Protective & Marine Coatings

COR-COTE FRE

Fiber Reinforced High Build Epoxy

Part A	B62A460	Gray
Part B	B62V460	Hardener

Revised: January 9, 2025

Product Information

TRM.42

Product Description

COR-COTE FRE is a glass-fiber reinforced, 100% solids epoxy designed for corrosion protection of concrete and steel in municipal and industrial wastewater treatment facilities, especially where a high build reinforced coating is required.

- 100% solids
- Resistant to water and wastewater treatment immersion

Product Characteristics

Finish:	Matte; shows some fiber in finished product
Color:	Gray
Volume Solids:	100%
VOC (measured):	160 g/L (EPA Method 24)
Weight Solids:	100%, calculated mixed
Mix Ratio:	1:1, mix by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**60.0** (1500)	**125.0** (3125)
Dry mils (microns)	**60.0** (1500)	**125.0** (3125)
~Coverage sq ft/gal (m^2/L)	**12.8** (0.3)	**26.6** (0.7)

Drying Schedule @ 120.0 mils wet (3000 microns):

	@ 77°F/25°C *50% RH*
To touch:	2 hours
To handle:	8 hours
To recoat:	
Minimum:	8 hours
Maximum:	2 weeks
Cure to service:	2 days

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

Pot Life:	30 minutes
Sweat-in-Time:	None

Shelf Life:	Part A: 9 months, unopened Part B: 6 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	204°F (95°C), PMCC ASTM D93
Clean Up/Reducer:	Clean up spray equipment by flushing system with R2KT4 to remove fibers from system. For general cleanup after flushing with R2KT4, use MEK. Do not thin material.

Recommended Uses

Protects concrete and steel surfaces in immersion and atmospheric exposure.

Ideally suited for coating, lining, and containment applications in water and wastewater facilities including:

- Lift stations
- Steel pipe
- Digesters
- Sluice ways
- Concrete pipe
- Manholes
- Trenches
- Basins
- Wet wells
- Sumps
- Clarifiers
- Influent chambers

Performance Characteristics

Substrate*: Steel
Surface Preparation*: SSPC-SP10
System Tested*:
1 ct. Cor-Cote FRE @ 80.0 mils (2000 microns) to 100.0 mils (2500 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Adhesion	ASTM D4541	1700 psi (steel)
Dry Heat Resistance	D2485 Quench test only	300°F (149°C)
Hardness, Shore D	ASTM 2240	75
Humidity Resistance	ASTM D4595	TBD
Immersion	ASTM D6943, 10 months fresh water	Rating 10 per ASTM D610 for rusting ; Rating 10 per ASTM D714 for blistering
Impact Resistance	ASTM D2794	30 in. lbs.

Epoxy coatings may darken or discolor following application and curing and may chalk when exposed to sunlight.

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Recommended Systems

		Dry Film Thickness / ct. Mils	(Microns)
Steel (Immersion Service):			
1 ct.	Cor-Cote FRE	60.0-125.0	(1500-3125)
or			
1 ct.	Cor-Cote FRE	60.0-125.0	(1500-3125)
1 ct.	Dura-Plate 6000	20.0-30.0	(500-750)

Cor-Cote FRE can be applied up to 120 mils thick in areas requiring protection from erosion. Topcoat with Dura-Plate 6000 to provide a smooth surface.

Concrete* (Immersion Service):			
1 ct.	Cor-Cote FRE	60.0-125.0	(1500-3125)
or			
1 ct.	Cor-Cote FRE	60.0-125.0	(1500-3125)
1 ct.	Dura-Plate 6000	20.0-30.0	(500-750)

Cor-Cote FRE can be applied up to 125 mils (3125 microns) thick in areas requiring protection from erosion. Topcoat with Dura-Plate 6000 to provide a smooth surface.

*Dura-Plate 2300 may be applied up to 1/4" for areas requiring resurfacing, patching or filling of voids.

The systems listed above are representative of the product's use, other systems may be appropriate.

Disclaimer

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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-SP 6/NACE 3, 2 mil (50 micron) profile
  - Immersion: SSPC-SP 10/NACE 2, 2-3 mil (50-75 micron) profile
* Concrete & Masonry:
  - Immersion: SSPC-SP 13/NACE 6-4.3.1 or 4.3.2, or ICRI No. 310.2R, CSP 3-5

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	-
Power Tool Cleaning	Rusted	C St 3	SP 3	-
	Pitted & Rusted	D St 3	SP 3	-

Tinting

Do not tint.

Application Conditions

Temperature:	50°F (10°C) minimum, 100°F (38°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.

Test Application Only Information

Packaging:	
Part A:	5 gallon (18.9L) container
Part B:	5 gallon (18.9L) container
Weight:	12.6 ± 0.2 lb/gl 1.5 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.

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Surface Preparations

Surface must be clean, surface dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Carbon Steel, Immersion Service:
Clean and degrease the surface prior to abrasive blasting per SSPC-SP 1 Solvent Cleaning. Methods described in SSPC-SP 1 include solvents, alkali, detergent/water, emulsions, and steam. The surface shall be abrasive blasted to SSPC-SP10/NACE No. 2 Near-White Blast Cleaning with a 2.0-3.0 mil (50-75 micron) profile. The anchor pattern shall be sharp with no evidence of a polished surface. The finished surface shall be free of all visible oil, grease, dust, dirt, mill scale, rust, coating, oxides, corrosion products, and other foreign matter with no more than 5% staining. After blasting, all dust and loose residue should be removed from the surface by acceptable means. Coat steel the same day as it is prepared and prior to the formation of rust.

Concrete and Masonry, Immersion Service:
Decontamination of the concrete surface requires the removal of oils, grease, wax, fatty acids and other contami¬nants and may be accomplished by the use of detergent scrubbing with a Sherwin-Williams cleaner and degreaser, low pressure water cleaning (less than 5,000 psi), steam cleaning, or chemical cleaning.The preferred methods for creating a surface profile, including the removal of dirt, dust, laitance and curing compounds, is abrasive blasting or scarifying to achieve an ICRI surface equivalent to CSP 3-5. Fill all cracks, voids, and bug holes with cementitious grout or Steel-Seam FT910. See ICRI Technical Guideline No. 310.2R for additional information.

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	-
Power Tool Cleaning	Rusted	C St 3	SP 3	-
	Pitted & Rusted	D St 3	SP 3	-

Application Conditions

Temperature:	50°F (10°C) minimum, 100°F (38°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.

Application requires a hopper feed delivery of mixed materials. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment and hoses before and after use with R2KT4, MEK, Acetone or appropriate thinner allowed by State, Federal Standards and VOC limitations.

Clean Up Solvent .....Reducer R2KT4

Airless Spray
- Pump.....Xtreme Mix 45:1 or 50:1
- Pressure.....1900 psi at the pump
- Hose.....1/2" ID hose (25 ft)
- Tip .....Graco Pistol grip mastic gun using XHD 531 tip
- Filter .....None
- Reduction.....None

Brush
- Brush.....Not recommended

Roller
- Cover .....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.

Prime pump and gun assembly with R2KT4.

Mixing Instructions: Mix contents of each component thoroughly with low speed power agitation. Make certain no pigment or fiber remains on the bottom of the can. Then combine one parts by volume of Part A with one part by volume of Part B. Thoroughly agitate the mixture with power agitation. Fill hopper container with mixed coating.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**60.0** (1500)	**125.0** (3125)
Dry mils (microns)	**60.0** (1500)	**125.0** (3125)
~Coverage sq ft/gal (m^2/L)	**12.8** (0.3)	**26.6** (0.7)

Drying Schedule @ 120.0 mils wet (3000 microns):

	@ 77°F/25°C *50% RH*
To touch:	2 hours
To handle:	8 hours
To recoat:	
Minimum:	8 hours
Maximum:	2 weeks
Cure to service:	2 days

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

Pot Life:	30 minutes
Sweat-in-Time:	None

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. Clean pump, hose, and gun by flushing system with R2KT4 to remove fiber. Then flush tools immediately after use with MEK.

Disclaimer

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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, rough-ness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, over thinning, climatic conditions, and excessive film build.

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.

Tinting is not recommended for immersion service.

For Immersion Service (if required): Holiday test in accordance with ASTM D 5162 for steel, or ASTM D 4787 for concrete.

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

Safety Precautions

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