**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**

- **Finish:** Gloss
- **Color:** Wide range of colors available
- **Volume Solids:** 64% ± 2%
  - mixed, may vary by color
- **Weight Solids:** 77% ± 2%
  - mixed, may vary by color
- **VOC (EPA method #24):**
  - Unreduced: <340 g/L; 2.8 lb/gal
  - Reduced 5%: <340 g/L; 2.8 lb/gal
- **Mix Ratio:** 4:1 by volume

**Recommended Spreading Rate per coat:**

<table>
<thead>
<tr>
<th>Wet mils (microns)</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0 (75)</td>
<td>6.0 (150)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dry mils (microns)</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0 (50)</td>
<td>4.0 (100)</td>
<td></td>
</tr>
</tbody>
</table>

| ~Coverage sq ft/gal (m²/L) | 256 (6.3) | 512 (12.5) |
| Theoretical coverage sq ft/gal (m²/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):**

- **At 40°F/4.5°C:**
  - To touch: 5 hours
  - To handle: 16 hours

- **At 77°F/25°C:**
  - 50% RH
  - To touch: 1 hour
  - To handle: 4 hours

- **At 120°F/49°C:**
  - To recoat:
    - minimum: 16 hours
    - maximum: 3 months
  - To cure: 14 days
  - Pot Life: 12 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.

**Recommended Uses**

Use over prepared substrates in industrial environments, such as:

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

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

**PERFORMANCE CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Substrate*: Steel</th>
<th>Surface Preparation*: SSPC-SP6/NACE 2</th>
<th>System Tested*:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 ct. Recoatable Epoxy Primer @ 4.0 mils (100 microns) dft</td>
<td>1 ct. SherThane 2K Urethane @ 3.0 mils (75 microns) dft</td>
</tr>
</tbody>
</table>

*unless otherwise noted below

**Test Name** | **Test Method** | **Results**
--- | --- | ---
Abrasion Resistance | ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load | 108 mg loss
Accelerated Weathering - QUV | ASTM D4587, QUV-A, 3000 hours | Passes, >70% Gloss retention
Adhesion | ASTM D4541 - Patti | 2364 psi
Corrosion Weathering | ASTM D5894, 45 cycles, 15,120 hours | Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D610 for rusting
Dry Heat Resistance | ASTM D2485 | 200°F (93°C)
Exterior Durability | 1 year at 45° South | Excellent
Flexibility | ASTM D522, 180° bend, 1/4" mandrel | Passes
Moisture Condensation Resistance | ASTM D4585, 100°F (38°C), 2000 hours | No blisters, rust, delamination, or rust creepage at scribe
Pencil Hardness | ASTM D3363 | B
Salt Fog Resistance | ASTM B117, 2000 hours | Rating 8 per ASTM D714 for blistering; Rating 10 per ASTM D610 for rusting
Thermocycling | 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, Levels 2 & 3.
**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. 310.2, CSP 1-3
  * Primer required

**Surface Preparation Standards**

<table>
<thead>
<tr>
<th>Condition of Surface</th>
<th>ISO 8501-1</th>
<th>BS7799-A1</th>
<th>Swedish Std.</th>
<th>SSPC</th>
<th>NACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Metal</td>
<td>Sa 3</td>
<td>Sa 3</td>
<td>SP 5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Near White Metal</td>
<td>Sa 2.5</td>
<td>Sa 2.5</td>
<td>SP 6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Commercial Blast</td>
<td>Sa 2</td>
<td>Sa 2</td>
<td>SP 7</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Brush-Off Blast</td>
<td>Sa 1</td>
<td>Sa 1</td>
<td>SP 2</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Hand Tool Cleaning</td>
<td>C St 3</td>
<td>C St 3</td>
<td>SP 3</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Power Tool Cleaning</td>
<td>D St 3</td>
<td>D St 3</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

**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

Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>Packaging</th>
<th>Part A: 1 gallon (3.78L) and 4 gallon (15.1L) kits</th>
<th>Part B: 1 quart (0.94L) and 1 gallon (3.78L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>11.55 ± 0.2 lb/gal ; 1.38 Kg/L</td>
<td>mixed, may vary with color</td>
</tr>
</tbody>
</table>

**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.

The systems listed above are representative of the product's use, other systems may be appropriate.
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, 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. 310.2. 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.

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 10% by volume

Roller
- Cover: 3/8" woven with solvent resistant core
- Reduction: As needed up to 10% by volume

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


**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:

<table>
<thead>
<tr>
<th>Recommended Spreading Rate per coat:</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet mils (microns)</td>
<td>3.0 (75)</td>
<td>6.0 (150)</td>
</tr>
<tr>
<td>Dry mils (microns)</td>
<td>2.0 (50)</td>
<td>4.0 (100)</td>
</tr>
<tr>
<td>Coverage sq ft/gal (m²/L)</td>
<td>256 (6.3)</td>
<td>512 (12.5)</td>
</tr>
<tr>
<td>Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft</td>
<td>1024 (25.0)</td>
<td></td>
</tr>
</tbody>
</table>

*N O T E :* 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):**

<table>
<thead>
<tr>
<th>@ 40°F/4.5°C</th>
<th>@ 77°F/25°C</th>
<th>@ 120°F/49°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>To touch:</td>
<td>5 hours</td>
<td>1 hour</td>
</tr>
<tr>
<td>To handle:</td>
<td>16 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td>To recoat:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>minimum:</td>
<td>16 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td>maximum:</td>
<td>3 months</td>
<td>3 months</td>
</tr>
<tr>
<td>To cure:</td>
<td>14 days</td>
<td>7 days</td>
</tr>
<tr>
<td>Pot Life:</td>
<td>12 hours</td>
<td>6 hours</td>
</tr>
<tr>
<td>Sweat-in-Time:</td>
<td>None required</td>
<td></td>
</tr>
</tbody>
</table>

*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.

**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.

**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.

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.

**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.