



**Protective
&
Marine
Coatings**



Certified to
NSF/ANSI 61

DURA-PLATE® 6000 REINFORCED EPOXY

PART A B62W710 **WHITE**
PART B B62V710 **OFF WHITE HARDENER**
PART B B62BV710 **BLACK HARDENER**

Revised: March 25, 2020

PRODUCT INFORMATION

TRM.116

PRODUCT DESCRIPTION

DURA-PLATE 6000 is a 100% solids, high build, high strength, reinforced epoxy lining for concrete and steel in severe service environments with fast return-to-service times and the option for single leg application. It eliminates the application challenges associated with standard reinforced epoxy products while providing long-term life expectancy with extremely low permeability and excellent chemical resistance.

- Glass flake reinforced
- Hangs up to 125+ mils* (3,125 microns)
- Single leg or plural component spray application
- Long pot life
- Extended 28 day re-coat window
- Return to service in 10 hours
- Extremely low permeability
- May be applied to an SSD (Saturated Surface Dry) substrate

*Refer to NSF website for product restrictions or recommendations on dry film thickness, reducer restrictions and cure times.

PRODUCT CHARACTERISTICS

Finish:	Gloss
Color:	White, Gray
Volume Solids:	100%, mixed
Weight Solids:	100%, mixed
Mix Ratio:	2:1 by volume
VOC (unreduced):	16 g/L ; 0.13 lb/gal, mixed

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	40.0 (1000)	125.0+ (3,125)
Dry mils* (microns)	40.0 (1000)	125.0+** (3,125)
~Coverage sq ft/gal (m²/L)	13 (0.3)	40 (1.0)

Theoretical coverage **sq ft/gal (m²/L) @ 1 mil / 25 microns dft** **1604** (39.4)

*Consult systems guide on second page for specific concrete and steel recommendations.

**Refer to NSF website for product restrictions or recommendations on dry film thickness, reducer restrictions and cure times.

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

Drying Schedule @ 120.0 mils wet (3,000 microns):

	@ 35°F/1.7°C 50% RH	@ 55°F/13°C 50% RH	@ 77°F/25°C 50% RH
To touch:	4 hours	3 hours	2 hours
To handle:	12 hours	5 hours	4 hours
To recoat:			
minimum:	10 hours	5 hours	5 hours
maximum:	28 days	28 days	28 days
Cure to service:	10 hours	10 hours	10 hours
Pot life:	not recommended*	1 hour	1 hour

*It is recommended that the product is kept above 55°F (13°C) for application and mixing.

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

PRODUCT CHARACTERISTICS (CONT'D)

Drying Schedule @ 120.0 mils wet (3,000 microns):

	@ 95°F/35°C <50% RH	@ 120°F/49°C <50% RH	@ 150°F/66°C <50% RH
To touch:	2 hours	1.5 hours	1 hour
To handle:	4 hours	3 hours	2 hours
To recoat:			
minimum:	5 hours	5 hours	5 hours
maximum:	28 days	28 days	28 days
Cure to service:	10 hours	10 hours	10 hours
Pot life:	40 minutes	40 minutes	10 minutes

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

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

Shelf Life:	24 months, unopened. Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	>212°F (100°C), PMCC or SETA, mixed
Reducer:	Not recommended
Clean Up:	MEK

RECOMMENDED USES

For use over properly prepared steel and concrete surfaces in industrial environments and water and wastewater exposures, such as but not limited to:

- Severe wastewater immersion and headspace environments
- Sewer collection systems
- Wastewater treatment plants
- Industrial and wastewater tankage
- Suitable for use in USDA-inspected food processing facilities

For NSF approved applications:

- Refer to NSF website for product restrictions or recommendations on dry film thickness, reducer restrictions and cure times

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP10/NACE2

System Tested*:

1 ct. Dura-Plate 6000 @ 120 mils (3,000 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060	<120 mg loss
Adhesion	ASTM D4541 (Steel) ASTM D4541 (Concrete)	>3,000 psi substrate failure
Compressive Strength	ASTM D695	10,000 psi
Direct Impact Resistance	ASTM D2794	80 in. lb.
Elongation Percentage	ASTM D2794	2%
Flexural Modulus	ASTM D790	670,000 psi
Flexural Strength	ASTM D790	12,000 psi
Hardness, Shore D	ASTM D2240	75
Humidity Resistance	ASTM D4585	Pass
Severe Wastewater Analysis Test	ASTM G210	Pass
Tensile Strength	ASTM D638	7,300 psi
Water Vapor Transmission	ASTM D1653	0 gms/m ² (24 hours)

Third party testing available upon request.



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RECOMMENDED SYSTEMS

Dry Film Thickness / ct.
Mils (**Microns**)

Concrete:

Primer (optional for below grade structures to reduce out gassing potential and required for above ground open top structures to reduce outgassing potential): Corobond 100, Corobond LT, or Resuprime MVT

1 ct. Dura-Plate 6000 60.0-125.0** (1,500-3,125)
 or
 1 ct. Dura-Plate 2300 as needed to fill surface imperfections
 1 ct. (Optional) Primer as defined above
 1 ct. Dura-Plate 6000 60.0-125.0** (1,500-3,125)

Steel:

1 ct. Dura-Plate 6000 40.0 (1,000)

**Refer to NSF website for product restrictions or recommendations on dry film thickness, reducer restrictions and cure times.

Contact your Sherwin-Williams Representative for other available primer options.

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: SSPC-SP10/NACE 2, 3 mil (75 micron) profile

Concrete & Masonry: SSPC-SP13/NACE 6 or ICRI No. 310.2R CSP 3-5

Ductile Iron Pipe:
 Atmospheric: NAPF 500-03-03 Power Tool Cleaning
 Buried & Immersion: NAPF 500-03-04 Abrasive Blast Cleaning
 Cast Ductile Iron Fittings: NAPF 500-03-05 Abrasive Blast Cleaning

Surface Preparation Standards

Condition of Surface	ISO 8501-1	SSPC	NACE
White Metal	BS7079:A1	SP 5	1
Near White Metal	Sa 3	SP 10	2
Commercial Blast	Sa 2.5	SP 6	3
Brush-Off Blast	Sa 2	SP 7	4
Hand Tool Cleaning	Sa 1	SP 2	-
Rusted	C St 2	SP 2	-
Pitted & Rusted	D St 2	SP 2	-
Rusted	C St 3	SP 3	-
Power Tool Cleaning	D St 3	SP 3	-
Pitted & Rusted	D St 3	SP 3	-

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature:
 Air & Surface: 35°F (1.7°C) minimum, 150°F (66°C) maximum
 Material: 77°F (25°C) minimum, 150°F (66°C) maximum
 At least 5°F (2.8°C) above dew point

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:

Part A: 3 gallons (11.3L) in a 5 gallon (18.9L) container,
 5 gallons (18.9L) in a 5 gallon (18.9L) container
 Part B: 1.5 gallons (5.7L) in a 2 gallon (7.6L) container,
 5 gallons (18.9L) in a 5 gallon (18.9L) container

Weight: 10.45 lb/gal ; 1.25 Kg/L, mixed, White

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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APPLICATION BULLETIN

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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.

Iron & Steel:

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. The substrate shall not contain soluble salt concentrations in excess of 3 ppm for chlorides, 5 ppm for nitrates, and 10 ppm for sulfates. Surface with soluble salt concentrations in excess of these values shall be cleaned until satisfactory results are obtained. Minimum surface preparation is Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (3 mils / 75 microns). Remove all weld spatter and round all sharp edges. Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Concrete and Masonry:

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 3-5. 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.

Ductile Iron Pipe, Atmospheric Service:

Minimum surface preparation is Power Tool Clean per NAPF 500-03-03. Remove all oil and grease from surface by Solvent Cleaning per NAPF 500-03-01.

Ductile Iron Pipe, Buried and Immersion Service:

Minimum surface preparation is Abrasive Blast Cleaning per NAPF 500-03-04. Ductile iron pipe external surfaces, in some cases, can be damaged by excessive abrasive blast cleaning beyond this standard. Remove all oil and grease from surface by Solvent Cleaning per NAPF 500-03-01.

Ductile Iron Fittings:

Minimum surface preparation is Abrasive Blast Cleaning of Cast Ductile Iron Fittings per NAPF 500-03-05. Remove all oil and grease from surface by Solvent Cleaning per NAPF 500-03-01.

Follow the standard methods listed below when applicable:

ASTM D4258 Standard Practice for Cleaning Concrete.
 ASTM D4259 Standard Practice for Abrading Concrete.
 ASTM D4260 Standard Practice for Etching Concrete.
 ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.
 SSPC-SP13/NACE 6 Surface Preparation of Concrete.
 ICRI No. 310.2R Concrete Surface Preparation.

Surface Preparation Standards

Condition of Surface	ISO 8501-1	SSPC	NACE
White Metal	BS7079:A1	SP5	1
Near White Metal	Sa 3	SP10	2
Commercial Blast	Sa 2.5	SP6	3
Brush-Off Blast	Sa 2	SP7	4
Hand Tool Cleaning	CSa 1	SP2	-
Rusted	CSa 2	SP2	-
Pitted & Rusted	DSt 2	SP2	-
Rusted	CSa 3	SP3	-
Power Tool Cleaning	CSa 3	SP3	-
Pitted & Rusted	DSt 3	SP3	-

APPLICATION CONDITIONS

Temperature:

Air & Surface: 35°F (1.7°C) minimum, 150°F (66°C) maximum

Material: 77°F (25°C) minimum, 150°F (66°C) maximum

At least 5°F (2.8°C) above dew point

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.

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

Reduction Not recommended

Clean Up MEK

Airless Spray

Pump..... 70:1 or larger

Pressure..... 4,000-5,000 psi

Hose..... 1/2"

Tip023"- .025"

Gun XTR

Product Temperature precondition material to 77-85°F (25-29°C)

Filter remove all filters

Plural Component Equipment

Pump..... 70:1 proportioner with in-line heaters, 2:1 lowers and hose bundle configuration

Pressure..... 4,000-5,000 psi at tip/gun

Heated Hose Bundle..... 1/2" Part A x 3/8" Part B

Mix Manifold..... 2 x 6" static mixers directly attached

Integrated Hose 3/8" x 50 ft. max with in-line 6" clean-up static mixer (do not recommend 1/4" whip end)

Tip023"- .025"

Gun XTR

Heat Requirements Part A: 110-130°F (43-54°C),

Part B: 110-130°F (43-54°C),

Hose Bundle: 130°F (54°C)

Filter remove all filters

Brush and Roll for small areas only

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



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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mixing Instructions: pre-mix each individual component with mechanical agitation (drill and mixing blade - Jiffy mixer ES or equivalent). Pour Part A (2 parts by volume) in with Part B (1 part by volume) and mechanically agitate for 3 minutes minimum until uniform and homogenous, without introducing excessive air. Cut-in periodically from container wall and bottom to avoid unmixed material.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	40.0 (1000)	125.0+ (3,125)
Dry mils* (microns)	40.0 (1000)	125.0+** (3,125)
~Coverage sq ft/gal (m ² /L)	13 (0.3)	40 (1.0)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1604 (39.4)	

*Consult systems guide on second page for specific concrete and steel recommendations.

**Refer to NSF website for product restrictions or recommendations on dry film thickness, reducer restrictions and cure times.

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

Drying Schedule @ 120.0 mils wet (3,000 microns):

	@ 35°F/1.7°C 50% RH	@ 55°F/13°C 50% RH	@ 77°F/25°C 50% RH
To touch:	4 hours	3 hours	2 hours
To handle:	12 hours	5 hours	4 hours
To recoat:			
minimum:	10 hours	5 hours	5 hours
maximum:	28 days	28 days	28 days
Cure to service:	10 hours	10 hours	10 hours
Pot life:	not recommended*	1 hour	1 hour

*It is recommended that the product is kept above 55°F (13°C) for application and mixing.

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

Drying Schedule @ 120.0 mils wet (3,000 microns):

	@ 95°F/35°C <50% RH	@ 120°F/49°C <50% RH	@ 150°F/66°C <50% RH
To touch:	2 hours	1.5 hours	1 hour
To handle:	4 hours	3 hours	2 hours
To recoat:			
minimum:	5 hours	5 hours	5 hours
maximum:	28 days	28 days	28 days
Cure to service:	10 hours	10 hours	10 hours
Pot life:	40 minutes	40 minutes	10 minutes

*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.

PERFORMANCE TIPS

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes.

For high build applications a crosshatch spray technique is best.

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.

No reduction of material is recommended, as this can affect film build, appearance and performance.

Brush and roll application may be used for stripe coating, touch up, and small jobs where spraying may not be conducive, however this may require multiple coats to achieve target mil thickness.

Premix each individual component prior to application.

Pre-conditioning of material to between 77-85°F (25-29°C) is required and will aid in lower pressure needed for atomization and a smoother overall finish.

For Mortar Applications (Lining and Resurfacing): Clean, dry 20/40 mesh sand may be used at a mix ratio of 1:1 by volume or approximately 12 lbs/gallon.

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

When applying or repairing Dura-Plate 6000 in multiple coats, the surface should be checked for amine blush prior to applying the next coat or repair.

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

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with MEK. Clean pump, hose, and gun by flushing system with MEK. Where possible, slowly recirculate MEK until to remove any remaining glass flake from areas it could collect inside the pump. Wash tools immediately after use with MEK. Follow manufacturer's safety recommendations when using any solvent.

SAFETY PRECAUTIONS

Refer to the SDS sheet before use.

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