Protective & Marine Coatings

WATER QUALITY

SHERFLEX™ S
ELASTOMERIC POLYURETHANE

PART A B65-920
PART B B65V920
SERIES HARDENER

Revised: October 17, 2018

PRODUCT INFORMATION

TRM.65

PRODUCT DESCRIPTION

SHERFLEX S ELASTOMERIC POLYURETHANE is a high solids, aromatic quick set polyurethane. It can be applied at thicknesses of 25-60 mils (625-1500 microns) in a single application.

- Certified to ANSI/NSF Standard 61 for potable water tanks, 3,000 gallons and larger, or pipe sizes 61" ID or larger
- Fast cure - short down time
- High build and flexible
- Crack bridging capabilities
- Seamless and waterproof
- Impact, tear, and abrasion resistant
- Chemical resistant
- Low permeability

PRODUCT CHARACTERISTICS

Finish: Semi-Gloss

Colors: Beige

Volume Solids: 100%, mixed

Mix Ratio: 3:1

VOC (calculated): <50 g/L ; 0.42 lb/gal, mixed

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**25.0** (625)	**60.0** (1500)
Dry mils (microns)	**25.0** (625)	**60.0** (1500)
~Coverage sq ft/gal (m^2/L)	**27** (0.7)	**64** (1.6)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**1604** (39.4)	

Drying Schedule @ 30.0 mils wet (750 microns):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 120°F/49°C
To touch:	3 hours	75 minutes	40 minutes
Tack free:	5 hours	3 hours	1.5 hours
To recoat maximum:	30 days	30 days	30 days
To cure:	5 days	1 day	1 day

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

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

Pot Life: 15-20 minutes

Sweat-in-Time: None | None | None

For **Potable Water Service**, allow a minimum cure time of 1 day @ 77°F (25°C) prior to placing in service. Sterilize and rinse per AWWA C652.

Shelf Life: 12 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).

Flash Point: 240°F (115°C), Closed Cup Part A
390°F (198°C), Closed Cup Part B

Reducer: Not recommended

Clean Up: MEK R6K10

RECOMMENDED USES

Potable Water Tank Restrictions:
Tanks ≥ 3,000 gallons
Pipes ≥ 61"

Designed for use in immersion service as a part of tough, flexible, impact resistant, waterproof coating and lining system or for use over SherFlex Elastomeric Urethane or Envirolastic AR 520 PW to repair damaged areas or touch-up pinholes.

For use in areas including:
- Potable water storage tanks
- Water & wastewater linings
- Cooling tower linings
- Secondary containment

PERFORMANCE CHARACTERISTICS

Substrate*: Concrete

Surface Preparation*: SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP3-5

System Tested*:
1 ct. Corobond LT Epoxy Primer @ 4.0 mils (100 microns) dft
1 ct. Sher-Flex Elastomeric @ 60.0 mils (1500 microns) dft
1 ct. Sherflex S @ 30.0 mils (750 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	106 mg loss
Adhesion	ASTM D4541	Concrete: 350 psi (concrete failure); Steel: 1800 psi
Direct Impact	ASTM D2794 on steel pipe	160 in./lb, no failures
Durometer Hardness	ASTM D2240	68 Shore D
Elongation	ASTM D638	Recoverable 37% at 25°C (77°F)
Flexibility	ASTM D1737	No effect bending 0.5 mm plate coated with 20 mils over mandrel of 8 mm diameter
Permeability	ASTM E96	0.574 grams/hr ft^2 Hg U.S. Perms, or 0.379 gms/24hr/M^2 Type 396
Tensile Strength	ASTM D638	1800 psi at 25°C (77°F)
Thermal Conductivity	ASTM C177	0.000550 cal./sec. cm^2°C per cm at 25°C (0.133 BTU/HR.ft. °F per ft at 77°F)

Meets ASTM D16, Type V

continued on back

Protective & Marine Coatings

CERTIFIED UL WATER QUALITY

SHERFLEX™ S

ELASTOMERIC POLYURETHANE

PART A	B65-920	SERIES
PART B	B65V920	HARDENER

Revised: October 17, 2018

PRODUCT INFORMATION

TRM.65

RECOMMENDED SYSTEMS

Applications (both NSF & Non-NSF) on steel should be between 25-60 mils (625-1500 microns).

NSF Applications:

- Maximum DFT allowed is 60 mils (1500 microns)
- Tank Sizes of 3,000 gallons and larger
- Pipe sizes 61" ID or larger
- If applied over SherFlex or Envirolastic AR 520 PW for repair or touch-up (intended for use in small areas only), the dft of the SherFlex S should not exceed 30 mils (750 microns).

Non-NSF Applications:

- SherFlex S can be applied between 25-60 mils (625-1500 microns) dft.

		Dry Film Thickness / ct. Mils	(Microns)
Wastewater or Potable Water:			
1 ct.	SherFlex S	25.0-80.0	(625-2000)
or			
1 ct.	Macropoxy 240	1.0-1.5	(25-40)
1 ct.	SherFlex S	25.0-80.0	(625-2000)
Potable Water - AWWA D102 ICS No. 4:			
1 ct.	Optional Primer*	1.0 min.	(25)
1 ct.	SherFlex S	25.0 min.	(625)
Concrete:			
1 ct.	Dura-Plate 235	4.0-8.0	(100-200)
1 ct.	SherFlex S	30.0-60.0	(750-1500)

Note: DFT's in excess of 60 mils may require multiple coats

*Optional Primers:
Macropoxy 240
Corothane I GalvaPac 1K
Corothane I GalvaPac 2K
Corothane I GalvaPac 2K 100

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:

Steel:	SSPC SP10/NACE 2, 3 mil (75 micron) profile
Concrete:	SSPC-SP13/NACE 6 or ICRI No. 310.2R, CSP 3-5

Abrade SherFlex Elastomeric Urethane with 60 grit sandpaper and clean prior to application of repair material.

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:

Material:	
(brush and squeegee):	60°F (16°C) minimum, 90°F (32°C) maximum
(spray application):	90°F (32°C) recommended
Air and surface:	30°F (-1°C) minimum, 120°F (49°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:	72 ounces (2.1L) in gal (3.78L) can 5 gallons (18.9L) in 5 gal (18.9L) can
Part B:	24 ounces (0.71L) in qt (0.94L) can 5 gallons (18.9L) in 5 gal (18.9L) can
Weight:	11.18 ± 0.2 lb/gal ; 1.34 Kg/L, mixed

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.

Protective & Marine Coatings

WATER QUALITY

SHERFLEX™ S
ELASTOMERIC POLYURETHANE

PART A	B65-920	SERIES
PART B	B65V920	HARDENER

Revised: October 17, 2018

APPLICATION BULLETIN

TRM.65

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.

Refer to product Application Bulletin for detailed surface preparation information.

Iron & Steel:
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 (3 mils / 75 microns).

Abrade SherFlex Elastomeric Urethane with 60 grit sandpaper and clean prior to application of repair material.

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.

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.

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:
Material:
(brush and squeegee): 60°F (16°C) minimum, 90°F (32°C) maximum
(spray application): 90°F (32°C) recommended

Air and surface: 30°F (-1°C) minimum, 120°F (49°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.

Reduction .....Not recommended

Clean Up .....MEK R6K10

Purge Solvent .....MEK R6K10, Acetone

Recommended Spray Equipment*
Pump.....Graco Hydra-Cat or Xtreme mix system with remote manifold (restriction required on Hardener side)
Pressure.....3000 psi working pressure
Hose.....3/8" Resin,1/4" Hardener, 1/4" whip hose from Mixing Manifold to Gun, 15 ft maximum 5" Static Mixing Tube with disposable plastic insert.
Tip .....017" - .025"

Conventional Spray .....Not recommended

Squeegee .....Repairs and touch-up only

Brush .....Repairs and touch-up only

*Application training is required and spray equipment must be approved by Sherwin-Williams Technical Service.

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

continued on back

Protective & Marine Coatings

CERTIFIED UL WATER QUALITY

SHERFLEX™ S

ELASTOMERIC POLYURETHANE

PART A	B65-920	SERIES
PART B	B65V920	HARDENER

Revised: October 17, 2018

APPLICATION BULLETIN

TRM.65

APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mixing Instructions (Brush & Squeegee / Repair): Agitate components thoroughly with a hand mix before use to assure homogenous mixture. Then combine pre-measured components A and B (3:1 mix ratio). Hand mix immediately for 30 seconds to one minute maximum to obtain homogenous color. Apply immediately to damaged/repair area by brush or squeegee.

All pinholes or defects in the protective lining shall be highlighted with black indelible ink for the purpose of identifying them for the repair process. Using the pinholes as a center point, the area 6 inches around the pinhole/defect must be abraded with a 60-grit paper. Abraded surfaces are then cleaned and top coated with the SherFlex S.

Mixing Instructions (Plural Component): Agitate components thoroughly with low speed power agitation before use to disperse pigment and assure homogeneity. Do not reduce (thin). Do not mix resins A and B together. CAUTION: Do not agitate in air and moisture. Both components should be heated to approximately 90°F-110°F (32°C-43°C) to achieve spray pattern consistency.

Plural component application required, 3:1 mix ratio.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**25.0** (625)	**60.0** (1500)
Dry mils (microns)	**25.0** (625)	**60.0** (1500)
~Coverage sq ft/gal (m^2/L)	**27** (0.7)	**64** (1.6)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**1604** (39.4)	

Drying Schedule @ 30.0 mils wet (750 microns):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 120°F/49°C
To touch:	3 hours	75 minutes	40 minutes
Tack free:	5 hours	3 hours	1.5 hours
To recoat maximum:	30 days	30 days	30 days
To cure:	5 days	1 day	1 day

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

Pot Life: 15-20 minutes

Sweat-in-Time: None None None

For **Potable Water Service**, allow a minimum cure time of 1 day @ 77°F (25°C) prior to placing in service. Sterilize and rinse per AWWA C652.

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

PERFORMANCE TIPS

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, climatic conditions, and excessive film build.

Do not agitate in air and moisture.

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

Applications (both NSF & Non-NSF) on steel should be between 25-60 mils (625-1500 microns).

* NSF Applications:
- Maximum DFT allowed is 80 mils
- Tank Sizes of 3,000 gallons and larger
- Pipe sizes 61" ID or larger
- If applied over SherFlex or Envirolastic AR 520 PW for repair or touch-up (intended for use in small areas only), the dft of the SherFlex S should not exceed 30 mils (750 microns).

*Non-NSF Applications:
- SherFlex S can be applied between 25-60 mils (625-1500 microns) dft.

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

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with MEK R6K10. Clean tools and equipment immediately after use with MEK R6K10.

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.

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.