Protective & Marine Coatings

SHER-CRYL® 1300
DIRECT-TO-METAL ACRYLIC

B66-2000 Series — **Gloss**
B66-2050 Series — **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
- HAPS free
- Corrosion resistant
- Excellent early moisture resistance
- Excellent color and gloss retention
- High build - one coat application

Product Characteristics

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

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
To touch:	90 minutes	25 minutes	10 minutes
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.

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
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	193 mg loss
Accelerated Weathering	ASTM D4587, 1,000 hours	>75% gloss retention
Adhesion	ASTM D3359 ASTM D4541	5A, 5B 500 psi
Direct Impact Resistance	ASTM D2794	>160 in. lb. (direct and reverse)
Dry Heat Resistance	ASTM D2485	400°F
Humidity Resistance	ASTM D4585, 100°F, 1,000 hours	Passes
Pencil Hardness	ASTM D3363	HB (1 day) ; F (7 days)
Salt Fog Resistance	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
Steel, Direct-to-Metal:		
1-2 cts.	Sher-Cryl 1300 Direct-to-Metal Acrylic	4.0-7.0
Steel, Epoxy Primer:		
1 ct.	Macropoxy 646 Fast Cure Epoxy	5.0-10.0
1 ct.	Sher-Cryl 1300 Direct-to-Metal Acrylic	4.0-7.0
Steel, Zinc Primer:		
1 ct.	Zinc Clad III HS	3.0-5.0
1 ct.	Sher-Cryl 1300 Direct-to-Metal Acrylic	4.0-7.0
or		
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
Aluminum and Galvanized Metal, Direct-to-Metal:		
1 ct.	Sher-Cryl 1300 Direct-to-Metal Acrylic	4.0-7.0
Aluminum and Galvanized Metal, Epoxy Primer:		
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

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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 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	C St 2	SP 2	-
	Pitted & Rusted	D St 2	SP 2	-
Power Tool Cleaning	Rusted	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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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 Sovent 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 Sovent 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 ahesion, sweep blast or abrade smooth metals to create a surface profile.

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 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	C St 2	SP 2	-
	Pitted & Rusted	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	SP 3	-
	Pitted & Rusted	D St 3	SP 3	-

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 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

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: 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:**

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To cure:	30 days	30 days	30 days

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

	@ 50°F	@ 77°F	@ 120°F
To touch:	90 minutes	25 minutes	10 minutes
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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

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SHERWIN-WILLIAMS 704376 11/22/21
410-796-3397 Order# 0123258

EXTERIOR ARCHITECTURAL
SHER-CRYL 1300 DTM LATEX
GLOSS IFC 8112NP

4024 ENVIRO GREEN

SHER-COLOR FORMULA

CCE*COLORANT	OZ	32	64	128
W1-White	22	51	-	-
B1-Black	20	22	1	-
Y3-Deep Gold	14	54	1	-

FIVE GALLON ULTRADEEP
B66T02014 650957905

NOT RECOMMENDED FOR USE ON VINYL

Non Returnable Tinted Color

CAUTION: To assure consistent color, always order enough paint to complete the job and intermix all containers of the same color before application. Mixed colors may vary slightly from color strip or color chip.

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