



# Protective & Marine Coatings

## SHERTHANE® 2K URETHANE

PART A  
PART B

B65-150 SERIES  
B65V150

GLOSS  
HARDENER

Revised: March 25, 2022

### PRODUCT INFORMATION

5.24

#### PRODUCT DESCRIPTION

**SHERTHANE 2K URETHANE** is a 2-component, low VOC, aliphatic acrylic modified polyurethane designed for use in industrial environments.

- A chemical and abrasion resistant urethane enamel.
- A heavy duty maintenance coating for use in "high visibility areas."
- Outstanding application procedures

#### PRODUCT CHARACTERISTICS

<b>Finish:</b>	Gloss
<b>Color:</b>	Wide range of colors available
<b>Volume Solids:</b>	64% $\pm$ 2% mixed, may vary by color
<b>Weight Solids:</b>	77% $\pm$ 2%, mixed, may vary by color
<b>VOC (EPA method #24):</b>	<340 g/L; 2.8 lb/gal, mixed
<b>Mix Ratio:</b>	4:1 by volume

#### Recommended Spreading Rate per coat:

	Minimum	Maximum
<b>Wet mils (microns)</b>	<b>3.0 (75)</b>	<b>6.0 (150)</b>
<b>Dry mils (microns)</b>	<b>2.0 (50)</b>	<b>4.0 (100)</b>
<b>~Coverage sq ft/gal (m<sup>2</sup>/L)</b>	<b>256 (6.3)</b>	<b>512 (12.5)</b>
<b>Theoretical coverage sq ft/gal (m<sup>2</sup>/L) @ 1 mil / 25 microns dft</b>	<b>1024 (25.0)</b>	

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

#### Drying Schedule @ 4.0 mils wet (100 microns):

	@ 40°F/4.5°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
<b>To touch:</b>	5 hours	1 hour	30 minutes
<b>To handle:</b>	16 hours	4 hours	2 hours
<b>To recoat:</b>			
<b>minimum:</b>	16 hours	4 hours	2 hours
<b>maximum:</b>	3 months	3 months	3 months
<b>To cure:</b>	14 days	7 days	7 days
<b>Pot Life:</b>	12 hours	6 hours	2 hours
<b>Sweat-in-Time:</b>	None required		

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

<b>Shelf Life:</b>	Part A - 36 months, unopened Part B - 12 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
<b>Flash Point:</b>	95°F (35°C), mixed (Seta Flash)
<b>Reducer/Clean Up:</b>	Xylene, R2K4

#### RECOMMENDED USES

Use over prepared substrates in industrial environments, such as:

- Offshore platforms
- Rolling stock
- Paper mills
- Clean rooms
- Conveyors
- Refineries
- Exterior surfaces of steel tanks
- Structural steel
- Chemical processing equipment
- Exterior metal siding and trim
- Oil field machinery
- Handrails

- Suitable for use in USDA inspected facilities
- Over FIRETEX hydrocarbon systems

#### PERFORMANCE CHARACTERISTICS

**Substrate\*:** Steel

**Surface Preparation\*:** SSPC-SP6/NACE 3

**System Tested\*:**

1 ct. Recoatable Epoxy Primer @ 4.0 mils (100 microns) dft

1 ct. SherThane 2K Urethane @ 3.0 mils (75 microns) dft

\*unless otherwise noted below

Test Name	Test Method	Results
<b>Abrasion Resistance</b>	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	108 mg loss
<b>Accelerated Weathering - QUV</b>	ASTM D4587, QUV-A, 3000 hours	Passes, >70% Gloss retention
<b>Adhesion</b>	ASTM D4541 - Patti	2364 psi
<b>Corrosion Weathering</b>	ASTM D5894, 45 cycles, 15,120 hours	Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D610 for rusting
<b>Dry Heat Resistance</b>	ASTM D2485	200°F (93°C)
<b>Exterior Durability</b>	1 year at 45° South	Excellent
<b>Flexibility</b>	ASTM D522, 180° bend, 1/4" mandrel	Passes
<b>Moisture Condensation Resistance</b>	ASTM D4585, 100°F (38°C), 2000 hours	No blisters, rust, delamination, or rust creepage at scribe
<b>Pencil Hardness</b>	ASTM D3363	B
<b>Salt Fog Resistance</b>	ASTM B117, 2000 hours	Rating 8 per ASTM D714 for blistering; Rating 10 per ASTM D610 for rusting
<b>Thermocycling</b>	15 cycles (1 cycle = 4 hours fresh water immersion, 16 hours freezing, and 4 hours @ 120°F / 49°C)	Excellent, 100% adhesion, no film failure

Meets the requirements of SSPC Paint No. 36, Level 2.



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#### RECOMMENDED SYSTEMS

		Dry Film Thickness / ct.	
		Mils	(Microns)
<b>Steel, universal primer:</b>			
1 ct.	Kem Bond HS Primer	2.0-5.0	(50-125)
1-2 cts.	SherThane 2K Urethane	2.0-4.0	(50-100)
<b>Steel, epoxy primer:</b>			
1 ct.	Recoatable Epoxy Primer	4.0-6.0	(100-150)
1-2 cts.	SherThane 2K Urethane	2.0-4.0	(50-100)
<b>Steel, epoxy mastic primer:</b>			
1 ct.	Epoxy Mastic Aluminum II	6.0-8.0	(150-200)
1-2 cts.	SherThane 2K Urethane	2.0-4.0	(50-100)
<b>Steel, inorganic zinc-rich primer:</b>			
1 ct.	Zinc-Clad II Plus	3.0-5.0	(75-125)
1 ct.	Recoatable Epoxy Primer	4.0-6.0	(100-150)
1-2 cts.	SherThane 2K Urethane	2.0-4.0	(50-100)
<b>Galvanized Metal:</b>			
1 ct.	Tile-Clad High Solids	2.5-4.0	(63-100)
1-2 cts.	SherThane 2K Urethane	2.0-4.0	(50-100)
<b>Aluminum:</b>			
1 ct.	DTM Wash Primer	0.7-1.3	(18-32)
1-2 cts.	SherThane 2K Urethane	2.0-4.0	(50-100)
<b>Concrete:</b>			
1 ct.	Heavy Duty Block Filler	10.0-18.0	(250-450)
1-2 cts.	SherThane 2K Urethane	2.0-4.0	(50-100)

To enhance SherThane 2K Urethane product performance and extend long term weathering characteristics, apply 1 coat of Diamond-Clad Clear Coat Urethane @ 1.0-2.0 mils (25-50 microns) dft.

#### FIRETEX ONLY:

##### Finish Coat for FIRETEX Hydrocarbon Systems:

1 ct. SherThane 2K Urethane\*

\*Consult FIRETEX PFP Specialist for recommended dft range

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: SSPC-SP6/NACE 3, 2 mil (50 micron) profile
- \* Aluminum: SSPC-SP1
- \* Galvanizing: SSPC-SP1
- \* Concrete & Masonry: SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3

\* Primer required

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
Rusted	C St 2	C St 2	SP 2	-
Hand Tool Cleaning	Pitted & Rusted	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

Tint with Maxitoner colorants only into Part A at 100% tint strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

#### APPLICATION CONDITIONS

Temperature: 40°F (4.5°C) minimum, 120°F (49°C) maximum  
(air, surface, and material)  
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 4 gallon (15.1L) kits  
Part B: 1 quart (0.94L) and 1 gallon (3.78L)

Weight: 11.55 ± 0.2 lb/gal ; 1.38 Kg/L  
mixed, may vary with 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

5.24

#### 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 Commercial Blast Cleaning per SSPC-SP6/NACE 3. 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 mils / 50 microns). 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. Primer required

##### 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-SP7 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. Primer required.

##### 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. 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.

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

#### APPLICATION CONDITIONS

Temperature: 40°F (4.5°C) minimum, 120°F (49°C) maximum  
(air, surface, and 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.

Reducer/Clean Up: Xylene, R2K4

##### Airless Spray

Pressure.....2400 psi  
Hose.....3/8" ID  
Tip......015" - .017"  
Filter.....80 mesh  
Reduction.....As needed up to 5% by volume

##### Conventional Spray

Gun.....Binks 95  
Fluid Nozzle.....63 B  
Atomization Pressure.....50 - 70 psi  
Fluid Pressure.....20 - 25 psi  
Reduction.....As needed up to 5% by volume

##### Brush

Brush.....Natural Bristle  
Reduction\*.....As needed up to 5% by volume

##### Roller

Cover.....3/8" woven with solvent resistant core  
Reduction\*.....As needed up to 5% by volume

\*Other areas (<420 g/L): Xylene R2K4 up to 10% by volume. Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

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.

Mix contents of each component thoroughly with low speed power agitation. Make certain no pigment remains on the bottom of the can. Then combine 4 parts by volume of Part A with 1 part by volume of Part B. Thoroughly agitate the mixture with power agitation for 5 minutes.

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:

##### Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	3.0 (75)	6.0 (150)
Dry mils (microns)	2.0 (50)	4.0 (100)
~Coverage sq ft/gal (m <sup>2</sup> /L)	256 (6.3)	512 (12.5)
Theoretical coverage sq ft/gal (m <sup>2</sup> /L) @ 1 mil / 25 microns dft	1024 (25.0)	

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

##### Drying Schedule @ 4.0 mils wet (100 microns):

	@ 40°F/4.5°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	5 hours	1 hour	30 minutes
To handle:	16 hours	4 hours	2 hours
To recoat:			
minimum:	16 hours	4 hours	2 hours
maximum:	3 months	3 months	3 months
To cure:	14 days	7 days	7 days
Pot Life:	12 hours	6 hours	2 hours
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.

#### CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Xylene, R2K4. Clean tools immediately after use with Xylene, R2K4. Follow manufacturer's safety recommendations when using any solvent.

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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.

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 Xylene, R2K4.

Mixed coating is sensitive to water. Use water traps in all air lines. Moisture contact can reduce pot life and affect gloss and color.

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

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#### WARRANTY

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