DURA-PLATE® 5900
HIGH BUILD EPOXY

PRODUCT DESCRIPTION
DURA-PLATE 5900 is a high build, 100% solids epoxy designed for corrosion protection of concrete and steel in municipal and industrial wastewater treatment facilities, especially where a high build coating is required.

- 100% solids
- Resistant to water and wastewater treatment immersion
- May be applied to an SSD (Saturated Surface Dry) substrate
- May be applied as Mortar System utilizing Type DP Aggregate

PRODUCT CHARACTERISTICS

<table>
<thead>
<tr>
<th>Finish:</th>
<th>Matte</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>White, Gray</td>
</tr>
<tr>
<td>Volume Solids:</td>
<td>100%</td>
</tr>
<tr>
<td>VOC (measured):</td>
<td>160 g/L; 1.3 lb/gal (EPA Method 24)</td>
</tr>
<tr>
<td>Weight Solids:</td>
<td>100%, calculated mixed</td>
</tr>
<tr>
<td>Mix Ratio:</td>
<td>1:1 by volume</td>
</tr>
</tbody>
</table>

Recommended Spreading Rate per coat:

<table>
<thead>
<tr>
<th>Wet mils (microns)</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.0 (375)</td>
<td>125.0 (3125)</td>
<td></td>
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<td>15.0 (375)</td>
<td>125.0 (3125)</td>
<td></td>
</tr>
<tr>
<td>Coverage sq ft/gal (m²/L): 12.8 (0.3) 107 (2.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theoretical coverage sq ft/gal (m²/L): 1604 (39.4)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Drying Schedule @ 120.0 mils wet (3000 microns):

- @ 77°F/25°C
- 50% RH
- To touch: 2 hours
- To handle: 8 hours
- To recoat: Minimum: 8 hours
- Maximum: 2 weeks
- Cure to service: 2 days

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

Pot Life: 30 minutes
Sweat-in-Time: None

Shelf Life: 9 months, unopened
Store indoors at 40°F (4.5°C) to 100°F (38°C).

Flash Point: 204°F (95°C), PMCC ASTM D93
Reduction: Not recommended
Clean Up: R2KT4 or MEK

Recommended Uses
Protects concrete and steel surfaces in immersion and atmospheric exposure.

Ideally suited for coating, lining, and containment applications in water and wastewater facilities including:

- Lift stations
- Concrete pipe
- Wet wells
- Steel pipe
- Manholes
- Sumps
- Digesters
- Trenches
- Clarifiers
- Sluice ways
- Basins
- Influent chambers

Performance Characteristics

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Test Method</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrasion</td>
<td>ASTM D4060</td>
<td>104.5 mg loss</td>
</tr>
<tr>
<td>Absorption*</td>
<td>ASTM C413</td>
<td>0.03%</td>
</tr>
<tr>
<td>Adhesion (Concrete)</td>
<td>ASTM D7234</td>
<td>700 psi</td>
</tr>
<tr>
<td>Adhesion (Steel)</td>
<td>ASTM D4541</td>
<td>2000 psi</td>
</tr>
<tr>
<td>Dry Heat Resistance</td>
<td>D2485 Quench test only</td>
<td>300°F (149°C)</td>
</tr>
<tr>
<td>Hardness, Shore D</td>
<td>ASTM 2240</td>
<td>75</td>
</tr>
<tr>
<td>Immersion</td>
<td>ASTM D6943, 10 months fresh water</td>
<td>Rating 10 per ASTM D610 for rusting; Rating 10 per ASTM D714 for blistering</td>
</tr>
<tr>
<td>Impact Resistance</td>
<td>ASTM D2794</td>
<td>30 in. lbs.</td>
</tr>
</tbody>
</table>

*Mortar System
Epoxy coatings may darken or discolor following application and curing and may chalk when exposed to sunlight.
# DURA-PLATE® 5900
## HIGH BUILD EPOXY

### PRODUCT INFORMATION

**Part A**  B62W465  **White**
**Part A**  B62A465  **Gray**
**Part B**  B62V465  **Hardener**

**Revised**: November 12, 2019

## Recommended Systems

<table>
<thead>
<tr>
<th>Steel (Immersion Service):</th>
<th>Dry Film Thickness / ct. Mils (Microns)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ct. Dura-Plate 5900</td>
<td>15.0-125.0 (375-3125)</td>
</tr>
</tbody>
</table>

Dura-Plate 5900 can be applied up to 125 mils (3125 microns) thick in areas requiring protection from erosion.

<table>
<thead>
<tr>
<th>Concrete (Immersion Service):</th>
<th>Dry Film Thickness / ct. Mils (Microns)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ct. Corobond 100 Epoxy Primer*</td>
<td>4.0-6.0 (100-150)</td>
</tr>
<tr>
<td>1 ct. Dura-Plate 5900</td>
<td>40.0-125.0 (1000-3125)</td>
</tr>
</tbody>
</table>

**Concrete, Mortar (Lining and Resurfacing):**

<table>
<thead>
<tr>
<th>1 ct. Dura-Plate 5900 with 28 lbs. of Type DP Aggregate per 2 gallons</th>
<th>Dry Film Thickness / ct. Mils (Microns)</th>
</tr>
</thead>
<tbody>
<tr>
<td>125-200 (3125-5000)</td>
<td></td>
</tr>
</tbody>
</table>

*Primer is optional. Other Acceptable Primers: Corobond LT
Dura-Plate 235 MPE

Consult your Sherwin-Williams Representative for other primer options.

**For more information on mixing, reference Protective & Marine technical bulletin - Dura-Plate Epoxy Mortars**

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:**
- Atmospheric: SSPC-SP 6/NACE 3, 2 mil (50 micron) profile
- Immersion: SSPC-SP 10/NACE 2, 2-3 mil (50-75 micron) profile

- **Concrete & Masonry:**
- Immersion: SSPC-SP 13/NACE 6-4.3.1 or 4.3.2, or ICRI No. 310.2R, CSP 3-5

### Surface Preparation Standards

<table>
<thead>
<tr>
<th>Condition of Surface</th>
<th>ISO 8501-1</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>
</tr>
<tr>
<td>Near White Metal</td>
<td>Sa 2.5</td>
<td>Sa 2.5</td>
<td>SP 10</td>
<td>2</td>
</tr>
<tr>
<td>Commercial Blast</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>SP 7</td>
<td>4</td>
</tr>
<tr>
<td>Hand Tool Cleaning</td>
<td>C St 2</td>
<td>C St 2</td>
<td>SP 2</td>
<td>-</td>
</tr>
<tr>
<td>Rusted</td>
<td>D St 3</td>
<td>D St 3</td>
<td>SP 3</td>
<td>-</td>
</tr>
<tr>
<td>Pitted &amp; Rusted</td>
<td>D St 3</td>
<td>D St 3</td>
<td>SP 3</td>
<td>-</td>
</tr>
<tr>
<td>Power Tool Cleaning</td>
<td>C St 3</td>
<td>C St 3</td>
<td>SP 3</td>
<td>-</td>
</tr>
</tbody>
</table>

**Temperature:** 50°F (10°C) minimum, 100°F (38°C) maximum
(Air, surface, & material) At least 5°F (2.8°C) above dew point

Refer to product Application Bulletin for detailed application information.

## TINTING

Do not tint.

## APPLICATION CONDITIONS

Temperature: 50°F (10°C) minimum, 100°F (38°C) maximum
(Air, surface, & material) At least 5°F (2.8°C) above dew point

Refer to product Application Bulletin for detailed application information.

## ORDERING INFORMATION

### Packaging:

| Part A: | 5 gallon (18.9L) container |
| Part B: | 5 gallon (18.9L) container |

### Weight:

12.6 ± 0.2 lb/gal ; 1.5 Kg/L

## 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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Surface must be clean, surface dry, and in sound condition.
Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Carbon Steel, Immersion Service:
Clean and degrease the surface prior to abrasive blasting per SSPC-SP 1 Solvent Cleaning. Methods described in SSPC-SP 1 include solvents, alkali, detergent/water, emulsions, and steam. The surface shall be abrasive blasted to SSPC-SP10/NACE No. 2 Near-White Blast Cleaning with a 2 - 3 mil profile. The anchor pattern shall be sharp with no evidence of a polished surface. The finished surface shall be free of all visible oil, grease, dust, dirt, mill scale, rust, coating, oxides, corrosion products, and other foreign matter with no more than 5% staining. After blasting, all dust and loose residue should be removed from the surface by acceptable means. Coat steel the same day as it is prepared and prior to the formation of rust.

Concrete and Masonry, Immersion Service:
Decontamination of the concrete surface requires the removal of oils, grease, wax, fatty acids and other contaminants and may be accomplished by the use of detergent scrubbing with a Sherwin-Williams cleaner and degreaser, low pressure water cleaning (less than 5,000 psi), steam cleaning, or chemical cleaning. The preferred methods for creating a surface profile, including the removal of dirt, dust, laitance and curing compounds, is abrasive blasting or scarifying to achieve an ICRI surface equivalent to CSP 3-5. Fill all cracks, voids, and bug holes with cementitious grout, Steel-Seam FT910 or Dura-Plate 5800 grout. See ICRI Technical Guideline No. 310.2R for additional information.

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<td>3</td>
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<td>Brush-Off Blast</td>
<td>Sa 1</td>
<td>Sa 1</td>
<td>SP 4</td>
<td>3</td>
</tr>
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<td>Hand Tool Cleaning</td>
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<td>Rusted</td>
<td>C St 3</td>
<td>SP 3</td>
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Temperature: 50°F (10°C) minimum, 100°F (38°C) maximum
(Air, surface, & material)
At least 5°F (2.8°C) above dew point

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.

Application requires a hopper feed delivery of mixed materials. Changes in pressures and tip sizes may be needed for proper spray characteristics.

Reduction ......................Not recommended
Clean Up ........................Reducer R2KT4 or MEK
Airless Spray
Pump ............................Xtreme Mix 45:1 or 50:1
Pressure ........................2,200-2,500 psi
Hose .............................1/2" ID hose (25 ft)
Gun ..............................Silver Flex or XTR
Tip ...............................21-31
Filter ............................None

Plural Component Equipment:
Pump ................................Graco Xtreme Mix 50 and 70, XM 7, XP 50 and 70
Pressure ............................3500 psi
Hose ...............................3/8" ID
Tip .................................025" - .031"
Pump heater setting ..........90°F-110°F (32°C-43°C)
Material temperature ..........................80°F-110°F (27°C-43°C), vary as needed

Brush ................................Natural bristle
Roller ...............................Natural bristle

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

Surface preparation must be completed as indicated.

Mixing Instructions: Mix contents of each component thoroughly with low speed power agitation. Make certain no pigment remains on the bottom of the can. Then combine one parts by volume of Part A with one part by volume of Part B. Thoroughly agitate the mixture with power agitation. Fill hopper container with mixed coating.

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>
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<tr>
<td>Wet mils (microns)</td>
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<td>Dry mils (microns)</td>
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<td>Coverage sq ft/gal (m²/L)</td>
<td>12.8 (0.3)</td>
<td>107 (2.6)</td>
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<tr>
<td>Theoretical coverage sq ft/gal (m²/L) at 1 mil / 25 microns dft</td>
<td>1604 (39.4)</td>
<td></td>
</tr>
</tbody>
</table>

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

Drying Schedule @ 120.0 mils wet (3000 microns):

- @ 77°F/25°C
- 50% RH

To touch: 2 hours
To handle: 8 hours
To recoat:
- Minimum: 8 hours
- Maximum: 2 weeks
Cure to service: 2 days

If maximum recoat time is exceeded, scarify surface before recoating.

Drying time is temperature, humidity, and film thickness dependent.

Pot Life: 30 minutes
Sweat-in-Time: None

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

For Mortar Applications: (lining and resurfacing)
Refer to Protective & Marine technical bulletin - Dura-Plate Epoxy Mortars for mixing instructions

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with R2KT4 or MEK. Clean pump, hose, and gun by flushing system with R2KT4 or MEK. Then flush tools immediately after use with MEK.

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