DURA-PLATE® 5900
HIGH BUILD EPOXY

PRODUCT INFORMATION

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

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

Recommended Spreading Rate per coat:

<table>
<thead>
<tr>
<th>Metric Type</th>
<th>Minimum (microns)</th>
<th>Maximum (microns)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet mils</td>
<td>15.0 (375)</td>
<td>125.0 (3125)</td>
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<td>Dry mils</td>
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<td>1604 (39.4)</td>
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</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.

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

* Mortar System

Epoxy coatings may darken or discolor following application and curing and may chalk when exposed to sunlight.

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continued on back
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Product Information

Recommended Systems

<table>
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<tr>
<th>Surface</th>
<th>Condition</th>
<th>ISO 8501-1</th>
<th>Swedish Std.</th>
<th>SSPC</th>
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<tbody>
<tr>
<td>Steel (Immersion Service):</td>
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</tr>
<tr>
<td>1 ct. Dura-Plate 5900</td>
<td>Sa 3</td>
<td>Sa 3</td>
<td>SP 5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1 ct. Dura-Plate 5900</td>
<td>Sa 3</td>
<td>Sa 3</td>
<td>SP 10</td>
<td>2</td>
<td></td>
</tr>
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</table>

Dry Film Thickness / ct.

Steel (Immersion Service):

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

Concrete (Immersion Service):

1 ct. Corobond 100 Epoxy Primer* | 4.0-6.0 | (100-150) |
1 ct. Dura-Plate 5900 | 40.0-125.0 | (1000-3125) |

**Concrete, Mortar (Lining and Resurfacing):

1 ct. Dura-Plate 5900 with 28 lbs. of Type DP Aggregate per 2 gallons | 125-200 | (3125-5000) |

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

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<td>Sa 3</td>
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<td>Sa 3</td>
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<td>2</td>
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</table>

Tinting

Do not tint.

Application Conditions

Temperature: 50°F (10°C) minimum, 100°F (38°C) maximum

Relative humidity: 85% maximum

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 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 warranties 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.
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.

**Surface Preparation Standards**

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<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>St 1</td>
<td>St 1</td>
<td>SP 7</td>
<td>4</td>
</tr>
<tr>
<td>Hand Tool Cleaning</td>
<td>Rusted</td>
<td>Rusted</td>
<td>SP 2</td>
<td>-</td>
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<tr>
<td>Power Tool Cleaning</td>
<td>Pitted &amp; Rusted</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

Relative humidity: 85% maximum

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

**Application Equipment**

**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: 3,500 psi
- Hose: 3/8" ID
- Tip: 0.25" - 0.31"
- Pump heater setting: 90°F-110°F (32°C-43°C)
- Material temperature at gun tip: 80°F-110°F (27°C-43°C), vary as needed

**Brush** Natural bristle

**Roller** 3/8" nap for coatings

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:

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- 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.

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, over thinning, climatic conditions, and excessive film build.

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.

Tinting is not recommended for immersion service.

For Immersion Service (if required): Holiday test in accordance with ASTM D 5162 for steel, or ASTM D 4787 for concrete.

Safety Precautions

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

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.