASTM D2697
Weight Solids: 88% ± 2%, mixed
VOC (EPA Method 24): Unreduced: <100 g/L; 0.71 lb/gal mixed
Zinc Content in Dry Film: 90.3% by weight

Mix Ratio: 3 components, premeasured
3.25 gallons (12.3L) total

Recommended Spreading Rate per coat:

<table>
<thead>
<tr>
<th>Wet mils (microns)</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5 (113)</td>
<td>7.0 (175)</td>
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<tr>
<td>Dry mils (microns)</td>
<td>3.0 (75)</td>
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<tr>
<td>~Coverage sq ft/gal (m²/L)</td>
<td>224 (5.5)</td>
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<td>Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft</td>
<td>1120 (27.5)</td>
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NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 5.0 mils wet (125 microns):

- @ 40°F/4.5°C: 45 minutes
- @ 77°F/25°C: 30 minutes
- @ 120°F/49°C: 10 minutes

To touch: 45 minutes
To handle: 30 minutes
To recoat*:
  - minimum: 4 hours
  - maximum: 1 year
To cure:
  - minimum: 7 days
  - maximum: 5 days

Drying time is temperature, humidity, and film thickness dependent.

*NOTE: Film must be free of solvent, hard and firm. When rubbed with the face of a coin or knife the film should polish but not flake or chip.

Test Name | Test Method | Results
---|---|---
Adhesion | ASTM D4541 | 975 psi

Corrosion Weathering

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Test Method</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rusting</td>
<td>ASTM D610</td>
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Dry Heat Resistance (zinc only)

- ASTM D2485
  - 400°F (204°C)

Moisture Condensation Resistance

- ASTM D4585, 100°F, 4000 hours
  - Rating 10 per ASTM D610 for rusting; Rating 10 per ASTM D714 for blistering

Pencil Hardness (zinc only)

- ASTM D3363
  - 2H

Salt Fog Resistance

- ASTM B117, 4500 hours
  - Rating 10 per ASTM D610 for rusting; Rating 10 per ASTM D714 for blistering

Slip Coefficient* (zinc only)

- AISC Specifications for Structural Joints using ASTM A325 or ASTM A490 Bolts
  - Class B, 0.51

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Recommended Uses

For use over properly prepared blasted steel.
- Fabrication Shops
- Bridge and Highway Structures
- Stadiums and Sports Complexes
- Drilling Rigs
- Piping
- Refineries
- Barges and Ships
- Wind Towers - onshore and offshore
- Shop or Field Applications
- Not recommended for immersion service.

Substrate*: Steel
Surface Preparation*: SSPC-SP10/NACE 2
System Tested*:
- 1 ct. Zinc Clad III HS @ 5.0 mils (125 microns) dft
- 1 ct. Macropoxy 646 @ 5.0-10.0 mils (125-250 microns) dft
- 1 ct. Acrolon 218 HS @ 5.0 mils (125 microns) dft

*unless otherwise noted below

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PART A B69A110
PART B B69V110
PART F B69D11

PRODUCT INFORMATION

6.10

RECOMMENDED SYSTEMS

<table>
<thead>
<tr>
<th>Steel, polyurethane topcoat:</th>
<th>Dry Film Thickness / ct. Mils (Microns)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ct. Zinc Clad III HS 100</td>
<td>3.0-5.0 (75-125)</td>
</tr>
<tr>
<td>1-2 cts. Acrolon 218 HS</td>
<td>3.0-6.0 (75-150)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Steel, catalyzed epoxy topcoat:</th>
<th>Dry Film Thickness / ct. Mils (Microns)</th>
</tr>
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<tbody>
<tr>
<td>1 ct. Zinc Clad III HS 100</td>
<td>3.0-5.0 (75-125)</td>
</tr>
<tr>
<td>1-2 cts. Macropoxy 646</td>
<td>5.0-10.0 (125-250)</td>
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<tr>
<td>1 ct. Zinc Clad III HS 100</td>
<td>3.0-5.0 (75-125)</td>
</tr>
<tr>
<td>1-2 cts. Tile-Clad HS</td>
<td>2.5-4.0 (63-100)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Steel, acrylic topcoat:</th>
<th>Dry Film Thickness / ct. Mils (Microns)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ct. Zinc Clad III HS 100</td>
<td>3.0-5.0 (75-125)</td>
</tr>
<tr>
<td>2 cts. Pro Industrial DTM Acrylic Coating</td>
<td>2.5-4.0 (63-100)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Steel, water based epoxy topcoat:</th>
<th>Dry Film Thickness / ct. Mils (Microns)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ct. Zinc Clad III HS 100</td>
<td>3.0-5.0 (75-125)</td>
</tr>
<tr>
<td>2 cts. Waterbased Tile-Clad Epoxy</td>
<td>2.0-4.0 (50-100)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Steel, water-based urethane topcoat:</th>
<th>Dry Film Thickness / ct. Mils (Microns)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ct. Zinc Clad III HS 100</td>
<td>3.0-5.0 (75-125)</td>
</tr>
<tr>
<td>1 ct. Waterbased Tile-Clad Epoxy</td>
<td>2.0-4.0 (50-100)</td>
</tr>
<tr>
<td>1-2 cts. Hydrogloss</td>
<td>2.0-4.0 (50-100)</td>
</tr>
</tbody>
</table>

The systems listed above are representative of the product's use, other systems may be appropriate.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:
Iron & Steel: SSPC-SP6/NACE 3, 2 mil (50 micron) profile
Galvanizing: SSPC-SP7
Weathered Zinc Rich Primer: Clean, dry, sound

Surface Preparation Standards

<table>
<thead>
<tr>
<th>Condition of Surface</th>
<th>ISO 8501-1</th>
<th>BS7079-A1</th>
<th>Swedish Std.</th>
<th>SIS059900</th>
<th>SSPC</th>
<th>NACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Metal</td>
<td>Sa3</td>
<td>Sa 3</td>
<td>Sa 3</td>
<td>SP5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Near White Metal</td>
<td>Sa2</td>
<td>Sa 2</td>
<td>Sa 2</td>
<td>SP6</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Commercial Blast</td>
<td>Sa1</td>
<td>Sa 1</td>
<td>Sa 1</td>
<td>SP7</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Brush-Off Blast</td>
<td>Cs2</td>
<td>Cs 2</td>
<td>Cs 2</td>
<td>SP8</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Hand Tool Cleaning</td>
<td>Rusted</td>
<td>D Si2</td>
<td>D Si2</td>
<td>SP10</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td>Pitted &amp; Rusted</td>
<td>D Si3</td>
<td>D Si3</td>
<td>SP11</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Power Tool Cleaning</td>
<td>Rusted</td>
<td>D Si2</td>
<td>D Si2</td>
<td>SP12</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Do not tint.

APPLICATION CONDITIONS

Temperature: 40°F (4.5°C) minimum, 120°F (49°C) maximum (air, surface, and material)
Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging: 3.25 gallons (12.3L) mixed
Part A 1 gallon (3.78L)
Part B 1 gallon (3.78L)
Part F 73 lb (33.1 Kg) Zinc Dust
Weight: 28.65 ± 0.2 lb/gal ; 3.44 Kg/L, mixed

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

DISCLAIMER

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WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Zinc rich coatings require direct contact between the zinc pigment in the coating and the metal substrate for optimum performance.

**Iron & Steel (atmospheric service)**
Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Coat any bare steel the same day as it is cleaned or before flash rusting occurs.

**Galvanized Steel**
Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1 (recommended solvent is VM&P Naphtha). When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned or before flash rusting occurs.

**Weathered Zinc-Rich Primer**
Remove zinc salts by either high pressure water washing and scrubbing with stiff bristle brush or sweep blast followed by water flush. Allow to dry.

**Note:** If blast cleaning with steel media is used, an appropriate amount of steel grit blast media may be incorporated into the work mix to render a dense, angular 1.5-3.0 mil (38-75 micron) surface profile, per Keane-Tator Surface Profile Comparator. A profile up to 4 mils (100 microns) is acceptable, however, coating must be applied to achieve a minimum of 3 mils (75 microns) dft. This method may result in improved adhesion and performance.

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<td>Near White Metal</td>
<td>Sa 2.5</td>
<td>Sa 2</td>
<td>SP 10</td>
<td>2</td>
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<td>3</td>
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<tr>
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<td>SP 3</td>
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**Application Equipment**

**Airless Spray**
(continuous agitation required)
- **Gun**: Binks 95
- **Fluid Nozzle**: 68
- **Air Nozzle**: 68P
- **Atomization Pressure**: 50 psi
- **Fluid Pressure**: 10 - 20 psi
- **Reduction**: As needed up to 10% by volume

Keep pressure pot at level of applicator to avoid blocking of fluid line due to weight of material. Blow back coating in fluid line at intermittent shutdowns, but continue agitation at pressure pot.

**Brush**
- **Brush**: Small areas only; natural bristle
- **Reduction**: Not recommended

If specific application equipment is not listed above, equivalent equipment may be substituted.
Protective & Marine Coatings

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Application Bulletin

Revised: January 19, 2015

Part A B69A110 Base
Part B B69V110 Hardener
Part F B69D11 Zinc Dust

Application Procedures

Surface preparation must be completed as indicated.

Zinc Clad III HS 100 comes in 3 premeasured containers which when mixed provides 3.25 gallons (12.3L) of ready-to-apply material.

Mixing Instructions:
Mix contents of component A and B thoroughly with a low speed power agitator. Make certain no pigment remains on the bottom of the can. Then combine 1 part by volume of Part A with 1 part by volume of Part B, then add Part F (73 lb zinc dust). Thoroughly agitate the mixture with power agitation. After mixing, pour through a 30-60 mesh screen. Allow the material to sweat-in as indicated. Re-stir before using.

Continuous agitation of mixture during application is required, otherwise zinc dust will quickly settle out.

Apply paint at the recommended film thickness and spreading rate as indicated below:

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50% RH

Pot Life: 6 hours
Sweat-in-Time: 1 hour

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

Performance Tips

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Application above recommended film thickness may result in mud cracking.

Excessive reduction of material can affect film build, appearance, and performance.

Do not mix previously catalyzed material with new.

Do not apply the material beyond recommended pot life.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with R7K111 or R6K10.

Keep pressure pot at level of applicator to avoid blocking of fluid line due to weight of material. Blow back coating in fluid line at intermittent shutdowns, but continue agitation at pressure pot.

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Refer to Product Information sheet for additional performance characteristics and properties.

Safety Precautions

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