



# Protective & Marine Coatings

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

PART A  
PART A  
PART B  
PART F

B69A100  
B69LW100  
B69V100  
B69D11

GRAY-GREEN, BASE  
OAP BLUE, BASE  
HARDENER  
ZINC DUST

Revised: April 15, 2024

### PRODUCT INFORMATION

6.07

#### PRODUCT DESCRIPTION

**ZINC CLAD III HS** is a three-component, polyamide epoxy, zinc-rich coating. It has a low VOC level and contains 90.5% 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, OAP Blue
Volume Solids:	70% ± 2%, ASTM D2697
Weight Solids:	90% ± 2%, mixed
VOC (EPA Method 24):	<340 g/L; 2.80 lb/gal, mixed
Zinc Dust Pigment Content in Dry Film:	ASTM D 521 90% Min ASTM D 6580 85% Min
Mix Ratio:	3 components, premeasured 3.25 gallons (12.3L) total

#### Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	4.5 (113)	7.0 (175)
Dry mils (microns)	3.0 (75)	5.0 (125)
~Coverage sq ft/gal (m <sup>2</sup> /L)	224 (5.5)	370 (9.1)
Theoretical coverage sq ft/gal (m <sup>2</sup> /L) @ 1 mil / 25 microns dft	1120 (27.5)	

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):

@ 35°F/1.7°C @ 77°F/25°C @ 120°F/49°C  
50% RH

To touch:	45 minutes	30 minutes	10 minutes
To handle:	2 hours	1 hour	30 minutes
To recoat:			
minimum:	4 hours	30 minutes	30 minutes
**maximum:	none	none	none
To cure:	10 days	7 days	7 days

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

\*\*Maximum Recoat: Unlimited. Must have a clean, dry surface for top-coating. "Loose" chalk or salts must be removed in accordance with good painting practice.

Paint temperature must be at least 40°F (4.5°C) minimum.

Pot Life:	6 hours	4 hours	2 hours
Sweat-in-Time:	1 hour	30 minutes	15 minutes

**Shelf Life:** 24 months, unopened  
Store indoors at 40°F (4.5°C) to 100°F (38°C)

Note: B69LW100 (Part A) has a 12 month shelf life

**Flash Point:** 67°F (19°C), Closed Cup, mixed

**Reducer/Clean Up<sup>1</sup>:** Not recommended

<sup>1</sup>Other VOC areas (<450 g/L): use Reducer #58 or MEK, R6K10 in areas below 80°F. Use Reducer #58 or R7K104 in areas above 80°F. Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

#### RECOMMENDED USES

For use over properly prepared blasted steel.

- Fabrication shops and field applications
- Bridge and highway structures
- Stadiums and sports complexes
- Drilling rigs
- Piping
- Refineries
- Barges and ships
- Wind towers - onshore and offshore
- Not recommended for immersion service
- Approved with FIRETEX hydrocarbon coatings
- When small kits are required for repair, touch up or small projects ZINC CLAD® 4100 may be utilized without compromise to performance

#### PERFORMANCE CHARACTERISTICS

**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

Test Name	Test Method	Results
Adhesion	ASTM D4541	1976 psi
Corrosion Weathering	ASTM D5894, 27 cycles, 9072 hours	Rating 10 per ASTM D610 for rusting; Rating 10 per ASTM D714 for blistering
Dry Heat Resistance (zinc only)	ASTM D2485	400°F (204°C)
Moisture Condensation Resistance	ASTM D4585, 100°F (38°C), 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, 15,000 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, 0.52

Meets SSPC Paint Spec 20 - 1ct. Zinc @ 5 mils (125 microns) dft  
Complies with ISO 12944-5 C5I and C5M requirements.

\*Consult your Sherwin-Williams Representative regarding this product's Slip Certification document



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#### RECOMMENDED SYSTEMS

		Dry Film Thickness / ct.	
		Mils	(Microns)
<b>Steel, polyurethane topcoat:</b>			
1 ct.	Zinc Clad III HS	3.0-5.0	(75-125)
1-2 cts.	Acrolon 218 HS	3.0-6.0	(75-150)
<b>Steel, catalyzed epoxy topcoat:</b>			
1 ct.	Zinc Clad III HS	3.0-5.0	(75-125)
1-2 cts.	Macropoxy 646	5.0-10.0	(125-250)
<b>Steel, catalyzed epoxy topcoat:</b>			
1 ct.	Zinc Clad III HS	3.0-5.0	(75-125)
1-2 cts.	Tile-Clad HS	2.5-4.0	(63-100)
<b>Steel, catalyzed epoxy siloxane topcoat:</b>			
1 ct.	Zinc Clad III HS	3.0-5.0	(75-125)
1-2 cts.	Polysiloxane XLE-80	3.0-7.0	(75-175)
or			
1-2 cts.	Polysiloxane XLE-80 HAPS Free	3.0-7.0	(75-175)
<b>Steel, acrylic topcoat:</b>			
1 ct.	Zinc Clad III HS	3.0-5.0	(75-125)
2 cts.	Pro Industrial DTM Acrylic Coating	2.5-4.0	(63-100)
or			
1 ct.	Fast-Clad HB Acrylic	5.0-8.0	(125-200)

#### FIRETEX ONLY

Steel Substrate being primed for FIRETEX M90 and M90/2  
1 ct. Zinc Clad III HS 3.0-6.0 (75-150)

When small kits are required for repair, touch up or small projects ZINC CLAD® 4100 may be utilized without compromise to performance.

#### 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  
Ductile Iron Pipe:  
Atmospheric: NAPF 500-03-03 Power Tool Cleaning  
Buried & Immersion: NAPF 500-03-04 Abrasive Blast Cleaning  
Cast Ductile Iron Fittings: NAPF 500-03-05 Abrasive Blast Cleaning

#### Surface Preparation Standards

Condition of Surface	ISO 8501-1 BS7079:A1	SSPC	NACE
White Metal	Sa 3	SP 5	1
Near White Metal	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	SP 7	4
Hand Tool Cleaning	C St 2	SP 2	-
Rusted	D St 2	SP 2	-
Pitted & Rusted	C St 3	SP 3	-
Rusted	D St 3	SP 3	-
Pitted & Rusted			

#### TINTING

Do not tint.

#### APPLICATION CONDITIONS

Temperature: 35°F (1.7°C) minimum, 120°F (49°C) maximum (air and surface)  
40°F (4.5°C) minimum, 120°F (49°C) maximum (material)  
At least 5°F (2.8°C) above dew point  
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 Kg) Zinc Dust

Weight: 27.63 ± 0.2 lb/gal ; 3.31 Kg/L, mixed

#### SAFETY PRECAUTIONS

Refer to the SDS 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.

#### 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.

#### DISCLAIMER

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### APPLICATION BULLETIN

6.07

#### SURFACE PREPARATIONS

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.

##### Ductile Iron Pipe, Atmospheric Service:

Minimum surface preparation is Power Tool Clean per NAF 500-03-03. Remove all oil and grease from surface by Solvent Cleaning per NAF 500-03-01.

##### Ductile Iron Pipe, Buried and Immersion Service:

Minimum surface preparation is Abrasive Blast Cleaning per NAF 500-03-04. Ductile iron pipe external surfaces, in some cases, can be damaged by excessive abrasive blast cleaning beyond this standard. Remove all oil and grease from surface by Solvent Cleaning per NAF 500-03-01.

##### Ductile Iron Fittings:

Minimum surface preparation is Abrasive Blast Cleaning of Cast Ductile Iron Fittings per NAF 500-03-05. Remove all oil and grease from surface by Solvent Cleaning per NAF 500-03-01.

##### 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 5 mils (127 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.

#### APPLICATION CONDITIONS

Temperature: 35°F (1.7°C) minimum, 120°F (49°C) maximum (air and surface)  
40°F (4.5°C) minimum, 120°F (49°C) maximum (material)  
At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

#### APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reducer/Clean Up\* .....Not recommended

\*Other VOC areas (<450 g/L): use Reducer #58 or MEK, R6K10 in areas below 80°F. Use Reducer #58 or R7K104 in areas above 80°F. Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

##### Airless Spray

(use Teflon packings and continuous agitation)

Pressure.....2000 - 2300 psi  
Hose.....3/8" ID  
Tip .....0.19"  
Filter .....none  
Reduction.....Not recommended

##### Conventional Spray

(continuous agitation required)

Gun .....Binks 95  
Fluid Nozzle .....68  
Air Nozzle.....68P  
Atomization Pressure.....50 psi  
Fluid Pressure.....10 - 20 psi  
Reduction.....Not recommended

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.

#### Surface Preparation Standards

Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal	Sa 3	Sa 3	SP 5	1
Near White Metal	Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	Sa 1	SP 2	4
Hand Tool Cleaning	C St 2	C St 2	SP 2	-
Pitted & Rusty	D St 2	D St 2	SP 2	-
Rusty	C St 3	C St 3	SP 3	-
Power Tool Cleaning	D St 3	D St 3	SP 3	-



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### APPLICATION BULLETIN

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#### APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Zinc Clad III HS 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 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.

If reducer solvent is used, add only after components have been thoroughly mixed, after sweat-in. 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:

##### Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	4.5 (113)	7.0 (175)
Dry mils (microns)	3.0 (75)	5.0 (125)
~Coverage sq ft/gal (m <sup>2</sup> /L)	224 (5.5)	370 (9.1)
Theoretical coverage sq ft/gal (m <sup>2</sup> /L) @ 1 mil / 25 microns dft	1120 (27.5)	

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):

	@ 35°F/1.7°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	45 minutes	30 minutes	10 minutes
To handle:	2 hours	1 hour	30 minutes
To recoat:			
minimum:	4 hours	30 minutes	30 minutes
**maximum:	none	none	none
To cure:	10 days	7 days	7 days

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

\*\*Maximum Recoat: Unlimited. Must have a clean, dry surface for top-coating. "Loose" chalk or salts must be removed in accordance with good painting practice.

Paint temperature must be at least 40°F (4.5°C) minimum.

Pot Life:	6 hours	4 hours	2 hours
Sweat-in-Time:	1 hour	30 minutes	15 minutes

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

#### CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with MEK, R6K10. Clean tools immediately after use with MEK, R6K10. Follow manufacturer's safety recommendations when using any solvent.

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#### 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.

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 MEK, 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.

SSPC-SP11 surface preparation is acceptable for small areas.

Higher dry film thickness may be acceptable under certain conditions. Contact your Sherwin-Williams representative.

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

#### SAFETY PRECAUTIONS

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#### WARRANTY

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