



# Protective & Marine Coatings

# SHER-CRYL® 1300 DIRECT-TO-METAL ACRYLIC

B66-2000 SERIES  
B66-2050 SERIES

GLOSS  
SEMI-GLOSS

Revised: June 7, 2019

## PRODUCT INFORMATION

1.31

### PRODUCT DESCRIPTION

**SHER-CRYL 1300** is a direct-to-metal, fast dry, high build waterborne acrylic coating. Designed to provide a high quality, fast throughput, fast return to service, economical one coat direct-to-metal finish while having no impact to VOC emissions. May be used direct to prepared substrates or over acrylic, epoxy, or zinc primers.

- Fast dry
- Flash rush resistant
- Excellent early moisture resistance
- Excellent color and gloss retention
- High build - one coat application
- HAPS free
- Corrosion resistant

### PRODUCT CHARACTERISTICS

|                       |   |
|-----------------------|---|
| <b>Finish:</b>        | Gloss, Semi-gloss   |
| <b>Color:</b>         | Ultradeep Base, Extra White, Deep Tone Base (gloss only), Black |
| <b>Volume Solids:</b> | 36% ± 2%, may vary by color                                     |
| <b>Weight Solids:</b> | 42% ± 2%, may vary by color                                     |
| <b>VOC:</b>           | <50 g/L ; 0.42 lb/gal   |

#### Recommended Spreading Rate per coat:

|   | Minimum | Maximum |
|---|---------|---------|
| <b>Wet mils:</b>  | 11.0    | 20.0    |
| <b>Dry mils:</b>  | 4.0     | 7.0     |
| <b>~Coverage sq ft/gal:</b>                               | 80      | 140     |
| <small>Theoretical coverage sq ft/gal @ 1 mil dft</small> | 561     |         |

#### GLOSS: Drying Schedule @ 12.0 mils wet @ 50% RH:

|                   | @ 50°F     | @ 77°F     | @ 120°F    |
|-------------------|------------|------------|------------|
| <b>To touch:</b>  | 25 minutes | 20 minutes | 15 minutes |
| <b>Tack free:</b> | 30 minutes | 30 minutes | 15 minutes |
| <b>To handle:</b> | 45 minutes | 45 minutes | 30 minutes |
| <b>To recoat:</b> | 45 minutes | 45 minutes | 30 minutes |
| <b>To cure:</b>   | 30 days    | 30 days    | 30 days    |

*Good air movement is necessary for drying. Drying time is temperature, humidity, and film thickness dependent.*

#### SEMI-GLOSS: Drying Schedule @ 12.0 mils wet @ 50% RH:

|                   | @ 50°F      | @ 77°F     | @ 120°F    |
|-------------------|-------------|------------|------------|
| <b>To touch:</b>  | 90 minutes  | 25 minutes | 10 minutes |
| <b>Tack free:</b> | 105 minutes | 25 minutes | 15 minutes |
| <b>To handle:</b> | 120 minutes | 45 minutes | 20 minutes |
| <b>To recoat:</b> | 120 minutes | 45 minutes | 20 minutes |
| <b>To cure:</b>   | 30 days     | 30 days    | 30 days    |

*Good air movement is necessary for drying. Drying time is temperature, humidity, and film thickness dependent.*

**Shelf Life:** 36 months, unopened  
Store indoors at 40°F to 100°F

**Flash Point:** >200°F, PMCC

**Reducer\*:** Water

\*Typically not required. Maximum 5% by volume.

**Clean Up:** Flush with clean, warm water for extended periods of down time. Follow water flush with Butyl Cellosolve R6K25.

### RECOMMENDED USES

For use over prepared:

- Steel
- Galvanizing
- Aluminum

Examples:

- Structural Steel
- Bridges
- Piping
- Machinery
- Equipment
- Freight cars
- Skids
- Production Tanks
- Tank cars
- Intermodal containers

- Direct to metal (mild to moderate service)
- Over acrylic, epoxy, or zinc primers (moderate to severe service)

### PERFORMANCE CHARACTERISTICS

**Substrate\*:** Steel

**Surface Preparation\*:** SSPC-SP10/NACE 2

**System Tested\*:**

1 ct. Sher-Cryl 1300 @ 6.0 mils dft

\*unless otherwise noted below

| Test Name                       | Test Method                                    | Results                           |
|---------------------------------|--|-----------------------------------|
| <b>Abrasion Resistance</b>      | ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load | 193 mg loss                       |
| <b>Accelerated Weathering</b>   | ASTM D4587, 1,000 hours                        | >75% gloss retention              |
| <b>Adhesion</b>                 | ASTM D3359<br>ASTM D4541                       | 5A, 5B<br>500 psi                 |
| <b>Direct Impact Resistance</b> | ASTM D2794                                     | >160 in. lb. (direct and reverse) |
| <b>Dry Heat Resistance</b>      | ASTM D2485                                     | 400°F                             |
| <b>Humidity Resistance</b>      | ASTM D4585, 100°F, 1,000 hours                 | Passes                            |
| <b>Pencil Hardness</b>          | ASTM D3363                                     | HB (1 day) ; F (7 days)           |
| <b>Salt Fog Resistance</b>      | ASTM B117, 1,000 hours                         | Passes                            |

#### Chemical Resistance (Splash / Spillage - Ambient):

- Sulfuric Acid (10%, 25%, 50%)..... Excellent
- Phosphoric Acid (10%, 25%)..... Excellent
- Sodium Hydroxide (15%, 50%)..... Excellent
- Ammonium Hydroxide (10% & Concentrated)..... Excellent
- Hydrochloric Acid (10% & Concentrated)..... Excellent
- Nitric Acid (10%)..... Excellent
- Isopropyl Alcohol ..... Excellent
- Potassium Hydroxide (25%)..... Good
- Mineral Spirits..... Good



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### RECOMMENDED SYSTEMS

|  | Dry Film Thickness / ct. | Mils |
|--|--------------------------|------|
| <b>Steel, Direct-to-Metal:</b>                         |                          |      |
| 1-2 cts. Sher-Cryl 1300 Direct-to-Metal Acrylic        | 4.0-7.0                  |      |
| <b>Steel, Epoxy Primer:</b>                            |                          |      |
| 1 ct. Macropoxy 646 Fast Cure Epoxy                    | 5.0-10.0                 |      |
| 1 ct. Sher-Cryl 1300 Direct-to-Metal Acrylic           | 4.0-7.0                  |      |
| <b>Steel, Zinc Primer:</b>                             |                          |      |
| 1 ct. Zinc Clad III HS                                 | 3.0-5.0                  |      |
| 1 ct. Sher-Cryl 1300 Direct-to-Metal Acrylic           | 4.0-7.0                  |      |
| <b>or</b>  |                          |      |
| 1 ct. Zinc Clad III HS                                 | 3.0-5.0                  |      |
| 1 ct. Macropoxy 646 Fast Cure Epoxy                    | 5.0-10.0                 |      |
| 1 ct. Sher-Cryl 1300 Direct-to-Metal Acrylic           | 4.0-7.0                  |      |
| <b>Aluminum and Galvanized Metal, Direct-to-Metal:</b> |                          |      |
| 1 ct. Sher-Cryl 1300 Direct-to-Metal Acrylic           | 4.0-7.0                  |      |
| <b>Aluminum and Galvanized Metal, Epoxy Primer:</b>    |                          |      |
| 1 ct. Macropoxy 646 Fast Cure Epoxy                    | 2.0-4.0                  |      |
| 1 ct. Sher-Cryl 1300 Direct-to-Metal Acrylic           | 4.0-7.0                  |      |

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.

Better performance achieved with SSPC-SP6

Minimum recommended surface preparation:

Iron & Steel: SSPC-SP2 or SP3

Aluminum & Galvanized Metal: SSPC-SP16

#### Surface Preparation Standards

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

### TINTING

#### Tinting with CCE:

| Base        | oz/gal | Strength |
|-------------|--------|----------|
| Ultradeep   | 8-12   | 100%     |
| Extra White | 0-4    | 100%     |
| Deep Tone   | 4-8    | 100%     |

### APPLICATION CONDITIONS

Temperature: 40°F minimum, 120°F maximum  
(air, surface, and material)  
At least 5°F above dew point.

Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

### ORDERING INFORMATION

Packaging: 5 gallon pails, 53 gallon drums,  
275 gallon totes

Weight: 9.0 ± 0.3 lbs/gal, may vary by color

### 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.



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## APPLICATION BULLETIN

1.31

### 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 and Steel:

Remove all oils and grease from surface by Solvent Cleaning per SSPC-SP1. Only use emulsifying industrial detergents such as Sherwin-Williams Concentrated Pre-Paint Cleaner, SW General Purpose Cleaner, or equal, followed by clean water rinse. DO NOT USE HYDROCARBON CONTAINING SOLVENTS.

Minimum surface preparation is Hand Tool Cleaning per SSPC-SP2. For better performance, abrasive blast clean per SSPC-SP6/NACE 3 (Commercial Blast Cleaning) or SSPC-SP10/NACE 2 (Near White Blast Cleaning) with a suitable abrasive to create a sharp angular profile of approximately 2.0 mil depth.

#### Aluminum & Galvanized Metal:

Remove all oils and grease from surface by Solvent Cleaning per SSPC-SP1. Only use emulsifying industrial detergents such as Sherwin-Williams Concentrated Pre-Paint Cleaner, SW General Purpose Cleaner, or equal, followed by clean water rinse. DO NOT USE HYDROCARBON CONTAINING SOLVENTS.

Prepare surfaces per SSPC-SP16. For optimum adhesion, sweep blast or abrade smooth metals to create a surface profile.

### APPLICATION CONDITIONS

Temperature: 40°F minimum, 120°F maximum  
(air, surface, and material)  
At least 5°F 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\*** ..... Water

\*Typically not required. Maximum 5% by volume.

**Clean Up** ..... Flush with clean, warm water for extended periods of down time. Follow with water flush with Butyl Cellosolve R6K25.

#### Airless Spray

Pump..... 1.0 gallon/minute, 3000 psi minimum  
Pressure..... 2000-2500 psi  
Hose..... 1/4" ID  
Tip ..... .013" - .025"  
Filter..... 60 mesh  
Reduction..... Not recommended

#### Conventional Spray

Gun ..... Binks 95  
Fluid Nozzle ..... 66  
Air Nozzle..... 63PB  
Atomization Pressure..... 50 psi  
Fluid Pressure..... 15-20 psi  
Reduction..... Not recommended

#### Brush, small areas and touch-up only

Brush..... Nylon / polyester  
Reduction..... Not recommended

#### Roller, small areas and touch-up only

Cover ..... 1/4" or 3/8" woven solvent resistant core  
Reduction..... Not recommended

#### Surface Preparation Standards

| Condition of Surface | ISO 8501-1<br>BS7079:A1 | SSPC  | NACE |
|----------------------|-------------------------|-------|------|
| White Metal          | Sa 3                    | SP 5  | 1    |
| Near White Metal     | Sa 2.5                  | SP 10 | 2    |
| Commercial Blast     | Sa 2                    | SP 6  | 3    |
| Brush-Off Blast      | Sa 1                    | SP 7  | 4    |
| Hand Tool Cleaning   | 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  | -    |

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



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## APPLICATION BULLETIN

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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:                                  | 11.0    | 20.0    |
| Dry mils:                                  | 4.0     | 7.0     |
| ~Coverage sq ft/gal:                       | 80      | 140     |
| Theoretical coverage sq ft/gal @ 1 mil dft | 561     |         |

#### GLOSS: Drying Schedule @ 12.0 mils wet @ 50% RH:

|            | @ 50°F     | @ 77°F     | @ 120°F    |
|------------|------------|------------|------------|
| To touch:  | 25 minutes | 20 minutes | 15 minutes |
| Tack free: | 30 minutes | 30 minutes | 15 minutes |
| To handle: | 45 minutes | 45 minutes | 30 minutes |
| To recoat: | 45 minutes | 45 minutes | 30 minutes |
| To cure:   | 30 days    | 30 days    | 30 days    |

*Good air movement is necessary for drying. Drying time is temperature, humidity, and film thickness dependent.*

#### SEMI-GLOSS: Drying Schedule @ 12.0 mils wet @ 50% RH:

|            | @ 50°F      | @ 77°F     | @ 120°F    |
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| Tack free: | 105 minutes | 25 minutes | 15 minutes |
| To handle: | 120 minutes | 45 minutes | 20 minutes |
| To recoat: | 120 minutes | 45 minutes | 20 minutes |
| To cure:   | 30 days     | 30 days    | 30 days    |

*Good air movement is necessary for drying. 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

Flush with clean, warm water for extended periods of down time. Follow water flush with Butyl Cellosolve R6K25.

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### PERFORMANCE TIPS

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, overthinning, climatic conditions, and excessive film build.

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

This material is extremely sensitive to hydrocarbon containing solvents. When cleaning the surface per SSPC-SP1, use only an emulsifying industrial detergent such as Sherwin-Williams Concentrated Prepaint Cleaner or SW General Purpose Cleaner or equal, followed by a water rinse. DO NOT USE HYDROCARBON CONTAINING SOLVENTS.

3M decals #3690 were tested at 2 hours at 77°F and 50% RH with excellent adhesion.

Dry times are improved with good air movement.

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

### SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

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### WARRANTY

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