



C&B Piping Coating Submittal

Exterior Coating: Macropoxy 5500LT High Solids epoxy shop coating

Manufacturer: Sherwin-Williams

Surface Prep: Remove oil, grease, and other surface contaminants per NAPF 500-03-01
Abrasive blast clean per NAPF 500-03-04 for pipe, NAPF 500-03-05 for cast fittings

Thickness: 3-5 mils Nominal DFT

Notes:

- C&B Piping applies this coating per the Sherwin-Williams recommendations attached on the PDS.
- The shop coating provides some temporary protection during loading, transit, unloading, jobsite handling, and jobsite storage. After shipment from C&B, the shop coat will be subsequently affected by a combination of physical and environmental conditions outside of our control. If products are properly handled and stored on the jobsite, our shop coat may meet the standards to be used as the system primer as long as the application of subsequent field applied coatings are to be performed within 60 days of receipt of products. All subsequent field applied coatings must strictly follow the recommendation of the coatings manufacturer.
- The applicability of the shop coat to be subsequently used as the primer for a paint system, and the extent of testing and surface prep required at that time, is to be determined by the contractor or field paint subcontractor applying the paint system. Please refer to PDS attached for maximum recoat window based on conditions.
- If the shop coating is not desired, it can be ordered as BARE, or fully removed by field coatings contractor per applicable NAPF 500-03 standards at cost by others.

Handling & Storage:

- Careful handling and effective storage are critical in limiting physical and environmental damage to the shop coating. Shop coatings exposed to weather and/or chemical exposure will limit the maximum recoat window and potentially cause adhesion issues.





Protective
&
Marine
Coatings



Certified to
NSF/ANSI/CAN 61
Meeting Health
Effects Requirements
of NSF/ANSI/CAN
600

MACROPOXY® 5500LT POTABLE WATER EPOXY

PART A B58-X745
PART B B58VX740
PART B B58VX745

SERIES
HARDENER
OAP HARDENER

Revised: February 13, 2023

PRODUCT INFORMATION

4.86LT

PRODUCT DESCRIPTION

MACROPOXY 5500LT is a high solids, polyamidoamine epoxy tank lining developed for potable water storage tanks. Superior spray and performance properties make Macropoxy 5500LT ideal for field or shop applications.

- Low odor
- Outstanding application properties
- Recommended for potable water
- Capable of low temperature cure

PRODUCT CHARACTERISTICS

Finish:	Semi-Gloss
Color:	Red Primer; White, Light Blue and Beige Topcoats
Volume Solids:	71% ± 2%, mixed
Weight Solids:	77% ± 2%, mixed
VOC (EPA Method 24):	<100 g/L ; 0.83 lb/gal, mixed
Mix Ratio:	1:1 by volume

PRIMER Recommended Spreading Rate per coat:

B58RX745	Minimum	Maximum
Wet mils (microns)	3.0 (75)	10.0 (250)
Dry mils (microns)	2.0 (50)	8.0 (200)
~Coverage sq ft/gal (m ² /L)	142 (3.5)	570 (14.0)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1139 (28.0)	

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

PRIMER Drying Schedule @ 3.0 mils (75 microns) wet:

B58RX745	@ 35°F/2°C	@ 55°F/13°C	@ 77°F/25°C	@ 95°F/35°C	@ 120°F/49°C
	50% RH				
To touch:	4.5 hours	4.5 hours	2.5 hours	1 hour	1 hour
To handle:	8 hours	8 hours	6.5 hours	3.5 hours	3 hours
To recoat:					
minimum*:	18 hours	18 hours	16 hours	8 hours	6 hours
maximum:	60 days	60 days	60 days	28 days	28 days
Immersion service:	7 days at 40°F (4.5°C)				

*Sterilize and rinse per AWWA C652.

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

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

Pot life:	8 hours	8 hours	6 hours	4 hours	3 hours
Sweat-in-time:	30 minutes	not required	not required	not required	not required

TOPCOAT Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	8.0 (200)	18.0 (450)
Dry mils (microns)	6.0 (150)	14.0 (350)
~Coverage sq ft/gal (m ² /L)	81 (2.0)	190 (4.7)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1139 (28.0)	

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

PRODUCT CHARACTERISTICS (CONT'D)

TOPCOAT Drying Schedule @ 10.0 mils (250 microns) wet:

	@ 35°F/2°C	@ 55°F/13°C	@ 77°F/25°C	@ 95°F/35°C	@ 120°F/49°C
	50% RH				
To touch:	4.5 hours	4.5 hours	2.5 hours	1 hour	1 hour
To handle:	8 hours	8 hours	6.5 hours	3.5 hours	3 hours
To recoat:					
minimum*:	18 hours	18 hours	16 hours	8 hours	6 hours
maximum:	60 days	60 days	60 days	28 days	28 days

Immersion service: 7 days at 40°F (4.5°C)

*Sterilize and rinse per AWWA C652.

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

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

Pot life:	8 hours	8 hours	6 hours	4 hours	3 hours
Sweat-in-time:	30 minutes	not required	not required	not required	not required

Shelf Life: 36 months, unopened
Store indoors at 40°F (4.5°C) to 100°F (38°C).

Flash Point: 67°F (19°C), Seta Flash, mixed
Reducer / Clean Up: Reducer R7K111*

*maximum solvent addition is 7%

RECOMMENDED USES

- NSF approved to Standard 61/600 - for potable water service, consult WWW.NSF.ORG
- Water treatment plants
- Complies with AWWA D102 for ICS #1, #2, #5, and #6 ; and OCS #5 & #6
- Complies with AWWA D102
- Meets the requirements of AWWA C210

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP10/NACE 2

1 ct. Macropoxy 5500LT @ 6.0 mils (150 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	114 mg loss
Adhesion	ASTM D4541	>2,100 psi
Corrosion Weathering	ASTM D5894, 12,000 hours	Rating 10 per ASTM D714 for blistering Rating 10 per ASTM D610 for rusting
Direct Impact Resistance	ASTM D2794	30 in. lb.
Dry Heat Resistance	ASTM D2485	250°F/121°C
Flexibility	ASTM D522, 180° bend, 3/4" mandrel	Passes
Humidity Resistance	ASTM D4585, 6000 hours	No blistering, cracking or rusting
Immersion H ₂ O and Salt H ₂ O	18 months fresh and salt water	Rating 10 per ASTM D714 for blistering Rating 10 per ASTM D610 for rusting
Pencil Hardness	ASTM D3363	3H

Epoxy coatings may darken or discolor following application and curing. Above are typical results and should not be construed as a specification.



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RECOMMENDED SYSTEMS

	Dry Film Thickness / ct.	
	Mils	(Microns)
Immersion and Atmospheric:		
Ductile Iron Pipe:		
Shop Applied:		
1-2 cts. Macropoxy 5500LT	6.0-14.0	(150-350)
or		
Field Applied:		
1 ct. Macropoxy 5500LT or 5500LT Primer	3.0-14.0	(75-350)
1 ct. Macropoxy 5500LT	6.0-14.0	(150-350)
Steel:		
2-3 cts. Macropoxy 5500LT	6.0-14.0*	(150-350)
or		
1 ct. Macropoxy 5500LT Primer	2.0-6.0	(50-150)
1-3 cts. Macropoxy 5500LT	6.0-14.0*	(150-350)
Concrete:		
2-3 cts. Macropoxy 5500LT	6.0-14.0*	(150-350)
or		
1 ct. Macropoxy 5500LT Primer	2.0-6.0	(50-150)
1-3 cts. Macropoxy 5500LT	6.0-14.0*	(150-350)
Potable Water Tanks, Steel:		
*AWWA D102: Inside Coating System No. 1		
minimum AWWA	8.0	(200)
1 ct. Macropoxy 5500LT	3.0	(75)
1 ct. Macropoxy 5500LT	5.0	(125)
*AWWA D102: Inside Coating System No. 2		
minimum AWWA	12.0	(300)
1 ct. Macropoxy 5500LT	3.0	(75)
1 ct. Macropoxy 5500LT	4.0	(100)
1 ct. Macropoxy 5500LT	5.0	(125)

Acceptable for use with AWWA D102: Component of Outside Coating System No. 5 and No. 6

Other acceptable topcoats over Macropoxy 5500LT Primer:
Dura-Plate UHS
Sher-Plate PW

*Maximum of 28.0 mils (700 microns) for entire system

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: SSSP-SP2/3~~
~~Immersion: SSSP-SP10/NACE 2, 2-4 mil (50-100 micron) 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

Concrete:
Atmospheric: SSCP-SP13/NACE 6 with an ICRI CSP 2-4
Immersion: SSCP-SP13/NACE 6 with an ICRI CSP 2-4

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	C St 2	SP 2	-
Pitted & Rusted	D St 2	SP 2	-
Rusted	C St 3	SP 3	-
Power Tool Cleaning	D St 3	SP 3	-

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature:
Air & Surface: 35°F (2°C) minimum, 120°F (49°C) maximum
Material: 35°F (2°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:

Part A: 1 gallon (3.78L) and 5 gallon (18.9L) containers
Part B: 1 gallon (3.78L) and 5 gallon (18.9L) containers

Weight: 13.3 ± 0.2 lb/gal ; 1.6 Kg/L, mixed, may vary by color

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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APPLICATION BULLETIN

4.86LT

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.

~~Carbon Steel, Immersion Service:~~

~~The surface shall be abrasive blasted to SSPC-SP10/NACE No. 2 Near White Blast Cleaning with a 2-4 mil (50-100 micron) profile. The anchor profile shall be sharp with no evidence of a peen 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.~~

~~Iron & Steel:~~

~~Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. For better performance, use 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). Prime any bare steel within 8 hours or before flash rusting occurs.~~

Ductile Iron Pipe, Atmospheric Service:

Minimum surface preparation is Power Tool Clean per NAF 500-03-03. Remove all oil and grease from surface by Solvent Cleaning per NAF 500-03-01.

Ductile Iron Pipe, Buried and Immersion Service:

Minimum surface preparation is Abrasive Blast Cleaning per NAF 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 NAF 500-03-01.

Ductile Iron Fittings:

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

Concrete and Masonry:

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3. 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. 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 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	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:

Air & Surface: 35°F (2°C) minimum, 120°F (49°C) maximum

Material: 35°F (2°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 UpReducer R7K111

Airless Spray

Pressure.....2700-3000 psi
Hose.....3/8" ID with 1/4" whip
Tip519-525
Filternone
Reduction.....As needed up to 7% by volume

Brush

Brush.....Nylon/Polyester or Natural Bristle
Reduction.....As needed up to 7% by volume

Roller

Cover3/8" woven with solvent resistant core
Reduction.....As needed up to 7% by volume

If specific application equipment is not listed above, equivalent equipment may be substituted.



Protective & Marine Coatings



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Meeting Health Effects Requirements of NSF/ANSI/CAN 600

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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mixing Instructions: mix contents of each component thoroughly with low speed power agitation. Make certain no pigment remains on the bottom of the can. Then combine one part by volume of Part A with one part by volume of Part B. Thoroughly agitate the mixture with power agitation. If reducer solvent is used, add only after both components have been thoroughly mixed.

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

PRIMER Recommended Spreading Rate per coat:

B58RX745	Minimum	Maximum
Wet mils (microns)	3.0 (75)	10.0 (250)
Dry mils (microns)	2.0 (50)	8.0 (200)
~Coverage sq ft/gal (m ² /L)	142 (3.5)	570 (14.0)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1139 (28.0)	

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

PRIMER Drying Schedule @ 3.0 mils (75 microns) wet:

B58RX745	@ 35°F/2°C	@ 55°F/13°C	@ 77°F/25°C	@ 95°F/35°C	@ 120°F/49°C
	50% RH				
To touch:	4.5 hours	4.5 hours	2.5 hours	1 hour	1 hour
To handle:	8 hours	8 hours	6.5 hours	3.5 hours	3 hours
To recoat:					
minimum*:	18 hours	18 hours	16 hours	8 hours	6 hours
maximum:	60 days	60 days	60 days	28 days	28 days
Immersion service:	7 days at 40°F (4.5°C)				

*Sterilize and rinse per AWWA C652.

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

Pot life:	8 hours	8 hours	6 hours	4 hours	3 hours
Sweat-in-time:	30 minutes	not required	not required	not required	not required

TOPCOAT Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	8.0 (200)	18.0 (450)
Dry mils (microns)	6.0 (150)	14.0 (350)
~Coverage sq ft/gal (m ² /L)	81 (2.0)	190 (4.7)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1139 (28.0)	

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

SAFETY PRECAUTIONS

Refer to the SDS sheet before use.

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APPLICATION PROCEDURES (CONT'D)

TOPCOAT Drying Schedule @ 10.0 mils (250 microns) wet:

	@ 35°F/2°C	@ 55°F/13°C	@ 77°F/25°C	@ 95°F/35°C	@ 120°F/49°C
	50% RH				
To touch:	4.5 hours	4.5 hours	2.5 hours	1 hour	1 hour
To handle:	8 hours	8 hours	6.5 hours	3.5 hours	3 hours
To recoat:					
minimum*:	18 hours	18 hours	16 hours	8 hours	6 hours
maximum:	60 days	60 days	60 days	28 days	28 days
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*Sterilize and rinse per AWWA C652.

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

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

Pot life:	8 hours	8 hours	6 hours	4 hours	3 hours
Sweat-in-time:	30 minutes	not required	not required	not required	not required

PERFORMANCE TIPS

Note: Once maximum pot life is exceeded, product may be sprayable but will not hold sag.

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, climatic conditions, and excessive film build. Excessive reduction of material can affect film build, appearance, and adhesion.

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 with Reducer R7K111.

Tinting is not recommended for immersion service.

Do not use Quik-Kick Epoxy Accelerator.

Insufficient ventilation, incomplete mixing, miscatalyzation, and external heaters may cause premature yellowing.

Excessive film build, poor ventilation, and cool temperatures may cause solvent entrapment. Avoid entrapment by following the recommended application procedures.

For Immersion Service: Electrical holiday inspection should be performed in accordance with NACE RP0188 "Discontinuity (Holiday) Testing of Protective Coatings" or ASTM D 5162-91 "Standard Practice for Discontinuity (Holiday) Testing of Non-conductive Protective Coating of Metallic Substrates."

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

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with R7K111. Clean tools immediately after use with R7K111. Follow manufacturer's safety recommendations when using any solvent.

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.