Protective & Marine Coatings

Certified to NSF/ANSI 61

COROTHANE® I GALVAPAC 2K ZINC PRIMER

PART A B65G10 — **BINDER**
PART F B69D210 — **ZINC DUST**

Revised: May 6, 2013

PRODUCT INFORMATION

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PRODUCT DESCRIPTION

COROTHANE® I GALVAPAC 2K ZINC PRIMER is a two component, low VOC, moisture curing urethane zinc-rich primer that contains micaceous iron oxide. Designed for low temperature application to blast cleaned or power tool cleaned steel surfaces.

- Low temperature application - down to 20°F (-7°C)
- Easy to apply and recoat
- Resistant to mudcracking
- Abrasion and chemical resistant
- Meets Class B requirements for Slip Coefficient and Creep Resistance, .54
- Enhanced coating strength and edge protection with micaceous iron oxide addition

PRODUCT CHARACTERISTICS

Finish:	Flat
Color:	Gray
Volume Solids:	67% ± 2%, mixed
Weight Solids:	91.7% ± 2%
VOC (calculated):	<340 g/L; 2.8 lb/gal, mixed
Mix Ratio:	2 components; premeasured 2.75 gallon mix
Zinc Content in Dry Film:	83% ± 2% by weight

Recommended Spreading Rate per coat:

	Standard Min		Standard Max		AWWA Min		AWWA Max	
Wet mils (microns)	**4.5**	112	**6.8**	170	**3.0**	75	**6.0**	150
Dry mils (microns)	**3.0**	75	**4.0**	100	**2.0**	50	**4.0***	100*
~Coverage sq ft/gal (m^2/L)	**268**	6.5	**358**	8.8	**268**	6.5	**536**	13
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**1072**	26.2						

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

*See Recommended Systems on Product Information page

Drying Schedule @ 5.0 mils wet (125 microns):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 100°F/38°C
To touch:	45 minutes	20 minutes	10 minutes
To recoat (min.): atmospheric service	8 hours	4-6 hours	1 hour
To recoat (min.): immersion service	24 hours	12 hours	10 hours
To recoat (max.):	12 months	12 months	12 months
To cure: atmospheric service	5 days	3 days	1 day
To cure: immersion service	14 days	7 days	5 days

If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.

For **Potable Water Service**, allow a minimum cure time of 7 days @ 77°F (25°C) prior to placing in service. Sterilize and rinse per AWWA C652.

Shelf Life:	Part A - 12 months, unopened Part F - 24 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	94°F (34°C), PMCC
Reducer/Clean Up:	Reducer #15, R7K15

RECOMMENDED USES

- **Immersion Service - potable water**: Meets NSF Standard 61 for use in potable water storage.
  - 250,000 gallon untopcoated
  - 20,000 gallon minimum topcoated
- Meets requirements of SSPC Paint Spec No. 40 for zinc rich moisture cure urethane primer
- As a primer in a urethane coating system for bridges, tanks, chemical, and marine structures
- Wind Towers - onshore and offshore
- Ideal for priming water assisted abrasive blasted surfaces where flash rusting or blooming limits the use of conventional zinc rich coatings
- Acceptable for use with cathodic protection with select topcoats
- Conforms to AWWA D102 Inside Coating System #3 (ICS-3), Inside Coating System #5 (ICS-5), Outside Coating System #2 (OCS-2), Outside Coating System #3 (OCS-3), Outside Coating System #4 (OCS-4), and Outside Coating System #6 (OCS-6)
- A component of INFINITANK

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP5

System Tested*:

1 ct. Corothane I GalvaPac 2K Zinc Primer @ 3.5 mils (88 microns) dft
1 ct. Corothane I MIO-Aluminum @ 3.0 mils (75 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	45 mg loss
Adhesion (Zinc only)	ASTM D4541	1943 psi
Corrosion Weathering	ASTM D5984, 15 cycles, 5000 hours	Rating 10 per ASTM D610 Rusting (field); Rating 10 per ASTM D714 Blistering
Direct Impact Resistance (Zinc only)	ASTM D2794	160 in. lb.
Dry Heat Resistance	ASTM D2485	300°F (149°C) continuous, 350°F (177°C) intermittent
Flexibility	ASTM D522, 180° bend, 1/4" mandrel	Passes
Immersion (Galvapac/2 cts Macropoxy 646 NSF)	5 year potable water	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Moisture Condensation Resistance (Zinc only)	ASTM D4585, 100°F (38°C), 4000 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Pencil Hardness	ASTM D3363	2H (zinc only)
Salt Fog Resistance (Zinc only)	ASTM B117, 5000 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Slip Coefficient* (Zinc only)	AISC Specification for Structural Joints Using ASTM A325 or ASTM A490 Bolts	Class B, .54
Wet Heat Resistance	Non-immersion	190°F (88°C)

Complies with ISO 12944-5 C5I and C5M requirements.

*Refer to Slip Certification document

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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Immersion Service, Potable Water, Steel:			
1 ct.	Corothane I GalvaPac 2K Zinc Primer	3.0-4.0	(75-100)
2 cts.	Macropoxy 646 PW	5.0-10.0	(125-250)
Immersion Service (Non-Potable Water), Steel:			
1 ct.	Corothane I GalvaPac 2K Zinc Primer	3.0-4.0	(75-100)
2 cts.	Corothane I Coal Tar	5.0-7.0	(125-175)
Atmospheric Service, Steel:			
*AWWA D102 Outside Coating System No. 2 minimum AWWA		7.5	(188)
1 ct.	Corothane I GalvaPac 2K Zinc Primer	3.0	(75)
1 ct.	Corothane Ironox B	3.0	(75)
1 ct.	Corothane I HS	1.5	(40)
*AWWA D102: Outside Coating System No. 6 minimum AWWA		6.0	(150)
1 ct.	Corothane I GalvaPac 2K Zinc Primer	2.0	(50)
1 ct.	Macropoxy 646 PW	2.0	(50)
1 ct.	Acrolon 218HS	2.0	(50)
Steel, Rapid Return to Service:			
1 ct.	Corothane I GalvaPac 2K Zinc Primer	3.0-4.0	(75-100)
1 ct.	Fast Clad Urethane	6.0-9.0	(150-225)
ISO 12944 C5M System:			
1 ct.	Corothane I GalvaPac 2K Zinc Primer	3.0-4.0	(75-100)
1 ct.	Fast Clad Urethane	6.0-9.0	(150-225)

Acceptable for use over Zinc Clad PCP Ultra. Topcoat required.

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.

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 preferred

Immersion, with recommended topcoat: SSPC-SP10, 2 mil (50 micron) profile

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:

air and surface: 20°F (7°C) minimum, 120°F (49°C) maximum

material: 45°F (7°C) minimum

Do not apply over surface ice

Relative humidity: 30% minimum, 99% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:

Part A: 1.73 gallons (6.5L) in a 3 gallon (11.3L) container

Part F: 60 lb zinc dust, 7.2 Kg/L

Weight: 28.5 ± 0.2 lb/gal, 3.42 Kg/L

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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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.

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.

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.

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:
air and surface: 20°F (7°C) minimum
120°F (49°C) maximum
material: 45°F (7°C) minimum

Do not apply over surface ice

Relative humidity: 30% minimum, 99% 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 .....Reducer #15, R7K15

Airless Spray
Pump.....30:1
Pressure.....1800-2000 psi
Hose.....1/4" ID
Tip .....015" - .019"
Filter.....60 mesh
Reduction.....As needed up to 10% by volume

Conventional Spray

Unit.....	Graco	Binks
Gun	900	95
Fluid Nozzle	070	66/65
Air Nozzle.....	947	63PR
Atomization Pressure.....	60-70 psi	60-70 psi
Fluid Pressure.....	15-20 psi	15-20 psi
Reduction.....	As needed up to 10% by volume	

Brush
Brush.....Natural bristle
Reduction.....As needed up to 10% by volume

Roller
Cover .....3/8" natural or synthetic with solvent resistant core
Reduction.....As needed up to 10% by volume

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.

Corothane I - GalvaPac Zinc Primer comes in 2 premeasured containers which when mixed provides 2.75 gallons (10.4L) of ready-to-apply material.

Mixing Instructions: Thoroughly agitate Binder Part A. Using continuous air driven agitation, slowly mix all 60 lbs. of Zinc Dust, B69D210, Part F into Binder Part A until mixture is completely uniform. After mixing, pour mixture through 30-60 mesh screen. Mixed material must be used within 8 hours. Do not mix previously mixed material with new.

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

Recommended Spreading Rate per coat:

	Standard				AWWA			
	Min		**Max**		**Min**		**Max**	
Wet mils (microns)	**4.5**	112	**6.8**	170	**3.0**	75	**6.0**	150
Dry mils (microns)	**3.0**	75	**4.0**	100	**2.0**	50	**4.0***	100*
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NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

*See Recommended Systems on Product Information page

Drying Schedule @ 5.0 mils wet (125 microns):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 100°F/38°C
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If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.

For **Potable Water Service**, allow a minimum cure time of 7 days @ 77°F (25°C) prior to placing in service. Sterilize and rinse per AWWA C652.

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 Reducer #15, R7K15. Clean tools immediately after use with Reducer #15, R7K15. 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.

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, adhesion, and NSF 61 approval.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer #15, R7K15.

Pour a small amount of Reducer #15, R7K15 over the top of the paint in the can to prevent skinning or gelling.

Place a temporary cover over the pail to keep excessive moisture, condensation, fog, or rain from contaminating the coating.

Do not use continuous agitation.

It is recommended that partially used cans not be sealed/closed for use at a later date.

An intermediate coat is recommended to provide a uniform appearance of the topcoat.

Corothane I KA Accelerator is acceptable for use (except NSF applications). See data page 5.98 for details.

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

SAFETY PRECAUTIONS

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