



**Protective
&
Marine
Coatings**

**ZINC CLAD® 3100
WATERBASED PRE-CONSTRUCTION PRIMER**

**PART A
PART F**

**B69V480
B69D480**

**BASE
DUST**

Revised: October 1, 2018

PRODUCT INFORMATION

6.25

PRODUCT DESCRIPTION

ZINC CLAD 3100 is a two-package, waterborne, inorganic zinc pre-construction primer designed to provide excellent welding and weathering properties. It provides the end user added flexibility in shops & facilities where VOC & HAPS emissions are restrictive. Zinc Clad 3100 brings a number of features & benefits, among them are:

- No HAPS
- Fast dry
- High speed weldability and cutting
- Optimized for automated plate line application
- Heat resistant
- Provides corrosion protection
- Long term weathering
- Long pot life (up to 24 hours)
- Can be sprayed via standard airless, air-assisted airless, HVLP and conventional spray equipment
- Compatible with manual, semi-automatic and automated welding techniques

PRODUCT CHARACTERISTICS

Finish:	Flat
Color:	Gray
Weight Solids:	59% ± 2% mixed
VOC (EPA Method 24):	<50 g/L ; 0.42 lb/gal
Zinc Content in Dry Film:	46.4% by weight
Mix Ratio:	2 components; premeasured
A:F 1:1 by weight	4.16 gallons mixed

Recommended Spreading Rate per coat:

Wet mils (microns)	1.7	(43)
Dry mils (microns)	0.6	(15)
Theoretical coverage sq ft/gal (m²/L)	802	(19.7)

**Recommended DFT is for blasted steel having an angular and jagged surface profile of ~2 mils (50 microns). For extended weathering, a higher DFT may be specified, but weld quality & cutting speeds may be inhibited.*

Drying Schedule @ 1.7 mils wet (43 microns):

@ 77°F/25°C / 50% RH

To touch:	5 minutes
To handle:	10 minutes
To topcoat:	3 hours
To cure:	7 days

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

Sweat-in-Time:	None required
Pot Life:	12-24 hours*

*Temperature, humidity, and volume dependent, among other factors.

PRODUCT CHARACTERISTICS (CONT'D)

Shelf Life:	Part A - 9 months, unopened Part F - 24 months, unopened Store indoors at 50°F (10°C) to 100°F (38°C)
Flash Point:	N/A
Reducer/Clean Up:	Water

RECOMMENDED USES

- Shipbuilding
- Petrochemical tank construction
- Water storage and Water treatment tank fabrication
- Structural steel
- Protection of steel plate and shapes during storage, transportation and fabrication



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RECOMMENDED SYSTEMS

Dry Film Thickness / ct.
Mils (Microns)

Steel/Atmospheric and Immersion Service:

1 ct. Zinc Clad 3100 0.60 (15)
1 or 2 cts. Recommended Topcoat

Zinc Clad 3100 is compatible with a wide range of Sherwin-Williams primers and topcoats. For specific recommendations related to Atmospheric or Immersion Service, please consult your Sherwin-Williams Representative for a recommendation appropriate to your service needs.

A brief list of commonly specified products are:

• Dura-Plate 235	• MIL-DTL-24441
• Dura-Plate 301	• MIL-PRF-23236
• Fast Clad ER	• Seaguard 5000 HS
• Macropoxy 80	• Seaguard 6000
• Macropoxy 646	• Seaguard 6100

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

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.

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.

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

Minimum recommended surface preparation:

Steel/Atmospheric and Immersion Service:

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

Sa 2½ Very Thorough Blast Cleaning (ISO 8501-1)
NACE 2

Note: Surface profile should be angular and jagged with a profile height of ~2 mils (50 microns)

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature: 50°F (10°C) minimum,
110°F (43°C) maximum
(air, surface, and material)
At least 5°F (2.8°C) above dew point

Relative humidity: 30% minimum, 85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:

Part A: 3.5 gallons in a 5 gallon pail
Part F: 30.8 lbs. zinc dust in a 2 gallon pail

Weight: 15.32 ± 0.2 lb/gal, 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.

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 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.

Steel/Atmospheric and 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 maximum). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

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 2 mils (50 micron) maximum surface profile. This method may result in improved adhesion and performance.

APPLICATION CONDITIONS

Temperature: 50°F (10°C) minimum, 110°F (43°C) maximum (air, surface, and material) At least 5°F (2.8°C) above dew point

Relative humidity: 30% minimum, 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.....Water

Airless Spray

Pump.....30:1
Pressure.....800-1,400 psi
Hose.....1/4" ID
Tip517
Filter60 mesh
Reduction.....As needed up to 10% by volume with Water

Conventional Spray (HVLP)

(continuous agitation required)

GunAccuspray 125Z - 1976 Derlin Fluid Gun
Fluid Nozzle72
Needle.....72
Air Nozzle.....63PB
Atomization Pressure.....55 - 80 psi
Fluid Pressure.....15 - 30 psi
Reduction.....Not required

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.

BrushFor touch-up only

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



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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Zinc Clad 3100 comes in 2 premeasured containers which when mixed provides 4.16 gallons (15.7L) of ready-to-apply material.

Mixing Instructions: Mix paint thoroughly with low speed power agitation prior to use. While mixing Part A, with power agitation, add zinc dust, Part F. **Do not add vehicle to zinc dust.** Add water reducer after both components have been thoroughly mixed. After mixing, pour through a 40-mesh screen.

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

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

Recommended Spreading Rate per coat:

Wet mils (microns)	1.7	(43)
Dry mils (microns)	0.6	(15)
Theoretical coverage sq ft/gal (m²/L)	642	(15.8)

**Recommended DFT is for blasted steel having an angular and jagged surface profile of ~2 mils (50 microns). For extended weathering, a higher DFT may be specified, but weld quality & cutting speeds may be inhibited.*

Drying Schedule @ 1.7 mils wet (43 microns):

@ 77°F/25°C / 50% RH

To touch:	5 minutes
To handle:	10 minutes
To topcoat:	3 hours
To cure:	7 days

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

Sweat-in-Time:	None required
Pot Life:	12-24 hours*

*Temperature, humidity, and volume dependent, among other factors.

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 water. Clean tools immediately after use with water. Follow manufacturer's safety recommendations when using any solvent.

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PERFORMANCE TIPS

Any oxide on the zinc surface due to weathering exposure must be removed prior to topcoating

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 water.

Not recommended for severe acid or alkali exposures.

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

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