Protective & Marine Coatings

WATERBASED ACROLON 100
WATERBASED URETHANE

Part A	B65T724	Clear Base	Part A	B65B720	Black
Part A	B65W721	Extra White Base	Part A	B65R720	Safety Red
Part A	B65WW725	MR, Extra White Base	Part A	B65Y720	Safety Yellow
			Part B	B65V720	Hardener

Revised: January 8, 2015

Product Information

5.31

Product Description

WATERBASED ACROLON 100 is an advanced technology, <100 g/L VOC, waterbased, acrylic urethane. Provides performance properties comparable to premium quality solvent based urethanes. This is a high gloss, abrasion resistant urethane that has excellent weathering properties.

- Retains its appearance over a wide range of chemical, weather, and mechanical conditions
- Can be applied directly to waterbased and solvent based organic zinc rich primers
- Low odor
- Non-flammable
- <100 g/L VOC, No reportable HAPS
- Clear Tint Base (B65T724) can be used as clear coat
- Resists film attack by mildew (MR Extra White Base only)

Product Characteristics

Finish:	High Gloss
Color:	Wide variety of colors available, Clear Coat (B65T724)
Volume Solids:	48.5% ± 2%, catalyzed, unreduced May vary by color
Weight Solids:	59% ± 2%, catalyzed, unreduced May vary by color
VOC (EPA Method 24):	Unreduced: <100 g/L; 0.83 lb/gal Reduced: <100 g/L,0.83 lb/gal
Mix Ratio:	4:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**4.0** (100)	**8.0** (200)
Dry mils (microns)	**2.0** (50)	**4.0** (100)
~Coverage sq ft/gal (m^2/L)	**195** (4.8)	**390** (9.5)
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**776** (19.0)	

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

Drying Schedule @ 5.0 mils wet (125 microns):

	@ 55°F/13°C	@ 77°F/25°C *50% RH*	@ 120°F/49°C
To touch:	3 hours	1.5 hours	45 minutes
To handle:	12 hours	6 hours	2 hours
To recoat:			
minimum:	16 hours	8 hours	2-4 hours
maximum:	3 months	3 months	3 months
To cure:	14 days	10 days	2 days
Pot Life:	2.5 hours	2 hours	45 minutes
Sweat-in-Time:		None	

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:	>230°F (110°C) Seta, catalyzed
Reducer:	Water, 5-15% minimum reduction required for brush and roll
Clean Up:	Water

Recommended Uses

- For use over prepared substrates in industrial and marine environments, such as:
  - Offshore platforms
  - Structural steel
  - Paper mills
  - Bridges
  - Refineries
  - Marine applications
  - Exterior surfaces of steel tanks
  - Rail cars and locomotives
  - Power plants
  - Conveyors
  - Nuclear power facilities
  - Floors
- Chemical processing equipment
- Industrial machinery and equipment
- Suitable for use in USDA inspected facilities
- Acceptable for use in Canadian Food Processing facilities, categories: D2, D3, E8 (Confirm acceptance of specific part numbers/rexes with your SW Sales Representative)
- Acceptable for use in high performance architectural applications
- A component of INFINITANK
- Resists film attack by mildew (MR Extra White Base only)

Performance Characteristics

Substrate*: Steel

Surface Preparation*: SSPC-SP10/NACE 2

System Tested*:

1 ct. Waterbased Tile-Clad Primer @ 4.0 mils (100 microns) dft
1 ct. Waterbased Acrolon 100 @ 3.0 mils (75 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	25 mg loss
Accelerated Weathering - QUV	ASTM D4587, QUV-A, 2000 hours	Passes
Adhesion	ASTM D4541	1,080 psi
Corrosion Weathering	ASTM D5894, 10 cycles, 3360 hours	Rating 10 per ASTM D610 for rusting, no more than 1/8" rust creepage at scribe
Direct Impact Resistance	ASTM D2794	>160 in lb
Dry Heat Resistance	ASTM D2485	200°F (93°C) constant, 250°F (121°C) intermittent
Flexibility	ASTM D522, 180° bend, 1/8" mandrel	Passes
Pencil Hardness	ASTM D3363	3H
Salt Fog Resistance (Zinc Clad IV, 2 coats of Waterbased Acrolon 100)	ASTM B117, 4,000 hours	Rating 9 per ASTM D610 for rusting
Scrub Resistance	ASTM D2486	5000+ cycles, with no visible wear
Thermal Shock	ASTM D2246, 10 cycles	Passes

Meets the requirements of SSPC Paint No. 36, Level 3 for white and light colors. Dark colors may require a clear coat.

continued on back

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Part A	B65WW725	MR, Extra White Base	Part A	B65Y720	Safety Yellow
			Part B	B65V720	Hardener

Revised: January 8, 2015

PRODUCT INFORMATION

5.31

RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Steel:			
1 ct.	Procryl Universal Primer	2.0-4.0	(50-100)
1-2 cts.	Waterbased Acrolon100	2.0-4.0	(50-100)
Steel:			
1 ct.	Zinc Clad III HS-100	3.0-5.0	(75-125)
1 ct.	Macropoxy 646-100	4.0-6.0	(100-150)
1-2 cts.	Waterbased Acrolon100	2.0-4.0	(50-100)
Steel:			
1 ct.	Zinc-Clad IV Primer	3.0-4.0	(75-100)
1-2 cts.	Waterbased Acrolon100	2.0-4.0	(50-100)
Steel:			
1 ct.	Epolon II Rust-Inhibiting Primer	2.0-4.0	(50-100)
1-2 cts.	Waterbased Acrolon100	2.0-4.0	(50-100)
Galvanizing:			
1 ct.	DTM Wash Primer	0.7-1.3	(18-32)
1-2 cts.	Waterbased Acrolon100	2.0-4.0	(50-100)
Aluminum:			
1 ct.	DTM Wash Primer	0.7-1.3	(18-32)
1-2 cts.	Waterbased Acrolon100	2.0-4.0	(50-100)
Pre-Finished Siding (Fluorocarbon, Silicone Polyester, and Polyester Polymers):			
1 ct.	Bond-Plex WB Acrylic	2.0-4.0	(50-100)
1-2 cts.	Waterbased Acrolon100	2.0-4.0	(50-100)
Concrete/Masonry (High Performance):			
1 ct.	Kem Cati-Coat HS Epoxy Filler/Sealer	10.0-20.0	(250-500)
1-2 cts.	Waterbased Acrolon100	2.0-4.0	(50-100)
Concrete/Masonry:			
1 ct.	Heavy Duty Block Filler	10.0-18.0	(250-450)
1-2 cts.	Waterbased Acrolon100	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.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

* Iron & Steel:	SSPC-SP6/NACE 3
* Aluminum:	SSPC-SP1
* Galvanizing:	SSPC-SP1
* Concrete & Masonry:	SSPC-SP13/NACE 6, or ICRI No. 310.2R , CSP1-3

* Requires primer

Do not used hydrocarbon solvents for cleaning

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 Part A with CCE or EnviroToner Colorants. Use the 100% tint strength formula pages. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

APPLICATION CONDITIONS

Temperature:	55°F (13°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:

Part A:	1 gallon (3.78L), 4 gallon (15.1L) in a 5 gallon (18.9L) pail
Part B:	1 quart (0.94L), 1 gallon (3.78L) (premeasured components)
Weight:	10.3 ± 0.2 lb/gal ; 1.24 Kg/L, catalyzed

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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Part A	B65W721	Extra White Base	Part A	B65R720	Safety Red
Part A	B65WW725	MR, Extra White Base	Part A	B65Y720	Safety Yellow
			Part B	B65V720	Hardener

Revised: January 8, 2015

Application Bulletin

5.31

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.

Do not used hydrocarbon solvents for cleaning

Iron & Steel
Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3. For better performance, use Near White Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Aluminum
Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1. Primer required

Galvanized Steel
Allow to weather a minimum of six 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 patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned. Primer required.

Concrete and Masonry
For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R , CSP 1-3. 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. Primer required.

Pre-Finished Siding:
(Fluorocarbon, Silicone Polyester, and Polyester Polymers)
Remove oil, grease, dirt, oxides, and other contaminants from the surface by cleaning per SSPC-SP1 or water blasting per NACE Standard RP-01-72 (caution: excessive blasting pressure may cause warping, use caution). Always check for compatibility of the previously painted surface with the new coating by applying a test patch of 2 - 3 square feet. Allow to dry thoroughly for 1 week before checking adhesion.

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:	55°F (13°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 .....Water, 5-15% minimum reduction required for brush and roll

Clean Up .....Water

Airless Spray
Unit.....30:1 Pump
Pressure.....2700-3000 psi
Hose.....1/4" ID
Tip .....013" - .015"
Filter.....60 mesh
Reduction.....As needed, up to 15% by volume

Conventional Spray
Gun .....DeVilbiss JGA
Fluid Tip .....E
Air Nozzle.....765
Atomization Pressure.....45-55 psi
Fluid Pressure.....10-20 psi
Reduction.....As needed, up to 15% by volume

Brush
Brush.....Nylon/Polyester
Reduction.....As needed, up to 15% by volume

Roller
Cover .....3/8" woven with solvent resistant core
Reduction.....As needed, up to 15% by volume

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

continued on back

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Revised: January 8, 2015

Application Bulletin

5.31

Application Procedures

Surface preparation must be completed as indicated.

Mix Components thoroughly with low speed agitation before use. Make certain no pigment remains on the bottom of the can. Then combine 4 parts by volume of Part A with 1 part by volume of Part B. Mix thoroughly with low speed agitation. Reduce 5% - 15% by volume with water for brush and roll application.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**4.0** (100)	**8.0** (200)
Dry mils (microns)	**2.0** (50)	**4.0** (100)
~Coverage sq ft/gal (m^2/L)	**195** (4.8)	**390** (9.5)
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**776** (19.0)	

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

Drying Schedule @ 5.0 mils wet (125 microns):

	@ 55°F/13°C	@ 77°F/25°C *50% RH*	@ 120°F/49°C
To touch:	3 hours	1.5 hours	45 minutes
To handle:	12 hours	6 hours	2 hours
To recoat:			
minimum:	16 hours	8 hours	2-4 hours
maximum:	3 months	3 months	3 months
To cure:	14 days	10 days	2 days
Pot Life:	2.5 hours	2 hours	45 minutes
Sweat-in-Time:		None	

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.

Clean Up Instructions

Clean spills and spatters immediately with water. Clean tools immediately after use with water. Follow manufacturer's safety recommendations when using any solvent.

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Performance Tips

Stripe coat crevices, welds, and sharp angles to prevent 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.

Reduction over 15% of material can affect film build, appearance, and adhesion.

Do not mix previously catalyzed material with new.

Do not apply the material beyond recommended pot life.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with water.

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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