



Protective & Marine Coatings

FAST-CLAD® ZINC HS REINFORCED ZINC PRIMER

PART A
PART B

B69A352
B69V352

BASE
HARDENER

Revised: September 17, 2020

PRODUCT INFORMATION

6.16

PRODUCT DESCRIPTION

Fast-Clad Zinc HS is an inorganically reinforced zinc rich primer formulated to cathodically protect steel in various industrial and marine environments.

- Zinc dust is pre-wetted for easy incorporation and mixing
- Reinforced film provides durable performance
- Fast recoat time for improved productivity
- Provides resistance to topcoat bubbling common to other types of inorganic zincs.
- Excellent resistant to dry spray and mudcracking
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish:	Flat
Color:	Gray / Green
Volume Solids:	62% ± 2%
Weight Solids:	87%± 2%
Percent Zinc in Dry Film:	66%
Mix ratio:	9:1 (2 components)
VOC (mixed, packaged):	
Unreduced	<300g/L; 2.50 lb/gal
Reduced 5% with R6K10	<340g/L; 2.80 lb/gal

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	3.0 (75)	6.5 (162)
Dry mils (microns)	2.0 (50)	4.0 (100)
~Coverage sq ft/gal (m ² /L)	250 (6.1)	500 (12.2)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	992 (24.3)	

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

Drying Schedule @ 4.0 mils wet (100 microns):

	@ 40°F/4.5°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	1 hour	40 minutes	15 minutes
To handle:	12 hours	2 hours	45 minutes
To recoat:			
minimum:	12 hours	3 hours	45 minutes
maximum:	6 months	6 months	6 months
To cure:	10 days	7 days	5 days
<i>Drying time is temperature, humidity, and film thickness dependent.</i>			
Pot Life:	10 hours	8 hours	4 hours
Sweat-in-Time:	30 minutes	15 minutes	10 minutes

Shelf Life:	24 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C)
Flash Point:	86°F (30°C) PMCC, mixed
Reducer/Clean Up:	MEK (R6K10)

RECOMMENDED USES

For use over prepared steel in the following industrial environments:

- Petro-chemical
- Bridges and highways
- Fabrication shops
- Pulp and paper mills
- Marine - ships, barges, structures, offshore
- Immersion with recommended topcoat
- Also acceptable for touch-up and repair

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP6

System Tested*:

1 ct. Fast-Clad Zinc HS @ 2.0-4.0 mils (50-100 microns)

1 ct. Macropoxy 646 @ 5.0-10.0 mils (125-250 microns)

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance (primer only)	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	300 mg loss
Adhesion	ASTM D4541	1300 psi
Corrosion Resistance	ASTM D5894, 3 cycles, 1000 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Direct Impact Resistance (primer only)	ASTM D2794	75 in. lbs.
Dry Heat Resistance (primer only)	ASTM D2485, Method A, Quench Test	250°F (121°C)
Flexibility (primer only)	ASTM D522, 180° bend, 1/4" mandrel	Passes, 2.5% Elongation
Immersion Resistance, Salt Water	77°F (25°C), 500 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Immersion Resistance, Fresh Water	77°F (25°C), 500 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Moisure Condensation Resistance	ASTM D4585, 100°F (38°C), 1000 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Pencil Hardness (primer only)	ASTM D3363	3H
Salt Fog Resistance	ASTM B117, 1000 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering



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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct.	
		Mils	(Microns)
Immersion System			
Steel			
1 ct.	Fast-Clad Zinc HS	2.0-4.0	(50-100)
2 cts.	Macropoxy 646	5.0-10.0	(125-250)
2 cts.	SeaGuard 5000 HS	4.0-7.0	(100-175)
or			
2 cts.	SeaGuard 6000	5.0-8.0	(125-200)
Atmospheric Systems			
Steel, epoxy topcoat:			
1 ct.	Fast-Clad Zinc HS	2.0-4.0	(50-100)
1-2 cts.	Macropoxy 646	5.0-10.0	(125-250)
or			
1-2 cts.	SeaGuard 5000 HS	4.0-7.0	(100-175)
Steel, epoxy topcoat:			
1 ct.	Fast-Clad Zinc HS	2.0-4.0	(50-100)
1-2 cts.	Tile-Clad HS	2.5-4.0	(63-100)
Steel, epoxy/urethane topcoat:			
1 ct.	Fast-Clad Zinc HS	2.0-4.0	(50-100)
1 ct.	Macropoxy 646	5.0-10.0	(125-250)
1 ct.	Acrolon 218 HS	3.0-6.0	(75-150)
Steel, acrylic topcoat:			
1 ct.	Fast-Clad Zinc HS	2.0-4.0	(50-100)
1 ct.	Fast-Clad HB Acrylic	5.0-8.0	(125-200)

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-SP12/NACE 5, WJ-4 (with existing profile) or SSPC-SP6/NACE 3
Immersion:	SSPC-SP10/NACE 2, 2-3 mil (50-75 micron) profile or SSPC-SP12/NACE5, WJ-2/SC-2 (with existing profile)
Concrete & Masonry:	
Atmospheric:	SSPC-SP 13/NACE 6, or ICRI No. 310.2R, CSP 1-3
Immersion:	SSPC-SP 13/NACE 6, 6-4.3.1 or 4.3.2, or ICRI No. 310.2R, CSP 1-3

Surface Preparation Standards

Condition of Surface	ISO 8501-1 BS7079:A1	SSPC	NACE
White Metal	Sa 3	SP 5	1
Near White Metal	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted C St 2	SP 2	-
Pitted & Rusted	D St 2	SP 2	-
Rusted	C St 3	SP 3	-
Power Tool Cleaning	Pitted & Rusted D St 3	SP 3	-

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature:	40°F (4.5°C) minimum, 120°F (49°C) maximum
Surface:	
Air and material:	40°F (4.5°C) minimum, 100°F (38°C) maximum
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:	5 gallon (18.9L) mix
Part A:	4.5 gallons (17L) in a 5 gallon (18.9L) container
Part B:	1/2 gallon (1.89L) in a 1 gallon (3.78L) container
Weight:	20.30 ± 0.3 lb/gal ; 2.43 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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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 Ultra High Pressure Water Jetting for Steel per SSPC-SP12/NACE 5, WJ-4 (with existing profile) or Commercial Blast Cleaning per SSPC-SP6/NACE 3. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Coat 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 or SSPC-SP12/NACE No. 5. For SSPC-SP10, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils). For SSPC-SP12/NACE No. 5, all surfaces to be coated shall be cleaned in accordance with WJ-2/SC-2 standards. Pre-existing profile should be approximately 2 mils (50 microns). Light rust bloom is allowed. Remove all weld spatter and round all sharp edges by grinding. Prime any bare steel the same day as it is cleaned.

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.

Surface Preparation Standards

Table 1. Typical Standards				
	Condition of Surface	ISO 8501-1 BS7079:A1	SSPC	NACE
White Metal		Sa 3	SP 5	1
Near White Metal		Sa 2.5	SP 10	2
Commercial Blast		Sa 2	SP 6	3
Brush-Off Blast		Sa 1	SP 7	4
Hand Tool Cleaning	Rusted	C St 2	SP 2	-
	Pitted & Rusted	D St 2	SP 2	-
	Rusted	C St 3	SP 3	-
Power Tool Cleaning	Pitted & Rusted	D St 3	SP 3	-

APPLICATION CONDITIONS

Temperature:

Surface: 40°F (4.5°C) minimum, 120°F (49°C) maximum

Air and material: 40°F (4.5°C) minimum, 100°F (38°C) maximum

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/Clean Up:

ReducerMEK (R6K10)

Airless Spray

Pump.....30:1 minimum
Pressure.....2500 - 3000 psi
Hose.....1/4" ID
Tip0.017" – 0.019"
Filter60 mesh
Reduction.....Not recommended

Conventional Spray

GunBinks 95
Fluid Nozzle63C
Air Nozzle.....63PB
Atomization Pressure.....50 psi
Fluid Pressure.....15-20 psi
Reduction.....As needed up to 5% by volume

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 (small areas only)

Brush.....Natural Bristle
Reduction.....Not recommended

Roller (small areas only)

Cover3/8" woven with solvent resistant core
Reduction.....Not recommended

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 contents of component A and B thoroughly with low speed power agitation. Make sure no pigment remains on the bottom of the can. Then combine 9 parts by volume of Part A with one part by volume of Part B. Thoroughly agitate the mixture with power agitation at slow speeds. After mixing, pour through a 30-60 mesh screen. Allow the material to sweat-in as indicated. Re-stir before using.

If reducer solvent is used, add only after components have been thoroughly mixed, after sweat-in.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	3.0 (75)	6.5 (162)
Dry mils (microns)	2.0 (50)	4.0 (100)
~Coverage sq ft/gal (m ² /L)	250 (6.1)	500 (12.2)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	992 (24.3)	

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

Drying Schedule @ 4.0 mils wet (100 microns):

	@ 40°F/4.5°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	1 hour	40 minutes	15 minutes
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To recoat:			
minimum:	12 hours	3 hours	45 minutes
maximum:	6 months	6 months	6 months
To cure:	10 days	7 days	5 days
<i>Drying time is temperature, humidity, and film thickness dependent.</i>			
Pot Life:	10 hours	8 hours	4 hours
Sweat-in-Time:	30 minutes	15 minutes	10 minutes

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 MEK (R6K10). Clean tools immediately after use with MEK (R6K10). 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, over thinning, climate 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 down time with MEK (R6K10).

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 of coating above or below recommended film thickness may adversely affect coating performance.

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

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

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