



**Protective  
&  
Marine  
Coatings**



# SHERFLEX™ ELASTOMERIC POLYURETHANE

**PART A  
PART B**

**B65H910  
B65V910**

**BEIGE  
HARDENER**

Revised: October 17, 2018

## PRODUCT INFORMATION

TRM.69

### PRODUCT DESCRIPTION

**SHERFLEX ELASTOMERIC POLYURETHANE** is a high solids, spray applied, aromatic polyurethane coating and lining. It can be applied at thicknesses of 30-250 mils (750-6250 microns) in multiple passes during a single application.

- 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

<b>Finish:</b>	Semi-gloss
<b>Colors:</b>	Beige
<b>Volume Solids:</b>	100%, mixed
<b>Mix Ratio:</b>	3:1
<b>VOC (calculated):</b>	<50 g/L ; 0.42 lb/gal, mixed

#### Recommended Spreading Rate per coat:

	Minimum	Maximum
<b>Wet mils (microns)</b>	<b>30.0</b> (750)	<b>250.0</b> (6250)
<b>Dry mils (microns)</b>	<b>30.0</b> (750)	<b>250.0</b> (6250)
<b>~Coverage sq ft/gal (m<sup>2</sup>/L)</b>	<b>6</b> (0.72)	<b>53</b> (6.4)
<b>Theoretical coverage sq ft/gal (m<sup>2</sup>/L) @ 1 mil / 25 microns dft</b>	<b>1604</b> (39.4)	

#### Drying Schedule @ 30.0 mils wet (750 microns):

	@ 40°F/4.5°C	@ 77°F/25°C	@ 120°F/49°C
		<b>50% RH</b>	
<b>To touch:</b>	3 hours	45 minutes	30 minutes
<b>Tack free:</b>	5 hours	2.5 hours	1.5 hours
<b>To recoat maximum:</b>	30 days	30 days	30 days
<b>To cure:</b>	5 days	1 day	1 day
<i>Drying time is temperature, humidity, and film thickness dependent.</i>			
<i>If maximum recoat time is exceeded, abrade surface before recoating.</i>			
<b>Pot Life:</b>	None	None	None
<b>Sweat-in-Time:</b>	None	None	None
For <b>Potable Water Service</b> , allow a minimum cure time of 1 day @ 77°F (25°C) prior to placing in service. Sterilize and rinse per AWWA C652.			

<b>Shelf Life:</b>	12 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C). Drums must be rotated every 90 days.
<b>Flash Point:</b>	240°F (115°C), Closed Cup Part A 390°F (198°C), Closed Cup Part B
<b>Reducer:</b>	Not recommended
<b>Clean Up:</b>	Xylene R2K4 or MEK R6K10

### RECOMMENDED USES

#### Potable Water Tank Restrictions:

Tanks ≥ 3,000 gallons  
Pipes ≥ 61"  
Maximum DFT: 100 mils

Designed for use in immersion service as a tough, flexible, impact resistant, waterproof coating and lining system.

Not recommended for use with cathodic protection systems.

For use in areas including:

- Wet wells
- Grit chambers
- Aeration basins
- Sewer manholes
- Cooling tower linings
- Water & wastewater linings
- Secondary containment
- Potable water (Beige)

Acceptable for immersion service in Jet-A Fuel and JP-5 Jet Fuel.

Suitable for use in the Mining & Minerals Industry.

### PERFORMANCE CHARACTERISTICS

**Substrate\*:** Concrete

**Surface Preparation\*:** SSPC-SP13/NACE6, or ICRI No. 310.2, CSP 3-5

**System Tested\*:**

- 1 ct. Corobond LT Epoxy Primer @ 4.0 mils (100 microns) dft
  - 1 ct. SherFlex Elastomeric @ 60.0 mils (1500 microns) dft
- \*unless otherwise noted below

Test Name	Test Method	Results
<b>Abrasion Resistance</b>	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	106 mg loss
<b>Adhesion</b>	ASTM D4541	Concrete: 350 psi (concrete failure); Steel: 1800 psi
<b>Dielectric Strength</b>	ASTM D149-92a, method A	430 volts/mil
<b>Direct Impact</b>	ASTM D2794 on steel pipe	160 in./lb, no failures
<b>Durometer Hardness</b>	ASTM D2240	43 Shore D
<b>Elongation</b>	ASTM D638	45% at 25°C (77°F)
<b>Flexibility</b>	ASTM D1737	No effect bending 0.5 mm plate coated with 20 mils (500 microns) over mandrel of 8 mm diameter
<b>Permeability</b>	ASTM E96	0.189 grains/ hr ft <sup>2</sup> Hg U.S. Perms
<b>Tensile Strength</b>	ASTM D638	1988 psi at 25°C (77°F)
<b>Thermal Conductivity</b>	ASTM C177	0.000550 cal./sec. cm <sup>2</sup> °C per cm at 25°C (0.133 BTU/HR.ft.°F per ft at 77°F)

**Meets ASTM D16, Type V**



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### RECOMMENDED SYSTEMS

		Dry Film Thickness / ct.	
		Mils	(Microns)
<b>Concrete:</b>			
1 ct	Corobond Conductive Epoxy Primer	2.0-4.0	(50-100)
1 ct	SherFlex Elastomeric	60.0-250.0*	(1500-6250)

<b>Concrete</b>			
1 ct	Corobond LT Epoxy Primer	4.0-8.0	(100-200)
1 ct	SherFlex Elastomeric	60.0-250.0*	(1500-6250)

Other acceptable primers:

- Dura-Plate UHS Primer
- Corobond HS Primer
- Dura-Plate 235
- Corothane I- PrePrime (Smooth Concrete, air and surface temperature below 70° F)
- FasTop Primer (for new concrete)

<b>Steel:</b>			
1 ct.	SherFlex Elastomeric	30.0 -250.0*	(750-6250)
or			
1 ct.	Copoxy Shop Primer (as a hold primer)	1.0	(25)
1 ct.	SherFlex Elastomeric	30.0 -250.0*	(750-6250)

<b>Steel, Potable Water (lining)</b>			
1 ct.	SherFlex Elastomeric	30.0-100.0*	(750-2500)

<b>Steel, with holding primer, Potable Water Full System (lining)</b>			
1 ct.	Macropoxy 240	1.0 -1.5	(25-40)
1 ct.	SherFlex Elastomeric	30.0-100.0*	(750-2500)

<b>Concrete, Potable Water (lining)</b>			
1 ct.	Macropoxy 240	3.0-4.0	(75-100)
1 ct.	SherFlex Elastomeric	60.0-100.0*	(1500-2500)

- \* Potable Water Applications:
- Maximum DFT allowed is 100 mils (2500 microns)
  - SherFlex S may be applied up to 80 mils (2000 microns) dft. If applied over SherFlex, the dft of the SherFlex S should not exceed 30 mils (750 microns).

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  
Immersion: SSPC-SP10/NACE 2, 3.0 mil (75 micron) profile minimum

Concrete  
Immersion: SSPC-SP13/NACE 6, 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	C St 2	C St 2	SP 2	-
Pitted & Rusted	D St 2	D St 2	SP 2	-
Rusted	C St 3	C St 3	SP 3	-
Power Tool Cleaning	Pitted & Rusted	D St 3	SP 3	-

### TINTING

Do not tint.

### APPLICATION CONDITIONS

Temperature:  
Material: 140°F (60°C) minimum, 160°F (71°C) maximum  
Air and surface: -20°F (-29°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: 5 gal (18.9L) cans or 53 gallon (200L) drums  
Part B: 5 gal (18.9L) cans or 53 gallon (200L) drums

### 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.69

### 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

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 or greater). Remove all weld spatter and round all sharp edges by grinding. Coat all steel before flash rusting occurs.

#### Concrete and Masonry

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2, 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. 310.2, CSP 3-5.

### APPLICATION CONDITIONS

Temperature:

Material: 140°F (60°C) minimum, 160°F (71°C) maximum

Air and surface: -20°F (-29°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** .....Xylene R2K4, 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, 10 ft maximum 5" Static Mixing Tube with disposable plastic insert.  
Tip......025" - .035"

**Conventional Spray** .....Not recommended

**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.

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



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### APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

**Mixing Instructions:** 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 140°F-160°F (60°C-71°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)	30.0 (750)	250.0 (6250)
Dry mils (microns)	30.0 (750)	250.0 (6250)
~Coverage sq ft/gal (m <sup>2</sup> /L)	6 (0.72)	53 (6.4)
Theoretical coverage sq ft/gal (m <sup>2</sup> /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	45 minutes	30 minutes
Tack free:	5 hours	2.5 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:** None None None  
**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.

### CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Xylene R2K4, or MEK R6K10. Clean tools and equipment immediately after use (including both A and B sides of plural component spray system) with Xylene R2K4, or MEK R6K10.

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### PERFORMANCE TIPS

For immersion applications, a minimum total dry film thickness of 30 mils (750 microns) for steel and 60 mils (1500 microns) for concrete is required.

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

Use only heated, plural component equipment capable of producing 4,000 psi output consistently.

In order to prevent blockage of spray equipment, clean equipment before use or before periods of extended downtime with Xylene R2K4, or MEK R6K10

While spraying, use 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, climatic conditions, and excessive film build.

Do not agitate in air and moisture.

For concrete, refer to moisture content testing per SSPC SP-13/ NACE No. 6. Do not proceed with MVE >3lbs.

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

\* Potable Water Applications:

- Maximum DFT allowed is 100 mils (2500 microns)
- SherFlex S may be applied up to 80 mils (2000 microns) dft. If applied over SherFlex, the dft of the SherFlex S should not exceed 30 mils (750 microns).

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

### SAFETY PRECAUTIONS

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### WARRANTY

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