Protective & Marine Coatings

ZINC CLAD® 5
ORGANIC ZINC-RICH PRIMER

B69A45

Revised: May 10, 2022

PRODUCT INFORMATION

6.05

PRODUCT DESCRIPTION

ZINC CLAD 5 is a one-package, organic, zinc-rich coating containing 90% by weight of zinc dust pigment in the dried film.

- Single protective coat in mild corrosive environments
- 90% zinc content in dry film
- Provides cathodic/sacrificial protection
- Exhibits "self-healing" properties when the film is damaged

PRODUCT CHARACTERISTICS

Finish:	Flat
Color:	Gray-green
Volume Solids:	41% ± 2%
Weight Solids:	81% ± 2%
VOC (calculated):	<500 g/L; 4.17 lb/gal
Zinc Content in Dry Film:	90% by weight

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**7.5** 188	**10.0** 250
Dry mils (microns)	**3.0** 75	**4.0** 100
~Coverage sq ft/gal (m^2/L)	**165** 4.0	**219** 5.4
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**656** 16.1	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 10.0 mils wet (250 microns):

	@ 55°F/13°C	@ 77°F/25°C *50% RH*	@ 100°F/38°C
To touch:	4 hours	2-3 hours	30 minutes
To recoat:	30 hours	24 hours	1 hour
To cure:	7 days	7 days	3 days

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

Shelf Life:	24 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C)
Flash Point:	115°F (46°C) PMCC
Reducer:	Not recommended
Clean Up:	Xylene, R2K4

RECOMMENDED USES

For use over properly prepared blasted steel exposed to:

- Fresh water
- Salt water
- Brackish water
- Chemical fumes
- Topcoating recommended for maximum protection
- Excellent for field touch-up of damaged galvanized or zinc rich primers

PERFORMANCE CHARACTERISTICS

- A tough, hard film which serves as a single protective coating in mild corrosive environments.
- Provides cathodic protection to the steel.
- Insoluble zinc salts formed in the film make it more resistant to the passage of moisture.
- Simulates the protection of steel provided by galvanizing.
- Easy field use for touch-up work.
- Can be used untopcoated for immersion service.
- Provides performance comparable to products formulated to federal specifications: MIL-P-21035B
- Dry heat resistance: 300°F (149°C)

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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Steel, zinc primer/finish, immersion or atmospheric:			
1 ct.	Zinc Clad 5	3.0-4.0	(75-100)
Steel, Acrylic topcoat, atmospheric:			
1 ct.	Zinc Clad 5	3.0-4.0	(75-100)
1-2 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)
Steel, epoxy topcoat, atmospheric:			
1 ct.	Zinc Clad 5	3.0-4.0	(75-100)
1-2 cts.	Tile-Clad HS	2.5-4.0	(63-100)
Steel, urethane topcoat, atmospheric:			
1 ct.	Zinc Clad 5	3.0-4.0	(75-100)
1 ct.	Macropoxy 646	5.0-10.0	(125-250)
1 ct.	Sherthane 2K Urethane	3.0-4.0	(75-100)
or			
1 ct.	Hi-Solids Polyurethane	3.0-4.0	(75-100)
Galvanizing:			
1 ct.	Zinc Clad 5	3.0-4.0	(75-100)

NOTE: 1 ct. of DTM Wash Primer can be used as an intermediate coat under recommended topcoats to prevent pinholing.

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

Atmospheric: SSPC-SP6/NACE 3, 2 mil (50 micron) profile

Immersion: SSPC-SP10/NACE 2, 2 mil (50 micron) profile

Galvanizing: SSPC-SP7

Weather Zinc-Rich Primer: Clean, dry, sound

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 7	4
Hand Tool Cleaning	Rusted	C St 2	C St 2	SP 2	-
	Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	D St 3	SP 3	-

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature: 35°F (1.6°C) minimum, 95°F (35°C) maximum (air, surface, and 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: 1 gallon (3.78L) containers

Weight: 21.3 ± 0.2 lb/gal ; 2.55 Kg/L

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

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

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APPLICATION BULLETIN

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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). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Iron & Steel (immersion service)
Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is 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). Remove all weld spatter and round all sharp edges by grinding. Prime 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.

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 1.5-2.0 mil (38-50 micron) surface profile. This method may result in improved adhesion and performance.

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 7	4
Hand Tool Cleaning	Rusted	C St 2	C St 2	SP 2	-
	Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	D St 3	SP 3	-

APPLICATION CONDITIONS

Temperature:	35°F (1.6°C) minimum, 95°F (35°C) maximum (air, surface, and 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 .....Not recommended

Clean Up .....Xylene, R2K4

Airless Spray
(Use Teflon packings and continuous agitation)
Pressure.....2000 psi
Hose.....3/8" ID
Tip .....0.015"
Filter .....None

Conventional Spray
(continuous agitation required)
Gun .....Binks 95
Fluid Nozzle 68
Air Nozzle.....68P
Atomization Pressure.....50 psi
Fluid Pressure.....10 - 12 psi

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

If specific application equipment is not listed above, equivalent equipment may be substituted.

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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mixing Instructions: Mix paint thoroughly with low speed power agitation before use.

Continuous agitation required during application.

Pour through a 30 to 60 mesh screen before use.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**7.5** 188	**10.0** 250
Dry mils (microns)	**3.0** 75	**4.0** 100
~Coverage sq ft/gal (m^2/L)	**165** 4.0	**219** 5.4
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**656** 16.1	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 10.0 mils wet (250 microns):

	@ 55°F/13°C	@ 77°F/25°C *50% RH*	@ 100°F/38°C
To touch:	4 hours	2-3 hours	30 minutes
To recoat:	30 hours	24 hours	1 hour
To cure:	7 days	7 days	3 days

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

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 Xylene, R2K4. Clean tools immediately after use with Xylene, R2K4. 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.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Xylene, R2K4.

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.

Application above recommended film thickness may result in mud cracking.

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

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