Protective & Marine Coatings

Certified to NSF/ANSI/CAN 61

Meeting Health Effects Requirements of NSF/ANSI/CAN 600

COROTHANE® I GALVAPAC 1K ZINC PRIMER

B65G11 GRAY
B65RW11 RED

Revised: January 3, 2024

PRODUCT INFORMATION

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PRODUCT DESCRIPTION

COROTHANE I GALVAPAC 1K ZINC PRIMER is a moisture curing urethane zinc-rich primer. Designed for low temperature application to steel surfaces.

- Low temperature application - down to 20°F (-7°C)
- NSF approved to Standard 61/600 for potable water
- Abrasion and chemical resistant
- Easy to apply and recoat
- Usable for immersion service with recommended topcoated
- Resistant to mudcracking
- 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 and Red
Volume Solids:	67% ± 2%
Weight Solids:	91.7% ± 2%
VOC (calculated):	<300 g/L; 2.5 lb/gal (unreduced) <340 g/L; 2.8 lb/gal (reduced 10%)
Zinc Content in Dry Film:	85% minimum 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** 13.1
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil/25 micron 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 reverse side

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 (minimum), atmospheric service:	8 hours	4-6 hours	1 hour
To recoat (minimum), immersion service:	24 hours	12 hours	10 hours
To recoat (maximum):	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, consult www.nsf.org for details on recoat and dry times at indicated temperature. Sterilize and rinse per AWWA C652.

Shelf Life:	12 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 No. 15 (R7K15), Polane Retarder (R7K216), or
VOC exempt:	Reducer No. 111 (R7K111)

*Reducer No. 111 (R7K111) and Polane Retarder (R7K216) cannot be used for NSF applications. Reducer No. 15 (R7K15) is potable water approved up to 10% by volume.

RECOMMENDED USES

- **Immersion Service - potable water**: Meets NSF Standard 61/600 for use in potable water storage.
  - 250,000 gallon untopcoated
  - 20,000 gallon minimum topcoated
- Meets requirements of SSPC Paint Spec No. 40, Type I and Type II, for zinc rich moisture cure urethane primer
- Meets requirements of SSPC Paint 20, Level 1
- As a primer in a urethane coating system for bridges, tanks, chemical, and marine structures
- 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), Inside Coating System #6 (ICS-6), 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 1K 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 (GalvaPac only)	ASTM D4541; ASTM D3359	1943 psi (ASTM D4541); 5B (ASTM D3359)
Corrosion Weathering	ASTM D5894, 15 cycles, 5000 hours	Rating 10 per ASTM D610 Rusting (field); Rating 10 per ASTM D714 Blistering
Direct Impact Resistance (Galva-Pac only)	ASTM G14	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 (GalvaPac 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 (GalvaPac only)	ASTM B117, 5000 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Slip Coefficient* (GalvaPac only)	AISC Specification for Structural Joints Using ASTM A325 or ASTM A490 Bolts	Class B, .54, tension and creep <.005"
Wet Heat Resistance	Non-immersion	190°F (88°C)

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

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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Immersion Service (Potable Water), Steel:			
*AWWA D102: Inside Coating System No. 5			
minimum AWWA		10.0	(250)
1 ct.	Corothane I GalvaPac 1K Zinc Primer	2.0	(50)
2 ct.	SherPlate 600	4.0	(100)
Immersion Services (Potable Water), Steel:			
1 ct.	Corothane I GalvaPac 1K Zinc Primer	3.0-4.0	(75-100)
2 cts.	SherPlate 600	3.0-18.0	(75-450)
Immersion Services (Potable Water), Ductile Iron Pipe:			
1 ct.	Corothane I GalvaPac 1K Zinc Primer	3.0-4.0	(75-100)
2 cts.	SherPlate 600	3.0-18.0	(75-450)
Immersion Service (Non-Potable Water), Steel:			
1 ct.	Corothane I GalvaPac 1K 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 1K Zinc Primer	3.0	(75)
1 ct.	Corothane Ironox B	3.0	(75)
1 ct.	Corothane I HS	1.5	(40)
Atmospheric Service,Steel:			
*AWWA D102: Outside Coating System No. 6			
minimum AWWA		6.0	(150)
1 ct.	Corothane I GalvaPac 1K Zinc Primer	2.0	(50)
1 ct.	SherPlate 600	2.0	(50)
1 ct	Acrolon 218HS	2.0	(50)
Atmospheric Service,Steel:			
1 ct.	Corothane I GalvaPac 1K Zinc Primer	3.0-4.0	(75-100)
1 ct.	Sher-Loxane 800	4.0-6.0	(100-150)

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

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	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: 3 gallon (11.3L) container

Weight: 28.5 ± 0.2 lb/gal ; 3.42 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.

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. 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.

Ductile Iron Pipe, Atmospheric Service:
Minimum surface preparation is Power Tool Clean per NAPF 500-03-03. Remove all oil and grease from surface by Solvent Cleaning per NAPF 500-03-01.

Ductile Iron Pipe, Buried and Immersion Service:
Minimum surface preparation is Abrasive Blast Cleaning per NAPF 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 NAPF 500-03-01.

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

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 No. 15 (R7K15), Polane Retarder (R7K216), or Reducer No. 111 (R7K111)

*Reducer No. 111 (R7K111) and Polane Retarder (R7K216) *cannot* be used for NSF applications. Reducer No. 111 (R7K111) *can* be used for VOC exempt applications. Reducer No. 15 (R7K15) is potable water approved up to 10% by volume.

Airless Spray

Pump	30:1
Pressure	2500 - 3000 psi
Hose	1/4" ID
Tip	.017" - .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	66PR
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.

Mix material thoroughly prior to use with a low speed power agitator until completely uniform. After mixing, pour through a 30-60 mesh filter.

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

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** 13.1
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil/25 micron 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 reverse side

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 (minimum), atmospheric service:	8 hours	4-6 hours	1 hour
To recoat (minimum), immersion service:	24 hours	12 hours	10 hours
To recoat (maximum):	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, consult www.nsf.org for details on recoat and dry times at indicated temperature. 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 No. 15 (R7K15), Reducer No. 111 (R7K111), or Polane Retarder (R7K216). Clean tools immediately after use with Reducer No. 15 (R7K15), Reducer No. 111 (R7K111), or Polane Retarder (R7K216). 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, and adhesion.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer No. 15 (R7K15), Reducer No. 111 (R7K111), or Polane Retarder (R7K216).

Pour a small amount of Reducer No. 15 (R7K15), Reducer No. 111 (R7K111), or Polane Retarder (R7K216) 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.

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.

Not for use with cathodic protection except as indicated under the recommended systems.

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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