Protective & Marine Coatings

# DTM ACRYLIC PRIMER/FINISH

**B66W1**

Revised: January 15, 2015

## PRODUCT INFORMATION

1.21

### PRODUCT DESCRIPTION

**DTM ACRYLIC PRIMER/FINISH** is a 100% acrylic emulsion, waterborne, corrosion resistant coating for both new construction and industrial applications. It can be used as a primer under most water based topcoats or alone as a primer/topcoat system. It can be used directly over multiple substrates.

- Chemical Resistant
- Fast dry
- Flash/Early Rust Resistant
- Low odor / low VOC
- Early moisture resistant
- Outstanding exterior durability
- Single component

### PRODUCT CHARACTERISTICS

| | |
|---|---|
| **Finish:** | Flat |
| **Color:** | White |
| **Volume Solids:** | 46% ± 2% |
| **Weight Solids:** | 61% ± 2% |
| **VOC (EPA Method 24):** | <150 g/l; 1.25 lb/gal |

**Recommended Spreading Rate per coat:**

| | Minimum | Maximum |
|---|---|---|
| **Wet mils** (microns) | **5.0** (125) | **10.0** (250) |
| **Dry mils** (microns) | **2.5** (64) | **5.0** (125) |
| **~Coverage sq ft/gal** ($m^2$/L) | **150** (3.7) | **295** (7.2) |
| **Theoretical coverage sq ft/gal** ($m^2$/L) @ 1 mil / 25 microns dft | **736** (18.1) | |

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

**Drying Schedule @ 6.0 mils wet (150 microns):**

| | @ 55°F/13°C | @ 77°F/25°C *50% RH* | @ 120°F/49°C |
|---|---|---|---|
| **To touch:** | 1 hour | 40 minutes | 20 minutes |
| **To handle:** | 6 hours | 4 hours | 2 hours |
| **To recoat:** | 8 hours | 4 hours | 2 hours |
| **To cure:** | 45 days | 30 days | 14 days |

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

| | |
|---|---|
| **Shelf Life:** | 36 months, unopened<br>Store indoors at 50°F (10°C) to 100°F (38°C) |
| **Flash Point:** | >200°F (93°C), PMCC |
| **Reducer/Clean Up:** | Water |

### RECOMMENDED USES

For use over prepared:

- Steel
- Galvanizing
- Aluminum
- Masonry
- Concrete
- Zinc rich primers

Examples:

- Bar Joists
- New Construction
- Structural Steel
- Steel Deck Ceiling
- Piping
- Tanks

- Conforms to AWWA D102 OCS #3
- Acceptable for use in high performance architectural applications
- Suitable for use in USDA inspected facilities
- Conforms to MPI # 134

### PERFORMANCE CHARACTERISTICS

**Substrate***: Steel

**Surface Preparation***: SSPC-SP10

**System Tested***:

1 ct. DTM Acrylic Primer/Finish @ 3.0 mils (75 microns)

*unless otherwise noted below

| Test Name | Test Method | Results |
|---|---|---|
| **Abrasion Resistance** | ASTM D4060, CS17 wheel, 1000 cycles, 1kg load | 225 mg loss |
| **Accelerated Weathering (2 coats)** | ASTM D4587, QUV-A, 4,000 hours | Passes |
| **Adhesion** | ASTM D4541 | >500 psi |
| **Corrosion Weathering** | ASTM D5894, 12 cycles, 4,032 hours | Rating 9 per ASTM D610 for rusting ; Rating10 per ASTM D714 for blistering |
| **Direct Impact Resistance** | ASTM D2794 | >140 in. lbs. |
| **Dry Heat Resistance** | ASTM D2485 | 250°F (121°C) |
| **Exterior Durability** | 1 year, 45° South | Excellent |
| **Flexibility** | ASTM D522, 180° bend, 1/4" mandrel | Passes |
| **Moisture Condensation Resistance (2 coats)** | ASTM D4585, 100°F (38°C) | Excellent |
| **Pencil Hardness** | ASTM D3363 | H |
| **Salt Fog Resistance** | ASTM B117, 500 hours | Excellent |

Provides performance comparable to products formulated to federal specification: A-A-50557, and Paint Specification: SSPC-Paint 23.



continued on back

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## RECOMMENDED SYSTEMS

| | | Dry Film Thickness / ct. Mils | (Microns) |
|---|---|---|---|
| **Steel:** | | | |
| 2 cts. | DTM Acrylic Primer/Finish | 2.5-5.0 | (63-125) |
| **Steel:** | | | |
| 1 ct. | DTM Acrylic Primer/Finish | 2.5-5.0 | (63-125) |
| 2 cts. | Pro Industrial DTM Acrylic Coating | 2.5-5.0 | (63-125) |
| or | Metalatex Semi-Gloss | 1.5-4.0 | (38-100) |
| or | Water Based Catalyzed Epoxy | 2.5-3.0 | (63-75) |
| or | SherCryl HPA | 2.5-4.0 | (63-100) |
| **Aluminum, Galvanized, and Masonry:** | | | |
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| or | Water Based Catalyzed Epoxy | 2.5-3.0 | (63-75) |
| or | SherCryl HPA | 2.5-5.0 | (63-125) |
| **Concrete and Masonry:** | | | |
| 1 ct. | Heavy Duty Block Filler | 10.0-18.0 | (250-450) |
| 2 cts. | DTM Acrylic Primer/Finish | 2.5-5.0 | (63-125) |
| **Previously Painted Surfaces:** | | | |
| 1-2 cts. | DTM Acrylic Primer/Finish | 2.5-5.0 | (63-125) |

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.

**Do not use hydrocarbon solvents for cleaning.**

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

| | |
|---|---|
| Iron & Steel: | SSPC-SP2 |
| Aluminum: | SSPC-SP1 |
| Galvanizing: | SSPC-SP1 |
| Concrete & Masonry: | SSPC-SP13/NACE 6 or ICRI No. 310.2R, CSP 1-3 |

**Surface Preparation Standards**

| | Condition of Surface | ISO 8501-1 BS7079:A1 | Swedish Std. SIS055900 | SSPC | NACE |
|---|---|---|---|---|---|
| White Metal | | Sa 3 | Sa 3 | SP 5 | 1 |
| Near White Metal | | Sa 2.5 | Sa 2.5 | SP 10 | 2 |
| Commercial Blast | | Sa 2 | Sa 2 | SP 6 | 3 |
| Brush-Off Blast | | Sa 1 | Sa 1 | SP 7 | 4 |
| Hand Tool Cleaning | Rusted | C St 2 | C St 2 | SP 2 | - |
| | Pitted & Rusted | D St 2 | D St 2 | SP 2 | - |
| Power Tool Cleaning | Rusted | C St 3 | C St 3 | SP 3 | - |
| | Pitted & Rusted | D St 3 | D St 3 | SP 3 | - |

## TINTING

Tint with BAC, CCE, or EnviroToner at 75% tint strength, 2 oz/gal maximum. Better performance will be achieved with EnviroToners. Product is not controlled for tint strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

Tinting with BAC or CCE can affect the flash/early rust resistance of the coating.

## APPLICATION CONDITIONS

| | |
|---|---|
| Temperature: | 50°F (10°C) minimum, 120°F (44°C) maximum<br>(air, surface, and material)<br>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: | 1 (3.78L) and 5 (18.9L ) gallon containers |
| Weight per gallon: | 11.46 ± 0.2 lb 1.4 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.

## 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.

## 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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Revised: January 15, 2015

## APPLICATION BULLETIN

1.21

### 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.

**Do not use hydrocarbon solvents for cleaning.**

**Iron and Steel**: Minimum surface preparation is Hand Tool Cleaning per SSPC-SP2. Remove all oil and grease from the surface by Solvent Cleaning per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6. Self priming.

**Aluminum**: Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1. Self priming.

**Concrete Block**: Surface should be thoroughly clean and dry. Air, material and surface temperatures must be at least 55°F (13°C) before filling. Use Heavy Duty Block Filler. The filler must be thoroughly dry before topcoating.

**Galvanized Metal**: Allow to weather a minimum of 6 months prior to coating. Solvent Clean per SSPC-SP1. When weathering is not possible or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, brush blasting is necessary to remove these treatments. Self priming. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2.

**Masonry:** All masonry must be free of dirt, oil, grease, loose paint, mortar, masonry dust, etc. Clean per SSPC-SP13/Nace 6/ ICRI No. 310.2R, CSP 1-3. Poured, troweled, or tilt-up concrete, plaster, mortar, etc. must be thoroughly cured at least 30 days at 75°F. Form release compounds and curing membranes must be removed by brush blasting. Self priming. Brick must be allowed to weather for one year prior to surface preparation and painting.

**PVC, Fiberglass**: Remove all oil, grease, dirt, and other foreign material by Solvent Cleaning per SSPC-SP1. Scuff sand to abrade surface. Test adhesion.

**Previously Painted Surfaces**: If in sound condition, clean the surface of all foreign material. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface.

**Surface Preparation Standards**

| | Condition of Surface | ISO 8501-1 BS7079:A1 | Swedish Std. SIS055900 | SSPC | NACE |
|---|---|---|---|---|---|
| White Metal | | Sa 3 | Sa 3 | SP 5 | 1 |
| Near White Metal | | Sa 2.5 | Sa 2.5 | SP 10 | 2 |
| Commercial Blast | | Sa 2 | Sa 2 | SP 6 | 3 |
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| Power Tool Cleaning | Rusted | C St 3 | C St 3 | SP 3 | - |
| | Pitted & Rusted | D St 3 | D St 3 | SP 3 | - |

### APPLICATION CONDITIONS

| | |
|---|---|
| Temperature: | 50°F (10°C) minimum, 120°F (44°C) maximum<br>(air, surface, and material)<br>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:** .....Water

**Airless Spray**

Pressure.....2000 psi
Hose.....1/4" ID
Tip .....015" - .019"
Filter.....60 mesh
Reduction.....as needed up to 12-1/2% by volume

**Conventional Spray**

Gun .....Binks 95
Fluid Nozzle .....66
Air Nozzle.....63PB
Atomization Pressure.....60 psi
Fluid Pressure.....25 psi
Reduction.....as needed up to 12-1/2% by volume

**Brush**

Brush.....Nylon/Polyester
Reduction.....not recommended

**Roller**

Cover .....3/8" woven / solvent resistant core
Reduction.....not recommended

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



continued on back

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### APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

**Mixing Instructions:** Mix paint thoroughly to a uniform consistency with low speed power agitation prior to use.

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

**Recommended Spreading Rate per coat:**

| | Minimum | Maximum |
|---|---|---|
| **Wet mils** (microns) | **5.0** (125) | **10.0** (250) |
| **Dry mils** (microns) | **2.5** (64) | **5.0** (125) |
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*NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.*

**Drying Schedule @ 6.0 mils wet (150 microns):**

| | @ 55°F/13°C | @ 77°F/25°C *50% RH* | @ 120°F/49°C |
|---|---|---|---|
| **To touch:** | 1 hour | 40 minutes | 20 minutes |
| **To handle:** | 6 hours | 4 hours | 2 hours |
| **To recoat:** | 8 hours | 4 hours | 2 hours |
| **To cure:** | 45 days | 30 days | 14 days |

*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 soap and warm water. Clean hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with Mineral Spirits to prevent rusting of the equipment. Follow manufacturer's safety recommendations when using Mineral Spirits.

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### PERFORMANCE TIPS

Stripe coat all crevices, welds, and sharp edges to protect against early failure in these areas. For best results on rusty surfaces, always apply first coat by brush. No painting should be done immediately after a rain or during foggy weather.

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

During the early stages of drying, the coating is sensitive to rain, dew, high humidity, and moisture condensation. Plan painting schedules to avoid these influences during the first 16-24 hours of curing.

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, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, and adhesion.

DTM Acrylic Primer/Finish is extremely sensitive to hydrocarbon containing solvents. When cleaning the surface per SSPC-SP1, use only an emulsifying industrial detergent, followed by a water rinse. Do not use hydrocarbon containing solvents.

Do not use oil or alkyd topcoats over DTM Acrylic Primer/Finish.

**Do not use hydrocarbon solvents for cleaning.**

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

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