Protective & Marine Coatings

COR-COTE® HP FF

FLAKE FILLED EPOXY

PART A	B62-415	SERIES
PART B	B62V415	HARDENER

Revised May 1, 2018

PRODUCT INFORMATION

TRM.17

PRODUCT DESCRIPTION

COR-COTE HP FF FLAKE FILLED EPOXY is a 100% solids, epoxy coating The outstanding, broad spectrum of chemical resistance of this product provides protection in chemical environments while maintaining properties such as gloss and stain resistance. Overlapping glass flakes reduce permeability, providing excellent performance in immersion service.

- Stain resistant, high gloss finish
- Chemical resistant
- No VOCs and low odor
- Low viscosity for ease of workability
- Low permeation rate
- Improved edge protection
- Film reinforcement

PRODUCT CHARACTERISTICS

Finish:	Gloss
Color:	Haze Gray, Tile Red
Volume Solids:	100%, calculated, mixed
VOC (calculated):	<100 g/L; .83 lb/gal, mixed
Mix Ratio:	2:1

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**10.0** (250)	**15.0** (375)
Dry mils (microns)	**10.0** (250)	**15.0** (375)
~Coverage sq ft/gal (m^2/L)	**100** (2.45)	**160** (3.9)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**1600** (39.2)	

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

Drying Schedule @ 10.0 mils wet (250 microns):

@ 73°F/23°C
50% RH

To touch:	6 hours
To recoat:	
minimum:	8 hours
maximum:	16 hours
Light traffic:	16 hours
To cure:	7 days

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

Pot Life:	25 minutes
Sweat-in-Time:	None required

Shelf Life:	36 months Store indoors at 40°F (4.5°C) to 100°F (38°C)
Viscosity (mixed):	2,400 cps
Reducer:	Not recommended
Clean Up:	Xylene, R2K4

RECOMMENDED USES

Cor-Cote HP FF Flake Filled Epoxy is used as a coating/lining and as a topcoat for self-leveling, mortar, and mortar laminate applications.

Protects concrete and steel surfaces in immersion and atmospheric exposure in tank linings, secondary containment, and process flooring applications in various facilities including:

- Automotive
- Electronics
- Metal & mining
- Power
- Water & wastewater
- Chemical processing
- Food & beverage
- Pharmaceutical
- Pulp & paper
- Petrochemical
- Acceptable for use in USDA inspected facilities

PERFORMANCE CHARACTERISTICS

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060	1000 g 1000 cycles CS-17: 70 mgs loss
Adhesion	ASTM D4541	Concrete - 350 psi; Steel - 1200 psi
Durometer Hardness	ASTM D2240	Shore D - 80
Flammability	ASTM D635	Self-extinguishing over concrete
Water Vapor Transmission	ASTM E96	.0032 perm in

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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Steel, with hold primer:			
Medium Film Lining			
1 ct.	Macropoxy 240 (as required for blast hold primer)	1.0-1.5	(25-40)
1 ct.	Steel-Seam FT910 as required for filling pits and transitioning sharp edges, weld seams, etc.		
2 cts.	Cor-Cote HP FF Flake Filled Epoxy	10.0 -15.0	(250-375)
Concrete (containment, flooring, with flexible base coat):			
Flexible Laminate			
1 ct.	Corobond 100 Epoxy Primer/Sealer	4.0-6.0	(100-150)
1 ct.	Sher-Tuff Epoxy	20.0-30.0	(500-750)
1 ct.	Cor-Cote HP (clear) with 1 oz glass mat (with glass mat)	20.0-30.0	(500-750)
2 cts.	Cor-Cote HP FF Flake Filled Epoxy	10.0-15.0	(250-375)
Concrete or Steel (lining, containment, flooring):			
Medium Film Lining			
1 ct.	*For Steel:* Dura-Plate UHS Primer	4.0-8.0	(100-200)
	For Concrete: Corobond 100 Epoxy Primer/Sealer	4.0-6.0	(100-150)
1 ct.	Steel-Seam FT910 as required for filling pits and transitioning sharp edges, weld seams, etc. on steel or for filling voids and bugholes on concrete		
2 cts.	Cor-Cote HP FF Flake Filled Epoxy	10.0-15.0	(250-375)
Mortar Laminate			
1 ct.	*For Steel:* Dura-Plate UHS Primer	4.0-8.0	(100-200)
	For Concrete: Corobond 100 Epoxy Primer/Sealer	4.0-6.0	(100-150)
1 ct.	Steel-Seam FT910 as required for filling pits and transitioning sharp edges, weld seams, etc. on steel or for filling voids and bugholes on concrete		
1 ct.	Cor-Cote HP Epoxy (Clear) with 30 lbs Type M Aggregate per 1.5 gallons (5.7L) yields 75-80 sq. ft. (1.8-2.0 m^2/L)	60.0-65.0	(1500-1625)
1 ct.	1.0 oz. glass mat with Cor-Cote HP Epoxy (Clear) saturant (with glass mat)	20.0-30.0	(500-750)
1 ct.	Cor-Cote HP FF Flake Filled Epoxy	10.0-15.0	(250-375)
Self-leveling Mortar Broadcast			
1 ct.	Corobond 100 Epoxy Primer/Sealer	4.0-6.0	(100-150)
1 ct.	Cor-Cote HP Epoxy Coating with 22 lbs of Type S Aggregate per 1.5 gallons (5.7L) plus 40-60 mesh aggregate broadcast yields 55-60 sq. ft. (1.3-1.5 m^2/L)	100.0-120.0	(2500-3000)
1 ct.	Cor-Cote HP (to fill)	15.0-20.0	(375-500)
1 ct.	Cor-Cote HP FF Flake Filled Epoxy	10.0-15.0	(250-375)

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/NACE3, 2 mil (50 micron) profile
- Immersion: SSPC-SP10/NACE2, 2-3 mil (50-75 micron) profile

Concrete & Masonry:
- Atmospheric: SSPC-SP13/NACE 6, ICRI No. 310.2R CSP 3-5
- Immersion: SSPC-SP13/NACE 6-4.3.1 or 4.3.2

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:	50°F (10°C) minimum, 90°F (32°C) maximum (air, surface, material)
	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:
- Part A: 2 gallons (7.56L) in a 3 gallon (11.7L) container and 5 gallons (18.9L)
- Part B: 1 gallon (3.78L) and 5 gallons (18.9L)

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

TRM.17

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 (2-3 mils / 50-75 microns). Remove all weld spatter and round all sharp edges. 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.

Concrete and Masonry
For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 3-5. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910. Primer required.

Follow the standard methods listed below when applicable:
ASTM D4258 Standard Practice for Cleaning Concrete.
ASTM D4259 Standard Practice for Abrading Concrete.
ASTM D4260 Standard Practice for Etching Concrete.
ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.
SSPC-SP 13/Nace 6 Surface Preparation of Concrete.
ICRI No. 310.2R Concrete Surface Preparation.

Concrete, Immersion Service:
For surface preparation, refer to SSPC-SP13/NACE 6, Section 4.3.1 or 1.3.2 or ICRI No. 310.2R, CSP 3-5.

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:	50°F (10°C) minimum, 90°F (32°C) maximum (air, surface, material) 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.

Reduction .....Not recommended

Cleanup .....Xylene, R2K4

Airless Spray:
Pump.....Graco Extreme, 68:1
Gun .....Graco XTR
Fluid Hose.....3/8" - 1/2" ID
Tip Orifice.....027" - .031"
Fan Width at 12" .....10"
Fluid Pressure.....3000 - 3800 psi
Filter Screen.....Must be removed
Transfer Pump .....10:1 ratio each side
Static Mixing Tube.....1/2" ID with 32 turns

Brush:
Brush.....Natural bristle for applications in small areas

Roller:
Cover .....3/8" nap

Squeegee:
Flat squeegee .....Acceptable for horizontal applications followed by back roll with 3/8" nap roller

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: Premix individual components separately, using a low-speed drill and Jiffy Blade model ES mixer. Make certain no pigment or glass flake remains on the bottom or sides of the can. Combine one part by volume of Part B to two parts by volume of Part A. Mix with low-speed drill and Jiffy Blade model ES mixer for three minutes and until uniform. To insure that no unmixed material remains on the sides and bottom of the cans after mixing, visually observe the container by pouring the material into a separate container. Marbled or streaky appearance is an indication of improper mixing.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**10.0** (250)	**15.0** (375)
Dry mils (microns)	**10.0** (250)	**15.0** (375)
~Coverage sq ft/gal (m^2/L)	**100** (2.45)	**160** (3.9)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**1600** (39.2)	

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

Drying Schedule @ 10.0 mils wet (250 microns):

	@ 73°F/23°C *50% RH*
To touch:	6 hours
To recoat:	
minimum:	8 hours
maximum:	16 hours
Light traffic:	16 hours
To cure:	7 days

If maximum recoat time is exceeded, abrade surface before recoating.

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

Pot Life:	25 minutes
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

For concrete, always perform Calcium Chloride test as per ASTM F1869. Do not proceed with MVE >3 lbs.

For steel, stripe coat all chine, welds, bolted connections, and sharp angles to prevent early failure in these areas.

Pot life of this material is moderately short. Working time can be extended by mixing small batches and by getting material out of mixing containers and on to the working surface in desired film thickness as quickly as possible.

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.

For Immersion Service: (if required) Holiday test in accordance with ASTM D5162 for steel, or ASTM D4787 for concrete.

Use of Corobond Conductive Epoxy Primer on concrete is recommended in order to provide a uniform conductive underlayment. Repair holidays found prior to application of final coat

Do not apply material beyond recommended pot life.

Do not mix previously catalyzed material with new.

Consult your Sherwin-Williams representative for specific application and performance recommendations.

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

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