Protective & Marine Coatings

ZINC PLATE™
WELDABLE INORGANIC ZINC-RICH PRECONSTRUCTION PRIMER

PART A **B69A10** **BASE**
PART B **B69V10** **HARDENER**

Revised 9/09

PRODUCT INFORMATION

6.22

PRODUCT DESCRIPTION

ZINC PLATE WELDABLE PRECONSTRUCTION PRIMER is a solvent-based, two-package, inorganic ethyl silicate, zinc rich preconstruction primer.

- Single coat application
- Provides corrosion protection
- Weldable
- Low fume release during welding
- Fast Dry
- Long pot life - 24 hours
- Easy mix 1:2 ratio

PRODUCT CHARACTERISTICS

Finish:	Flat
Color:	Gray-green
Volume Solids:	23% ± 2%, mixed, calculated
Weight Solids:	58% ± 2 %, mixed
VOC (EPA Method 24):	<650 g/L; 5.41 lb/gal, mixed
Zinc Content in Dry Film:	67% by weight
Mix Ratio:	2 components; premeasured 1:2 5 gallons (18.9L) mix

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**2.0** 50	**3.5** 88
Dry mils (microns)	**0.5** 13	**0.8** 20
~Coverage sq ft/gal (m^2/L)	**461** 11.3	**738** 18.1
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**368** 9.0	

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

Drying Schedule @ 2.0 mils wet (100 microns):

	@ 77°F/25°C	@ 100°F/38°C *50% RH*	@ 120°F/49°C
To touch:	4 minutes	2 minutes	1 minute
To handle:	7 minutes	5 minutes	3 minutes
To topcoat:	7 days	7 days	7 days
To cure:	7 days	7 days	7 days
Drying time is temperature, humidity, and film thickness dependent.			
Pot Life:	24 hours	8 hours	4 hours
Sweat-in-Time:		None required	

Shelf Life:	9 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C)
Flash Point:	56°F (13°C) PMCC, mixed
Reducer/Clean Up:	
Below 80°F (27°C):	Xylene, R2K4
Above 80°F (27°C):	Reducer #58, R7K58

RECOMMENDED USES

- For use over prepared blasted steel
- For protection of steel on marine vessels and off-shore structures during construction
- Where impact and abrasion resistance are required
- For areas where welding and heat resistance are required
- Acceptable for immersion service with recommended topcoats

PERFORMANCE CHARACTERISTICS

Substrate*: Steel
Surface Preparation*: SSPC-SP10/NACE 2
System Tested*:
1 ct. Zinc Plate Weldable PCP @ 0.5 mils (13 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D968, Falling Sand	15.7 liters per mil
Adhesion	ASTM D4541	665 psi
Dry Heat Resistance	ASTM D2485	750°F (399°C)
Exterior Exposure	6 months Kuri Beach, NC	Rating 10 per ASTM D610 for rusting; Rating 10 per ASTM D714 for blistering
Flexibility	ASTM D522, 180° bend, 1/8" mandrel	Passes
Impact Resistance	ASTM D2794	Direct Impact - 160 in lb; Reverse Impace - 40 in lb
Pencil Hardness	ASTM D3363	6H
Salt Fog Resistance	ASTM B117, 2500 hours	Rating 10 per ASTM D714 for Blistering; Rating 9 per ASTM D610 for Rusting
Welding Test	Mil-STD-248D, filet size 3/16", travel speed 15 in/min, Volts 23	Passes

continued on back

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RECOMMENDED SYSTEMS

	Dry Film Thickness / ct. Mils	(Microns)
Steel, atmospheric or immersion:		
1 ct. Zinc Plate Weldable PCP	0.5 - 0.8	(13-20)

Acceptable topcoats (including immersion service):
Dura-Plate 235
Macropoxy 646
Mil-P-24441B
TarGuard
Mil-P-23236

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-SP10/NACE 2

Prior to topcoating, remove all soluble salts and contaminants. For immersion service, maximum chloride content allowed is 5 µg/cm^2.

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:	40°F (4.5°C) minimum, 100°F (38°C) maximum (air, surface, and material) At least 5°F (2.8°C) above dew point
Relative humidity:	40% - 90%

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:	5 gallons (18.9L) mixed
B69A10	1.67 gallons (6.3L) in a 5 gallon (18.9L) can (39.3 lbs / 17.8 Kg)
B69V10	3.33 gallons (12.6L) in a 5 gallon (18.9L) can (25.0 lbs / 11.3 Kg)
Weight:	13.19 ± 0.2 lb/gal ; 1.6 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.

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

6.22

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 or 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 (1.5-2 mils / 38-50 microns). 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 1.5-2.0 mil (38-50 micron) surface profile. This method may result in improved adhesion and performance.

Prior to topcoating, remove all soluble salts and contaminants. For immersion service, maximum chloride content allowed is 5 µg/cm^2.

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:	40°F (4.5°C) minimum, 100°F (38°C) maximum (air, surface, and material) At least 5°F (2.8°C) above dew point
Relative humidity:	40% - 90%

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
Below 80°F .....Xylene, R2K4
Above 80°F .....Reducer #58, R7K58

Airless Spray
(use Teflon packings and continuous agitation)
Pressure.....1800 - 2000 psi
Hose.....3/8" ID
Tip .....015" - .019"
Reduction.....Not required

Conventional Spray
(continuous agitation required)
Gun .....Binks 95
Fluid Nozzle 66
Air Nozzle.....63PB
Atomization Pressure.....30 - 40 psi
Fluid Pressure.....10 - 20 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.

Brush .....For touch-up only

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

continued on back

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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Zinc Plate Weldable PCP comes in 2 premeasured containers which when mixed provides 5 gallons (18.9L) of read-to-apply material.

Mixing Instructions: mix contents of each component thoroughly using low speed power agitation. Make certain no pigment remains on the bottom or sides of the can. Then combine 1 part by volume of Part A **into** 2 parts by volume of Part B. Thoroughly agitate the mixture with power agitation.

If reducer solvent is used, add only after both components have been thoroughly mixed.

Continuous agitation of mixture during application is required.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**2.0** 50	**3.5** 88
Dry mils (microns)	**0.5** 13	**0.8** 20
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NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

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To handle:	7 minutes	5 minutes	3 minutes
To topcoat:	7 days	7 days	7 days
To cure:	7 days	7 days	7 days
Drying time is temperature, humidity, and film thickness dependent.			
Pot Life:	24 hours	8 hours	4 hours
Sweat-in-Time:		None required	

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

Topcoating: Note minimum cure times at normal conditions before topcoating. Longer drying periods are required if primer cannot be water mist sprayed when humidity is low.

Occasionally topcoats will pinhole or delaminate from zinc-rich coatings. This is usually due to poor ambient conditions or faulty application of topcoats. This can be minimized by:

- Providing adequate ventilation and suitable application and substrate temperature.
- Avoid dry spray of topcoat.
- If pinholing develops, apply a mist coat of the topcoat, reduced up to 50%. Allow 10 minutes flash off and follow with a full coat.
- Applying a wet full coat, but at minimum film build, prior to applying a complete full coat.

Excessive film build, poor ventilation, and cool temperatures may cause solvent entrapment and premature coating failure.

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

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 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.

Not recommended for severe acid or alkali exposures.

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

SAFETY PRECAUTIONS

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