### Product Information

#### Product Description

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 urethane coatings.
- Enhances the color and gloss of urethane coatings.
- Outstanding application properties

#### Recommended Uses

- For exterior use over newly applied aliphatic urethane coatings in industrial environments.
- To enhance urethane coatings by providing extended weathering properties.
- Use where graffiti resistance is important.
- Use on:
  - Water tanks
  - Pipelines
  - Refineries
  - Amusement parks
  - Corporate logos/signs
  - Acceptable for use in high performance architectural applications.
  - Suitable for use in USDA inspected facilities

#### Product Characteristics

<table>
<thead>
<tr>
<th>Finish:</th>
<th>Gloss or Semi-Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Clear</td>
</tr>
<tr>
<td>Volume Solids:</td>
<td>67% ± 2%, mixed, Gloss</td>
</tr>
<tr>
<td>Weight Solids:</td>
<td>73% ± 2%, mixed</td>
</tr>
<tr>
<td>VOC (EPA Method 24):</td>
<td>Unreduced: &lt;300 g/L; 2.34 lb/gal</td>
</tr>
<tr>
<td>Mix Ratio:</td>
<td>8:4:1; 3 premeasured components</td>
</tr>
</tbody>
</table>

#### Recommended Spreading Rate per coat:

| Wet mils (microns) | 1.5 10 | 3.0 75 |
| Dry mils (microns) | 2.0 50 |
| ~Coverage sq ft/gal (m²/L) | 1090 26.6 |
| Theoretical coverage sq ft/gal (m²/L) | 1088 26.0 |

#### 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

#### Performance Characteristics

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Test Method</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrasion Resistance (semi-gloss)</td>
<td>ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load</td>
<td>55 mg loss</td>
</tr>
<tr>
<td>Accelerated Weathering (gloss)</td>
<td>ASTM D4587, QUV-A, 10,000 hours</td>
<td>100% gloss retention</td>
</tr>
<tr>
<td>Adhesion (gloss)</td>
<td>ASTM D4541</td>
<td>1250 psi</td>
</tr>
<tr>
<td>Corrosion Weathering (gloss)</td>
<td>ASTM D5894, 9 cycles, 3000 hours</td>
<td>Passe, no blistering, cracking, rusting, or delamination</td>
</tr>
<tr>
<td>Direct Impact Resistance (semi-gloss)</td>
<td>ASTM D2794</td>
<td>120 in lb</td>
</tr>
<tr>
<td>Dry Heat Resistance</td>
<td>ASTM D2485</td>
<td>200°F (93°C)</td>
</tr>
<tr>
<td>Exterior Exposure</td>
<td>5 years at 45°F South</td>
<td>No blistering, cracking, or chalking; 85% gloss retention, &lt;4 MacAdam unit color change</td>
</tr>
<tr>
<td>Flexibility</td>
<td>ASTM D522, 180° bend, 1/8” mandrel</td>
<td>Passe</td>
</tr>
<tr>
<td>Graffiti Resistance</td>
<td>Graffiti materials applied - epoxy ester spray, acrylic spray, alkyd spray, ballpoint pen ink, crayon, lipstick</td>
<td>All materials were removed easily and completely with either xylene or MEK</td>
</tr>
<tr>
<td>Pencil Hardness (gloss)</td>
<td>ASTM D3363</td>
<td>HB</td>
</tr>
<tr>
<td>Salt Fog Resistance (gloss)</td>
<td>ASTM B117, 3000 hours</td>
<td>Passe, no blistering or rusting</td>
</tr>
</tbody>
</table>

Diamond-Clad meets the performance requirements of SSPC Paint No. 36, Level 3.
DIAMOND-CLAD® CLEAR COAT URETHANE

PRODUCT INFORMATION

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

Aliphatic Urethane ..................................................coast 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
Envirolastic 980 PA..................................................90 days
Fluorokem HS.........................................................45 days
Hi-Solids Polyurethane.............................................14 days
Hi-Solids Polyurethane 250.......................................30 days
Poly-Lon HP Polyurethane........................................48 hours
SherThane 2K Urethane...........................................14 days

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.

Surface Preparation Standards

<table>
<thead>
<tr>
<th>Condition of Surface</th>
<th>ISO 8501-1</th>
<th>Swedish Std.</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Metal</td>
<td>Sa 2.5</td>
<td>Sa 3</td>
</tr>
<tr>
<td>Near White Metal</td>
<td>Sa 2</td>
<td>Sa 2</td>
</tr>
<tr>
<td>Commercial Blast</td>
<td>Sa 1.2</td>
<td>Sa 1.2</td>
</tr>
<tr>
<td>Brush-Off Blast</td>
<td>Sa 1.2</td>
<td>Sa 1.2</td>
</tr>
<tr>
<td>Hand Tool Cleaning</td>
<td>Rusted</td>
<td>D St 2</td>
</tr>
<tr>
<td>Power Tool Cleaning</td>
<td>Rusted</td>
<td>D St 3</td>
</tr>
<tr>
<td></td>
<td>Pitted &amp; Rusted</td>
<td>D St 3</td>
</tr>
</tbody>
</table>

TINTING

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

<table>
<thead>
<tr>
<th>Packaging</th>
<th>0.81 gallons (3.06L) mixed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part A</td>
<td>2 quarts (1.89L) in a 1 gallon (3.78L) container</td>
</tr>
<tr>
<td>Part B</td>
<td>1 quart (0.94L)</td>
</tr>
<tr>
<td>Part C</td>
<td>8 oz (0.23L) container</td>
</tr>
</tbody>
</table>

Weight: 8.74 ± 0.2 lb/gal ; 1.05 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.

www.sherwin-williams.com/protective
### 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.

**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**

- Acron 218 HS Acrylic Polyurethane: 30 days
- Corothane I Aliphatic Finish Coat: 7 days
- Corothane II Polyurethane: 14 days
- Envirolastic 940 LV: 90 days
- Envirolastic 980 PA: 90 days
- Fluorokem HS: 45 days
- Hi-Solids Polyurethane: 14 days
- Hi-Solids Polyurethane 250: 30 days
- Poly-Lon HP Polyurethane: 48 hours
- SherThane 2K Urethane: 14 days

### 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:** Reducer R7K216 or Reducer R6K30

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

**Brush**

- Brush: 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 air cap, needle, nozzle
- 40 psi air pressure

If specific application equipment is not listed above, equivalent equipment may be substituted.
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>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>40</td>
<td>3.0</td>
</tr>
<tr>
<td>2.0</td>
<td>25</td>
<td>50</td>
</tr>
</tbody>
</table>

| ~Coverage sq ft/gal (m²/L) | 545 | 13.3 | 1090 | 26.6 |

| Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft | 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):

- **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
- **Pot Life:** 2 hours / 1 hour / 30 minutes
- **Sweat-in-Time:** None

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.

### 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.