



**Industrial
&
Marine
Coatings**

**5.30
CENTURION®
WATER BASED URETHANE**

**PART A
PART B**

**B65-700
B65V700**

**SERIES
HARDENER**

PRODUCT INFORMATION

Revised 6/07

PRODUCT DESCRIPTION	RECOMMENDED USES																																				
<p>CENTURION WATER BASED URETHANE is an advanced technology, VOC compliant, water based, polyester urethane enamel. Provides performance properties comparable to premium quality solvent based urethanes. This is a high gloss abrasion resistant urethane that has excellent weathering properties.</p> <ul style="list-style-type: none"> Retains its appearance over a wide range of chemical, weather, and mechanical conditions Can be applied directly to water based and solvent based organic zinc rich primers Low odor Non-flammable 	<p>For use over prepared substrates in industrial and marine environments, such as:</p> <ul style="list-style-type: none"> Offshore platforms Structural steel Paper mills Bridges Refineries Marine applications Chemical processing equipment Industrial machinery and equipment Suitable for use in USDA inspected facilities <ul style="list-style-type: none"> Exterior surfaces of steel tanks Rail cars and locomotives Power plants Conveyors Nuclear power facilities Floors <p>Acceptable for use in high performance architectural applications.</p>																																				
PRODUCT CHARACTERISTICS	PERFORMANCE CHARACTERISTICS																																				
<p>Finish: High Gloss</p> <p>Color: Wide variety of colors available</p> <p>Volume Solids: 58%±2%, catalyzed, unreduced 53%±2%, catalyzed, reduced 10% 47%±2%, catalyzed, reduced 25% May vary by color</p> <p>Weight Solids: 71%±2%, catalyzed, unreduced May vary by color</p> <p>VOC (EPA Method 24): Unreduced:<100 g/L; 0.83 lb/gal May vary by color</p> <p>Mix Ratio: 3:1 by volume</p> <p>Recommended Spreading Rate per coat (at 10% reduction): Wet mils: 4.0 - 6.0 Dry mils: 2.0 - 3.0 Coverage: 310 - 460 sq ft/gal approximate</p> <p>NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.</p> <p>Drying Schedule @ 5.0 mils wet @ 50% RH:</p> <table border="1"> <thead> <tr> <th></th> <th>@ 55°F</th> <th>@ 77°F</th> <th>@ 120°F</th> </tr> </thead> <tbody> <tr> <td>To touch:</td> <td>3 hours</td> <td>1½ hour</td> <td>45 minutes</td> </tr> <tr> <td>To handle:</td> <td>12 hours</td> <td>6 hours</td> <td>2 hours</td> </tr> <tr> <td>To recoat:</td> <td></td> <td></td> <td></td> </tr> <tr> <td> minimum:</td> <td>16 hours</td> <td>8 hours</td> <td>2-4 hours</td> </tr> <tr> <td> maximum:</td> <td>3 months</td> <td>3 months</td> <td>3 months</td> </tr> <tr> <td>To cure:</td> <td>14 days</td> <td>10 days</td> <td>2 days</td> </tr> <tr> <td>Pot Life:</td> <td>2 hours</td> <td>2 hours</td> <td>30 minutes</td> </tr> <tr> <td>Sweat-in Time:</td> <td>none</td> <td>none</td> <td>none</td> </tr> </tbody> </table> <p>If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity and film thickness dependent.</p> <p>Shelf Life: 12 months, unopened Store indoors at 40°F to 100°F.</p> <p>Flash Point: >230°F Seta, catalyzed</p> <p>Reducer: Water, 10% minimum reduction required</p> <p>Clean Up: Reducer R7K15</p>		@ 55°F	@ 77°F	@ 120°F	To touch:	3 hours	1½ hour	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 hours	2 hours	30 minutes	Sweat-in Time:	none	none	none	<p>System Tested: (unless otherwise indicated) Substrate: Steel Surface Preparation: SSPC-SP10 1 ct. Waterbased Tile-Clad Primer @ 4.0 mils dft 1 ct. Centurion Water Based Urethane @ 3.0 mils dft</p> <p>Abrasion Resistance: Method: ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load Result: 45 mg loss</p> <p>Accelerated Weathering - QUV: Method: ASTM D4587, QUV-A, 12,000 hours Results: passes</p> <p>Adhesion: Method: ASTM D4541 Result: 800 psi</p> <p>Corrosion Weathering: Method: ASTM D5894, 10 cycles, 3360 hours Result: Rating 10 per ASTM D610 for rusting, no more than 1/8" rust creepage at scribe</p> <p>Decontamination - of Coatings used in Nuclear Power Plants Method: ANSI 5.12 / ASTM D4256-89 Result: Passes</p> <p>Direct Impact Resistance: Method: ASTM D2794 Result: >160 in lb</p> <p>Dry Heat Resistance: Method: ASTM D2485 Result: 200°F constant, 250°F intermittent</p> <p>Flexibility: Method: ASTM D522, 180° bend, 1/8" mandrel Result: Passes</p> <p>Irradiation-Effects on Coatings used in Nuclear Power Plants Method: ANSI 5.12 / ASTM D4082-89 Result: Passes</p> <p>Pencil Hardness: Method: ASTM D3363 Result: 2H</p> <p>Salt Fog Resistance (Zinc Clad IV, 2 coats of Centurion): Method: ASTM B117, 10,000 hours Result: Rating 9 per ASTM D610 for rusting</p> <p>Thermal Shock: Method: ASTM D2246, 10 cycles Result: Passes</p> <p>Meets the requirements of SSPC Paint No. 36, Levels 2 & 3</p>
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CENTURION®

WATER BASED URETHANE

**PART A
PART B**

**B65-700
B65V700**

**SERIES
HARDENER**

PRODUCT INFORMATION

RECOMMENDED SYSTEMS	SURFACE PREPARATION												
<p>Steel: 1 ct. Waterbased Tile-Clad Primer @ 2.0 - 4.0 mils dft 1-2 cts. Centurion WB Urethane @ 2.0 - 3.0 mils dft/ct</p> <p>Steel: 1 ct. Waterbased Tile-Clad Primer @ 2.0 - 4.0 mils dft 1 ct. Waterbased Tile-Clad Coating @ 2.0 - 4.0 mils dft 1-2 cts. Centurion WB Urethane @ 2.0 - 3.0 mils dft/ct</p> <p>Steel: 1 ct. Zinc-Clad VI WB Primer @ 2.0 - 3.0 mils dft 1 ct. Waterbased Tile-Clad Primer @ 2.0 - 4.0 mils dft 1-2 cts. Centurion WB Urethane @ 2.0 - 3.0 mils dft/ct</p> <p>Steel: 1 ct. Zinc-Clad VI WB Primer @ 2.0 - 3.0 mils dft 1-2 cts. Centurion WB Urethane @ 2.0 - 3.0 mils dft/ct</p> <p>Steel: 1 ct. Zinc-Clad IV Primer @ 3.0 - 4.0 mils dft 1-2 cts. Centurion WB Urethane @ 2.0 - 3.0 mils dft/ct</p> <p>Steel: 1 ct. Epolon II Rust-Inhibiting Primer @ 2.0 - 4.0 mils dft 1-2 cts. Centurion WB Urethane @ 2.0 - 3.0 mils dft/ct</p> <p>Galvanizing: 1 ct. DTM Wash Primer @ 0.7 - 1.3 mils dft 1-2 cts. Centurion WB Urethane @ 2.0 - 3.0 mils dft/ct</p> <p>Aluminum: 1 ct. DTM Wash Primer @ 0.7 - 1.3 mils dft 1-2 cts. Centurion WB Urethane @ 2.0 - 3.0 mils dft/ct</p> <p>Concrete/Masonry (High Performance): 1 ct. Kem Cati-Coat HS Epoxy Filler / Sealer @ 10.0 - 20.0 mils dft, as needed to fill voids and provides continuous substrate 1-2 cts. Centurion WB Urethane @ 2.0 - 3.0 mils dft/ct</p> <p>Concrete/Masonry: 1 ct. Heavy Duty Block Filler @ 10.0 - 18.0 mils dft 1-2 cts. Centurion WB Urethane @ 2.0 - 3.0 mils dft/ct</p>	<p>Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure good adhesion.</p> <p>Refer to product Application Bulletin for detailed surface preparation information.</p> <p>Minimum recommended surface preparation: * Iron & Steel: SSPC-SP26/NACE 3 * Aluminum: SSPC-SP1 * Galvanizing: SSPC-SP1 * Concrete & Masonry: SSPC-SP13/NACE 6, or ICRI 03732, CSP1-3 * Requires primer</p>												
	<p style="text-align: center;">TINTING</p> <p>Tint Part A with EnviroToner Colorants only. Use the 150% tint strength formula pages. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.</p> <p>Do not use Blend-A-Color Toner.</p>												
	<p style="text-align: center;">APPLICATION CONDITIONS</p> <p>Temperature: 55°F minimum, 120°F maximum (air, surface, and material) At least 5°F above dew point</p> <p>Relative humidity: 85% maximum</p> <p>Refer to product Application Bulletin for detailed application information.</p>												
	<p style="text-align: center;">ORDERING INFORMATION</p> <table border="0"> <tr> <td>Packaging:</td> <td>1 gallon mix:</td> <td>4 gallon mix:</td> </tr> <tr> <td>Part A:</td> <td>.75 gallons</td> <td>3 gallons</td> </tr> <tr> <td>Part B:</td> <td>1 quart</td> <td>1 gallon</td> </tr> <tr> <td></td> <td colspan="2">(premeasured components)</td> </tr> </table> <p>Weight per gallon: 11.5 ± 0.2 lb, catalyzed</p>	Packaging:	1 gallon mix:	4 gallon mix:	Part A:	.75 gallons	3 gallons	Part B:	1 quart	1 gallon		(premeasured components)	
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	<p style="text-align: center;">SAFETY PRECAUTIONS</p> <p>Refer to the MSDS sheet before use.</p> <p>Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.</p>												

The systems listed above are representative of the product's use. Other systems may be appropriate.

DISCLAIMER	WARRANTY
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<p>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.</p>	<p>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.</p>
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**Industrial
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Marine
Coatings**

**5.30A
CENTURION®
WATER BASED URETHANE**

PART A B65-700 SERIES
PART B B65V700 HARDENER

APPLICATION BULLETIN

APPLICATION PROCEDURES	PERFORMANCE TIPS																																													
<p>Surface preparation must be completed as indicated.</p> <p>Mix Component "A" thoroughly by boxing and stirring before use. Make certain no pigment remains on the bottom of the can. Then combine 3 parts by volume of Part A with 1 part by volume of Part B. Mix thoroughly. Reduce 10% minimum by volume with water (required) AFTER both components have been mixed together. Maximum reduction is 25%.</p> <p>Apply paint to the recommended film thickness and spreading rate as indicated below:</p> <p>Recommended Spreading Rate per coat:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Wet mils:</td> <td style="width: 35%;">4.0 - 6.0</td> <td style="width: 35%;"></td> </tr> <tr> <td>Dry mils:</td> <td>2.0 - 3.0</td> <td></td> </tr> <tr> <td>Coverage:</td> <td colspan="2">310 - 460 sq ft/gal approximate</td> </tr> </table> <p>NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.</p> <p>Drying Schedule @ 5.0 mils wet @ 50% RH:</p> <table style="width: 100%; border: none;"> <thead> <tr> <th></th> <th style="text-align: center;">@ 55°F</th> <th style="text-align: center;">@ 77°F</th> <th style="text-align: center;">@ 120°F</th> </tr> </thead> <tbody> <tr> <td>To touch:</td> <td style="text-align: center;">3 hours</td> <td style="text-align: center;">1½ hour</td> <td style="text-align: center;">45 minutes</td> </tr> <tr> <td>To handle:</td> <td style="text-align: center;">12 hours</td> <td style="text-align: center;">6 hours</td> <td style="text-align: center;">2 hours</td> </tr> <tr> <td>To recoat:</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">minimum:</td> <td style="text-align: center;">16 hours</td> <td style="text-align: center;">8 hours</td> <td style="text-align: center;">2-4 hours</td> </tr> <tr> <td style="padding-left: 20px;">maximum:</td> <td style="text-align: center;">3 months</td> <td style="text-align: center;">3 months</td> <td style="text-align: center;">3 months</td> </tr> <tr> <td>To cure:</td> <td style="text-align: center;">14 days</td> <td style="text-align: center;">10 days</td> <td style="text-align: center;">2 days</td> </tr> <tr> <td>Pot Life:</td> <td style="text-align: center;">2 hours</td> <td style="text-align: center;">2 hours</td> <td style="text-align: center;">30 minutes</td> </tr> <tr> <td>Sweat-in Time:</td> <td style="text-align: center;">none</td> <td style="text-align: center;">none</td> <td style="text-align: center;">none</td> </tr> </tbody> </table> <p>If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity and film thickness dependent.</p> <p>Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.</p>	Wet mils:	4.0 - 6.0		Dry mils:	2.0 - 3.0		Coverage:	310 - 460 sq ft/gal approximate			@ 55°F	@ 77°F	@ 120°F	To touch:	3 hours	1½ hour	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 hours	2 hours	30 minutes	Sweat-in Time:	none	none	none	<p>Stripe coat crevices, welds, and sharp angles to prevent early failure in these areas.</p> <p>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</p> <p>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.</p> <p>Reduction over 25% of material can affect film build, appearance, and adhesion.</p> <p>Do not mix previously catalyzed material with new.</p> <p>Do not apply the material beyond recommended pot life.</p> <p>In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with water.</p> <p>Refer to Product Information sheet for additional performance characteristics and properties.</p>
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<p>Clean spills and spatters immediately with Reducer R7K15. Clean tools immediately after use with Reducer R7K15. Follow manufacturer's safety recommendations when using any solvent.</p>	<p>Refer to the MSDS sheet before use.</p> <p>Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.</p>																																													
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<p>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.</p>	<p>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.</p>																																													