DIAMOND-CLAD CLEAR COAT URETHANE is a three component, graffiti resistant, acrylic polyurethane clear coat that enhances the finish and weathering properties of newly applied aliphatic urethane coatings. It exhibits excellent graffiti resistance and ease of application by brush or roller. Designed to be applied within the recoat window of the respective Sherwin-Williams aliphatic urethane.

- Extends the service life and exterior weathering properties of Sherwin-Williams aliphatic urethane.
- Outstanding application properties

**Product Characteristics**

**Finish:** Gloss or Semi-Gloss

**Color:** Clear

**Volume Solids:** 67% ± 2%, mixed, Gloss

**Weight Solids:** 73% ± 2%, mixed

**VOC (EPA Method 24):**
- Unreduced: <300 g/L; 2.34 lb/gal
- Reduced 10%: 340 g/L; 2.8 lb/gal

**Mix Ratio:** 8:4:1; 3 premeasured components

**0.81 gallons (3.06L) mixed**

**Reducer/Clean Up:** R7K216 or R6K30

**Flash Point:** 98°F (37°C) PMCC, mixed

**Reduction:** None

**Sweat-in-Time:** 1088 hours

**Pot Life:** 2 hours 1 hour 30 minutes

**7 days 7 days 7 days**

**To cure:** 7 days 7 days 7 days

**Dry Heat Resistance:** ASTM D2485 200°F (93°C)

**120 in lb**

**Drying Schedule @ 2.0 mils wet (50 microns):**

- @ 40°F/4.5°C 77°F/25°C 100°F/38°C
- 50% RH

- To touch: 2 hours 30 minutes 20 minutes
- To handle: 12 hours 3 hours 1.5 hours
- To recoat with itself, if required:
  - minimum: 12 hours 3 hours 1.5 hours
  - maximum: 7 days 7 days 7 days
- To cure: 7 days 7 days 7 days

**Flexibility**

- Part A (gloss) - 12 months, unopened
- Part A (semi-gloss) - 24 months, unopened
- Part B - 12 months, unopened
- Part C - 6 months, unopened
- Store indoors at 40°F (4.5°C) to 100°F (38°C).

- Shelf Life:
  - Part A (gloss) - 12 months, unopened
  - Part A (semi-gloss) - 24 months, unopened
  - Part B - 12 months, unopened
  - Part C - 6 months, unopened

- Flash Point: 98°F (37°C) PMCC, mixed

- Reducer/Clean Up: R7K216 or R6K30

**Recommended Uses**

- For exterior use over newly applied aliphatic urethane coatings in industrial environments.
- To enhance urethane coatings by providing extended weathering properties.
- Suitable for use in USDA inspected facilities
- For exterior use over newly applied aliphatic urethane coatings in industrial environments.
- To enhance urethane coatings by providing extended weathering properties.
- Suitable for use in USDA inspected facilities

**Performance Characteristics**

- **Substrate**: Steel
- **Surface Preparation**: SSPC-SP10/NACE 2
- **System Tested**:
  - 1st ct: Epolon II Multi-Mil Epoxy @ 2-4 mils (50-100 microns) dft
  - 2nd ct: Poly-Lon HP @ 2-4 mils (50-100 microns) dft
  - 3rd ct: DIAMOND-Clad Clear Coat @ 1-2 mils (25-50 microns) dft

- **Apply**: DIAMOND-Clad meets the performance requirements of SSPC Paint No. 36, Level 3.

- **Test Name**
  - **Abrasion Resistance (semi-gloss)**: ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load
  - **Accelerated Weathering (gloss)**: ASTM D4587, QUVA-A, 10,000 hours
  - **Adhesion (gloss)**: ASTM D4541 1250 psi
  - **Corrosion Weathering (gloss)**: ASTM D5894, 9 cycles, 3000 hours
  - **Direct Impact Resistance (semi-gloss)**: ASTM D2794 120 in lb
  - **Dry Heat Resistance**: ASTM D2485 200°F (93°C)
  - **Exterior Exposure**: 5 years at 45° South
  - **Graffiti Resistance**: Graffiti materials applied - epoxy ester spray, acrylic spray, alkyd spray, ballpoint pen ink, crayon, lipstick
  - **Flexibility**: DIAMOND-Clad meets the performance requirements of SSPC Paint No. 36, Level 3.
  - **Pencil Hardness (gloss)**: HB

- **Results**:
  - 55 mg loss
  - 100% gloss retention
  - No blistering, cracking, rusting, or delamination
  - No blistering, cracking, rusting, or delamination
  - Change MacAdam unit color change
  - Passes
  - All materials were removed easily and completely with either xylene or MEK
  - No blistering, cracking, rusting, or delamination

- **Development**:
  - US Patent No. 3073288
  - US Patent No. 3325149
  - US Patent No. 3421162
  - US Patent No. 3509793

- **Weight Solids**: 73% ± 2%, mixed

- **Gloss or Semi-Gloss**: 66% ± 2%, mixed

- **Color**: Clear

- **Volume Solids**: 67% ± 2%, mixed, Gloss

- **Mix Ratio**: 8:4:1; 3 premeasured components

- **0.81 gallons (3.06L) mixed**

- **Reducer/Clean Up**: R7K216 or R6K30

- **Flash Point**: 98°F (37°C) PMCC, mixed

- **Reduction**: None

- **Sweat-in-Time**: 1088 hours

- **Pot Life**: 2 hours 1 hour 30 minutes

- **Drying Schedule @ 2.0 mils wet (50 microns):**

- @ 40°F/4.5°C 77°F/25°C 100°F/38°C

  - 50% RH

  - To touch: 2 hours 30 minutes 20 minutes
  - To handle: 12 hours 3 hours 1.5 hours

  - To recoat with itself, if required:
    - minimum: 12 hours 3 hours 1.5 hours
    - maximum: 7 days 7 days 7 days

- **To cure**: 7 days 7 days 7 days

- **Dry Heat Resistance**: ASTM D2485 200°F (93°C)

- **Exterior Exposure**: 5 years at 45° South

- **Graffiti Resistance**: Graffiti materials applied - epoxy ester spray, acrylic spray, alkyd spray, ballpoint pen ink, crayon, lipstick

- **Flexibility**: DIAMOND-Clad meets the performance requirements of SSPC Paint No. 36, Level 3.

- **Pencil Hardness (gloss)**: HB

- **Salt Fog Resistance (gloss)**: ASTM B117, 3000 hours

- **Passes, no blistering or rusting**

- **DIAMOND-Clad meets the performance requirements of SSPC Paint No. 36, Level 3.**

- **DIAMOND-Clad meets the performance requirements of SSPC Paint No. 36, Level 3.**
Revised: September 17, 2020

**Recommended Systems**

Apply Diamond-Clad Clear Coat Urethane @ 1.0 - 2.0 mils (25-50 microns) dft/ct over the following Sherwin-Williams aliphatic urethanes:


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.

Refer to data page of the urethane to be topcoated.

<table>
<thead>
<tr>
<th>Condition of Surface</th>
<th>ISO 8501-1</th>
<th>BS7079:1</th>
<th>SSPC</th>
<th>NACE</th>
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<tr>
<td>White Metal</td>
<td>Sa 2.5</td>
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<tr>
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<td>-</td>
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<td>SP 2</td>
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<td>-</td>
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<tr>
<td></td>
<td>Rusted Pitted &amp; Rusted</td>
<td>D St 3</td>
<td>D St 3</td>
<td>SP 3</td>
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<tr>
<td></td>
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<td></td>
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</tbody>
</table>

Do not tint.

**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: 0.81 gallons (3.06L) mixed
Part A: 2 quarts (1.89L) in a 1 gallon (3.78L) container
Part B: 1 quart (0.94L)
Part C: 8 oz (0.23L) container
Weight: 8.74 ± 0.2 lb/gal ; 1.05 Kg/L, mixed

**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.

**Disclaimer**

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**Warranty**

The Sherwin-Williams Company warrants its 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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DIAMOND-CLAD®
CLEAR COAT URETHANE

APPLICATION BULLETIN 5.40

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.

General 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 good adhesion.

Refer to data page of the respective aliphatic urethane coating to be topcoated.

Aliphatic Urethane..............................................coat within
Acrolon 218 HS Acrylic Polyurethane..........................30 days
Corothane I Aliphatic Finish Coat................................7 days
Corothane II Polyurethane......................................14 days
Envirolastic 940 LV..............................................90 days
Fluorokem HS 100..............................................45 days
Hi-Solids Polyurethane.........................................14 days
Hi-Solids Polyurethane 250....................................30 days
Poly-Lon HP Polyurethane.................................48 hours
SherThane 2K Urethane......................................14 days

Surface Preparation Standards

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<tr>
<th>Condition of Surface</th>
<th>ISO 8501-1</th>
<th>BS7079.A1</th>
<th>Swedish Std.</th>
<th>SSPE</th>
<th>NACE</th>
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<td>Sa 2.5</td>
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<td>Commercial Blast</td>
<td>Sa 2</td>
<td>Sa 2</td>
<td>Sa 2</td>
<td>SP 6</td>
<td>3</td>
</tr>
<tr>
<td>Brush-Off Blast</td>
<td>Sa 1</td>
<td>Sa 1</td>
<td>Sa 1</td>
<td>SP 7</td>
<td>4</td>
</tr>
<tr>
<td>Hand Tool Cleaning</td>
<td>Rusted</td>
<td>C Sl 2</td>
<td>C Sl 2</td>
<td>SP 2</td>
<td>-</td>
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<tr>
<td>Pitted &amp; Rusted</td>
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<td>-</td>
</tr>
</tbody>
</table>

Temperature: 40°F (4.5°C) minimum, 120°F (49°C) maximum
(at, surface, and material)
At least 5°F (2.8°C) above dew point
Relative humidity: 85% maximum

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: ..........Reducer R7K216 or Reducer R6K30

Do not add reducer solvent more than 30 minutes after mixing material together.

Brush
Bru......Natural Bristle
Reduction..........As needed up to 10% by volume

Roller
Cover ..................1/4" woven with solvent resistant core
Reduction..........As needed up to 10% by volume

HVLP
SATA NR 2000 HVLP Spray gun/gravity feed
1.4 mm set aircap, needle, nozzle
40 psi air pressure

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

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continued on back
DIAMOND-CLAD®
CLEAR COAT URETHANE

PART A  CLEAR - GLOSS  B65T105
PART A  CLEAR - SEMI-GLOSS  B65T115
PART B  HARDENER  B65V105
PART C  CATALYST  B65C105

Application Bulletin

APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix contents of each component thoroughly with low speed power agitation. Combine 8 parts by volume of Part A with 1 part by volume of Part C. Mix thoroughly. Then add 4 parts by volume of Part B to the mixture and mix thoroughly with low speed power agitation. Do not shake. All components are premeasured.

If reducer solvent is used, add only after all components have been thoroughly mixed. Add within 30 minutes of mixing components together.

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

Recommended Spreading Rate per coat:

<table>
<thead>
<tr>
<th>Wet mils (microns)</th>
<th>Minimum</th>
<th>Maximum</th>
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</thead>
<tbody>
<tr>
<td>1.5</td>
<td>40</td>
<td>75</td>
</tr>
<tr>
<td>2.0</td>
<td>25</td>
<td>50</td>
</tr>
</tbody>
</table>

~Coverage sq ft/gal (m²/L) @ 1 mil /25 microns dft

Theoretical coverage sq ft/gal (m²/L)

1088  26.0

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

Drying Schedule @ 2.0 mils wet (50 microns):

@ 40°F/4.5°C  @ 77°F/25°C  @ 100°F/38°C

50% RH

To touch:  2 hours  30 minutes  20 minutes
To handle: 12 hours  3 hours  1.5 hours
To recoat with itself, if required:
                   minimum:  12 hours  3 hours  1.5 hours
                   maximum:  7 days  7 days  7 days
To cure:  2 hours  1 hour  30 minutes
Pot Life: None

Sweat-in-Time:

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 Reducer R7K216 or Reducer R6K30. Clean tools immediately after use with Reducer R7K216 or Reducer R6K30. Follow manufacturer’s safety recommendations when using any solvent.

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SOUTH AMERICA

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

SAFETY PRECAUTIONS

Refer to the SDS sheet before use.

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