Protective & Marine Coatings

SHERPLATE 600

PART A	B58-680	SERIES
PART B	B58V680	STANDARD HARDENER
PART B	B58V681	LOW TEMP HARDENER

Revised: November 11, 2022

PRODUCT INFORMATION

TRM.120

PRODUCT DESCRIPTION

SHERPLATE 600 is a next generation, high solids, epoxy phenalkamide lining that meets both the health effects and testing requirements of NSF/ANSI/CAN 61 criteria for xylenes, toluene and ethylbenzene.

- Low odor
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish: Gloss

Color: White, Red, Beige, and Blue

Volume Solids: 89% ± 2%, mixed

VOC (EPA Method 24): <100 g/L; 0.8 lbs/gal, mixed

Mix Ratio: 4A:1B, by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**5.0** (125)	**11.0** (275)
Dry mils (microns)	**3.0** (75)	**10.0** (250)
~Coverage sq ft/gal (m^2/L)	**143** (3.5)	**476** (11.7)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**1428** (35)	

Drying Schedule @ 8.0 mils wet (200 microns):

with B58V680:	@ 50°F/10°C *50% RH*	@ 77°F/25°C *50% RH*	@ 100°F/38°C *50% RH*
To touch:	4 hours	3 hours	2 hours
To handle:	14 hours	9 hours	3 hours
To recoat:			
minimum:	12 hours	4 hours	2 hours
maximum:	30 days	30 days	30 days
To cure:	7 days	7 days	5 days

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

Pot Life: 2-3 hours 65-85 minutes 20-25 minutes

Sweat-in-Time: None required

with B58V681:	@ 35°F/1.7°C *50% RH*	@ 50°F/10°C *50% RH*	@ 77°F/25°C *50% RH*
To touch:	6 hours	3 hours	2 hours
To handle:	12.5 hours	9 hours	7 hours
To recoat:			
minimum:	12 hours	8 hours	4 hours
maximum:	30 days	30 days	30 days
To cure:	10 days	7 days	5 days

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

Pot Life: n/a 60-80 minutes 30-45 minutes

Sweat-in-Time: None required

PRODUCT CHARACTERISTICS (CONT'D)

Shelf Life: Part A: 3 years, unopened
Part B: 2 years, unopened
Store indoors at 40°F (4.5°C) to 110°F (43°C).

Flash Point: 118°F (48°C), PMCC or SETA

Reducer*: VOC Restricted Areas (≤100 g/L): use R6K9 (Acetone) up to 5% by volume

Clean Up: MEK or Acetone

*Other areas (>100 g/L): use R6K9 (Acetone) or R6K116 (Butyl Acetate). Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

RECOMMENDED USES

Potable Water Restrictions:
- Tanks greater than 700 gallons
- Pipes greater than 12 inch ID
- Max DFT: 24 mils (600 microns)
- # of coats: 2
- Max Thinning: 5% Butyl Acetate or Acetone
- Final Cure: 7 days @ 77°F/25°C or 14 days @ 35°F/2°C
- Minimum Recoat: 4 hours @ 77°F/25°C, or 12 hrs @ 35°F/2°C

This lining complies with AWWA C210-15. It also complies with AWWA D102 ICS #1,#2,#5,#6 and OCS #5 and #6.

- Water treatment plants
- NSF potable water tanks, pipes, Ductile Iron pipes

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP6/NACE 3

Test Name	Test Method		Results
Abrasion Resistance[3]	ASTM D4060, 1000 cycles		154 mg loss
Adhesion	ASTM D4541		3000+ psi[3] 2400+ psi[4]
Cathodic Disbondment[3]	ASTM G8 @ 77°F/25°C		7 mm
Direct Impact Resistance[3]	ASTM D2794		>34 in/lbs
Dry Heat Resistance[3]	ASTM D2485		250°F (121°C)
Edge Retention	MIL-PRF-23236C, Appendix A		Pass: >70%
Flexibility[3]	ASTM D522, 180° bend, 3/8" mandrel		Pass
Salt Fog Resistance	ASTM B117	1,500 hours	10/10/7[3]
		1,000 hours	10/10/9[4]

[3]System tested (Report No. PMDEV2018-4152):
1 ct. SherPlate 600 @ 5.0-10.0 mils (125-250 microns) dft
1 ct. SherPlate 600 @ 5.0-10.0 mils (125-250 microns) dft

[4]System tested (Report No. PMDEV2018-4152):
1 ct. SherPlate 600 @ 5.0-10.0 mils (125-250 microns) dft
1 ct. Sher-Loxane 800 @ 4.0-6.0 mils (100-150 microns) dft

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NSF/ANSI/CAN 61 Meets Health Effects Requirements of NSF/ANSI/CAN 600

Revised: November 11, 2022

PRODUCT INFORMATION

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RECOMMENDED SYSTEMS

	Dry Film Thickness / ct. Mils	(Microns)
Immersion, Steel:		
***AWWA D102: Inside Coating System No. 1**		
1 ct. SherPlate 600	3.0	(75)
1 ct. SherPlate 600	5.0	(125)
***AWWA D102: Inside Coating System No. 2**		
1 ct. SherPlate 600	3.0	(75)
1 ct. SherPlate 600	4.0	(100)
1 ct. SherPlate 600	5.0	(125)
***AWWA D102: Inside Coating System No. 5**		
1 ct. Corothane I Galvapac	2.5	(63)
2 cts. SherPlate 600	4.0	(100)
***AWWA D102: Inside Coating System No. 6**		
1 ct. Corothane I Galvapac	2.5	(63)
1 ct. SherPlate 600	10.0	(250)
Atmospheric, Steel:		
***AWWA D102: Outside Coating System No. 5**		
1 ct. SherPlate 600	2.5	(63)
1 ct. SherPlate 600	2.0	(50)
1 ct. Acrolon 218HS	2.0	(50)
***AWWA D102: Outside Coating System No. 6**		
1 ct. Corothane I GalvaPac	2.5	(63)
1 ct. SherPlate 600	2.0	(50)
1 ct. Acrolon 218HS	2.0	(50)
Concrete/Masonry, smooth:		
2 cts.SherPlate 600	3.0-6.0	(75-150)

*Refer to UL.com for dft restrictions

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-SP2/3/ ISO8501-1:2007 St2, 2-3 mil (50-75 micron) profile
- Immersion: SSPC-SP10/NACE 2/ ISO8501-1:2007 St2.5, 2-3 mil (50-75 micron) profile

Aluminum/Galvanizing: Atmospheric: SSPC-SP1

Concrete & Masonry: Atmospheric: SSPC-SP13/NACE 6, or ICRI No. 310.2R CSP 2-4

Ductile Iron Pipe: Buried and Immersion Service, Fittings: See Surface Preparations on Page 3

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 & Surface*: 35°F (1.7°C) minimum, 120°F (49°C) maximum

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

*Standard hardener can be applied between 50°F (10°C) and 120°F (49°C). Low temperature hardener can be applied between 35°F (1.7°C) and 80°F (27°C).

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: ~3.8 gallon (14.4L) filled pails
- Part B: ~0.95 gallon (3.6L) filled cans

Weight: 12.00 ± 0.3 lb/gal ; 1.4 Kg/L, mixed may vary by color

SAFETY PRECAUTIONS

Refer to the SDS sheet before use.

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DISCLAIMER

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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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Revised: November 11, 2022

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 (atmospheric service)
Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3 or SSPC-SP12/NACE No. 5. For surfaces prepared by SSPC SP6/NACE 3, first remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. 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 (2-3 mils / 50-75 microns). For surfaces prepared by SSPC-SP12/NACE No. 5, all surfaces shall be cleaned in accordance with WJ-3/SC2. Pre-existing profile should be approximately 2 mils (50 microns). Prime 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/NACE 2, or SSPC-SP12/NACE No. 5. For SSPC-SP10/NACE 2, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2-3 mils / 50-75 microns). For SSPC-SP12/NACE No.5, all surfaces to be coated shall be cleaned in accordance with WJ-2/SC2 standards. Pre-existing profile should be approximately 2 mils (50 microns). Remove all weld spatter. Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Aluminum
Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1.

Galvanized Steel
Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1. 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-SP16 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 or before flash rusting occurs.

Concrete and Masonry
For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 2-4. 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. For surface preparation of Concrete, Immersion Service, refer to SSPC-SP13/NACE 6, Section 4.3.1 or 1.3.2 or ICRI No. 310.2R, CSP 2-3.

Ductile Iron Pipe (DIP) listed per NAPF 500.03
Ductile Iron Pipe, Atmospheric Service:
Minimum surface preparation is Power To 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.

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.

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 & Surface*: 35°F (1.7°C) minimum, 120°F (49°C) maximum

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

*Standard hardener can be applied between 50°F (10°C) and 120°F (49°C). Low temperature hardener can be applied between 35°F (1.7°C) and 80°F (27°C).

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* ..... VOC Restricted Areas (≤100 g/L): use R6K9 (Acetone) up to 5% by volume
Clean Up ..... MEK or Acetone

*Other areas (>100 g/L): use R6K9 (Acetone) or R6K116 (Butyl Acetate). Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

Airless Spray:
Pump 60:1
Pressure ..... 3120 psi (unreduced); 2080 psi (see Reducer above)
Tip 0.517
Filter ..... 250 micron
Reduction ..... up to 5% by volume if necessary

Brush
Brush ..... China Bristle
Reduction ..... up to 5% by volume if necessary

Roller
Cover ..... 3/8" woven with solvent resistant core
Reduction ..... up to 5% by volume if necessary

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 each component thoroughly using low speed power agitation. Make certain no pigment remains on the bottom or the sides of the can. Then combine four parts by volume of Part A with one part by volume of Part B. Thoroughly agitate the mixture with power agitation.

To ensure that no unmixed material remains on the sides or bottom of the cans after mixing, visually observe the container by pouring the material into a separate container.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**5.0** (125)	**11.0** (275)
Dry mils (microns)	**3.0** (75)	**10.0** (250)
~Coverage sq ft/gal (m^2/L)	**143** (3.5)	**476** (11.7)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**1428** (35)	

Drying Schedule @ 8.0 mils wet (200 microns):

with B58V680:	@ 50°F/10°C *50% RH*	@ 77°F/25°C *50% RH*	@ 100°F/38°C *50% RH*
To touch:	4 hours	3 hours	2 hours
To handle:	14 hours	9 hours	3 hours
To recoat:			
minimum:	12 hours	4 hours	2 hours
maximum:	30 days	30 days	30 days
To cure:	7 days	7 days	5 days
Pot Life:	2-3 hours	65-85 minutes	20-25 minutes
Sweat-in-Time:	None required		

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

with B58V681:	@ 35°F/1.7°C *50% RH*	@ 50°F/10°C *50% RH*	@ 77°F/25°C *50% RH*
To touch:	6 hours	3 hours	2 hours
To handle:	12.5 hours	9 hours	7 hours
To recoat:			
minimum:	12 hours	8 hours	4 hours
maximum:	30 days	30 days	30 days
To cure:	10 days	7 days	5 days
Pot Life:	n/a	60-80 minutes	30-45 minutes
Sweat-in-Time:	None required		

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

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

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, 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.

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 MEK.

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

CLEAN UP INSTRUCTIONS

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

SAFETY PRECAUTIONS

Refer to the SDS sheet before use.

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