Protective & Marine Coatings

PRO-CRYL® UNIVERSAL PRIMER

B66-310 SERIES

Revised 9/09

PRODUCT INFORMATION

1.23

PRODUCT DESCRIPTION

PRO-CRYL UNIVERSAL PRIMER is an advanced technology, self cross-linking acrylic primer. It is rust inhibitive and designed for both construction and maintenance applications. It can be used as a primer under water-based or solvent-based high performance topcoats.

- Rust inhibitive
- Flash rust / early rust resistant
- Low odor, low VOC
- Single component
- Early moisture resistant
- Fast dry
- Low temperature application
- Outstanding application characteristics

PRODUCT CHARACTERISTICS

Finish:	Low sheen
Color:	Off White, Gray, Red Oxide
Volume Solids:	39% ± 2%
Weight Solids:	53% ± 2%
VOC (EPA Method 24):	Unreduced: <100g/L; <0.83 lb/gal

Recommended Spreading Rate per coat:

	Minimum		Maximum	
Wet mils (microns)	**5.0**	125	**10**	250
Dry mils (microns)	**2.0**	50	**4.0**	100
~Coverage sq ft/gal (m^2/L)	**156**	3.8	**312**	7.6
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**624**	15.3		

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):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 120°F/49°C
To touch:	2 hour	40 minutes	20 minutes
To handle:	8 hours	2 hours	1 hour
To recoat:	16 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 Store indoors at 40°F (4.5°C) to 100°F (38°C)
Flash Point:	>200°F (93°C), PMCC, mixed
Reducer/Clean Up:	Water

RECOMMENDED USES

For use over prepared steel in industrial environments.

- Interior and exterior
- Barrier coating
- Shop or field application
- As a substitute for solvent based, universal primers
- Can be used as a dryfall coating under certain environmental conditions (see Application Bulletin)

Can be used in a variety of applications, including:

- Railings
- Machinery
- Structural steel
- Steel decking
- Marine vessels
- Storage tank exteriors
- Bar joists
- Piping
- Rail cars
- Suitable for use in USDA inspected facilities
- Conforms to AWWA D102-03 OCS #3
- Acceptable for use in high performance architectural applications.

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP10

System Tested*:

1 ct. Pro-Cryl Universal Primer @ 3.0 mils (75 microns)

1 ct. Sher-Cryl High Performance Acrylic @ 3 mils (75 microns)

*unless otherwise noted below

Test Name	Test Method	Results
Adhesion	ASTM D4541	500 psi
Corrosion Weathering	ASTM D5894, 10 cycles, 3,360 hours	Passes
Direct Impact Resistance	ASTM D2794	>140 in. lbs.
Dry Heat Resistance	ASTM D2485	200°F (93°C)
Flexibility	ASTM D522, 180° bend, 1/4" mandrel	Passes
Moisture Condensation Resistance	ASTM D4585, 100°F (38°C), 1,250 hours	Excellent
Pencil Hardness	ASTM D3363	H
Salt Fog Resistance	ASTM B117, 1,250 hours	Passes

Provides performance comparable to products formulated to federal specification: AA50557 and Paint Specification: SSPC-Paint 23.

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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Steel / Aluminum / Galvanized:			
1 ct.	Pro-Cryl Universal Primer	2.0-4.0	(50-100)
Acceptable topcoats for:			
Light Service:			
1-2 cts.	Metalatex Semi-Gloss	1.5-4.0	(38-100)
or	Industrial Enamel HS	2.0-4.0	(50-100)
or	Industrial Urethane Alkyd	2.0-4.0	(50-100)
Moderate Service:			
1-2 cts.	Sher-Cryl High Performance Acrylic	2.0-4.0	(50-100)
or	DTM Acrylic Coating	2.5-4.0	(63-75)
or	Steel-Master 9500	2.0-3.0	(50-75)
or	Hydrogloss	2.0-4.0	(50-100)
or	Pro Industrial 0 VOC Acrylic	2.5-4.0	(63-100)
or	Pro Industrial Multi-Surface Acrylic	1.5-2.0	(38-50)
Severe Service			
1-2 cts.	Waterbased Tile Clad Epoxy	2.5-4.0	(63-75)
or	Poly-Lon HP Polyurethane	2.0-3.0	(50-75)
or	Hi-Solids Polyurethane	3.0-4.0	(75-100)
or	Acrolon 218 HS	3.0-6.0	(75-150)
or	Waterbased Acrolon 100	2.0-4.0	(50-100)
Steel:			
1 ct.	Zinc-Clad XI	3.0-4.0	(75-100)
1 ct.	Pro-Cryl Universal Primer	2.0-4.0	(50-100)
1-2 cts.	Sher-Cryl High Performance Acrylic	2.0-4.0	(50-100)

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.

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

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

Do not tint.

APPLICATION CONDITIONS

Temperature:	40°F (4.5°C) minimum, 120°F (49°C) maximum (air, surface, and material) 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:	10.79 ± 0.2 lb 1.3 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 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

1.23

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 per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6.

Aluminum:
Remove all oil, grease, dirt, oxide and other foreign material per SSPC-SP1.

Galvanizing
The surface should be weathered for 6 months prior to painting. Remove all oil and grease per SSPC-SP1. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2.

Previously Painted Surfaces:
If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this products attacks the previous finish, removal of the previous coating may be necessary. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

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	-

APPLICATION CONDITIONS

Temperature:	40°F (4.5°C) minimum, 120°F (49°C) maximum (air, surface, and material) 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.....Not recommended

Conventional Spray
- Gun .....Binks 95
- Fluid Nozzle 66
- Air Nozzle.....63PB
- Atomization Pressure.....60 psi
- Fluid Pressure.....25 psi
- Reduction.....As needed up to 5% by volume

Brush
- Brush.....Nylon/Polyester
- Reduction.....Not recommended

Roller
- Cover .....3/8" woven solvent resistant core
- Reduction.....As needed up to 5% by volume

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 (microns)	**5.0**	125	**10**	250
Dry mils (microns)	**2.0**	50	**4.0**	100
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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):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 120°F/49°C
To touch:	2 hour	40 minutes	20 minutes
To handle:	8 hours	2 hours	1 hour
To recoat:	16 hours	4 hours	2 hours
To cure:	45 days	30 days	14 days

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

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.

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, and adhesion.

Do not use hydrocarbon solvents for cleaning.

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

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

Pro-Cryl can be used as a dryfall coating in certain environmental conditions. Test product before each application. Test by spraying 15-25 feet toward paint container. All material should readily wipe clean. Temperature and humidity will affect ability to dryfall. Hot surface will cause overspray to bond to surface. Always clean overspray immediately from hot surfaces.

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

Safety Precautions

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