



**Industrial
&
Marine
Coatings**

HI-SOLIDS POLYURETHANE

PART S B65-300
PART S B65-350
PART T B60V30

GLOSS SERIES
SEMI-GLOSS SERIES
HARDENER

PRODUCT INFORMATION

Revised 6/05

PRODUCT DESCRIPTION		RECOMMENDED USES																																							
<p>HI-SOLIDS POLYURETHANE is a two-component, low VOC, aliphatic, acrylic polyurethane resin coating. It is designed for high performance protection with outstanding exterior gloss and color retention.</p> <ul style="list-style-type: none"> • Good/excellent resistance to corrosion and weathering • Outstanding color and gloss retention • Chemical resistant • Part of a system tested for nuclear irradiation and decontamination, Level II • Suitable for use in USDA inspected facilities 		<p>For use over prepared substrates in industrial environments</p> <ul style="list-style-type: none"> • Heavy duty interior and exterior structural coating • A chemical and abrasion resistant equipment and machinery finish • A gloss and color retentive heavy duty maintenance coating for use in "high visibility" areas • Exterior surfaces of steel tanks • Refineries • Clean rooms • Chemical processing equipment • Conveyors • Handrails • Exterior metal siding and trim • Rolling stock • Paper mills • Marine Applications • Power plants • Oil Field Machinery • Offshore structures • Suitable for use in USDA inspected facilities <p>Conforms to AWWA D102-03 OCS #5 & #6. Acceptable for use in high performance architectural applications.</p>																																							
PRODUCT CHARACTERISTICS		PERFORMANCE CHARACTERISTICS																																							
<p>Finish: High Gloss or Semi-Gloss</p> <p>Color: Wide range of colors possible</p> <p>Volume Solids: 65% ± 2%, mixed, may vary by color</p> <p>Weight Solids: 77% ± 2%, mixed, may vary by color</p> <p>VOC (EPA Method 24): Unreduced: <340g/L; 2.80 lb/gal mixed Reduced 15% <370 g/L; 3.08 lb/gal May vary by color</p> <p>Mix Ratio: 4:1 by volume</p> <p>Recommended Spreading Rate per coat:</p> <table> <tr> <td>Wet mils:</td> <td>4.5 - 6.0</td> </tr> <tr> <td>Dry mils:</td> <td>3.0 - 4.0</td> </tr> <tr> <td>Coverage:</td> <td>260 - 347 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 @ 4.5 mils wet @ 50% RH:</p> <table> <thead> <tr> <th></th> <th>@ 40°F</th> <th>@ 77°F</th> <th>@ 120°F</th> </tr> </thead> <tbody> <tr> <td>To touch:</td> <td>4 hours</td> <td>2 hours</td> <td>1 hour</td> </tr> <tr> <td>To handle:</td> <td>16 hours</td> <td>8 hours</td> <td>5 hours</td> </tr> <tr> <td>To recoat:</td> <td></td> <td></td> <td></td> </tr> <tr> <td> minimum:</td> <td>24 hours</td> <td>18 hours</td> <td>10 hours</td> </tr> <tr> <td> maximum:</td> <td>14 days</td> <td>14 days</td> <td>14 days</td> </tr> <tr> <td>To cure:</td> <td>14 days</td> <td>10 days</td> <td>7 days</td> </tr> <tr> <td>Pot Life:</td> <td>8 hours</td> <td>4 hours</td> <td>2 hours</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>Sweat-in-Time: None required</p> <p>Shelf Life: Part S 36 months, unopened Part T 24 months, unopened Store indoors at 40°F at 100°F</p> <p>Flash Point: 80°F, PMCC, mixed</p> <p>Reducer/Clean Up: Below 80°F: Reducer #69, R7K69 Above 80°F: Reducer #58, R7K58 or R6K32</p>		Wet mils:	4.5 - 6.0	Dry mils:	3.0 - 4.0	Coverage:	260 - 347 sq ft/gal approximate		@ 40°F	@ 77°F	@ 120°F	To touch:	4 hours	2 hours	1 hour	To handle:	16 hours	8 hours	5 hours	To recoat:				minimum:	24 hours	18 hours	10 hours	maximum:	14 days	14 days	14 days	To cure:	14 days	10 days	7 days	Pot Life:	8 hours	4 hours	2 hours	<p>System Tested: (unless otherwise indicated) Substrate: Steel Surface Preparation: SSPC-SP6 1 ct. Recoatable Epoxy Primer @ 4.0 mils dft 1 ct. Hi-Solids Polyurethane Gloss @ 3.0 mils dft</p> <p>Abrasion Resistance: Method: ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load Result: 87.1 mg loss</p> <p>Adhesion: Method: ASTM D4541 Result: 1050 psi</p> <p>Corrosion Weathering: Primer - Zinc Clad II Plus; Intermediate - Recoatable Epoxy Primer Method: ASTM D5894, 21 cycles, 7,056 hours Result: Rating 10 per ASTM D714 for blistering Rating 9 per ASTM D610 for rusting</p> <p>Direct Impact Resistance: Method: ASTM D2794 Result: >28 in. lbs.</p> <p>Dry Heat Resistance: Method: ASTM D2485 Result: 200°F</p> <p>Flexibility: Method: ASTM D522, 180° bend, 1/8" mandrel Result: Passes</p> <p>Moisture Condensation Resistance: Method: ASTM D4585, 100°F, 1000 hours Result: No rusting, blistering, or delamination</p> <p>Pencil Hardness: Method: ASTM D3363 Result: F</p> <p>Salt Fog Resistance: Primer - Zinc Clad II Plus; Intermediate - Recoatable Epoxy Primer Method: ASTM B117, 9,000 hours Result: Rating 10 per ASTM D714 for blistering Rating 9 per ASTM D610 for rusting</p> <p>Thermal Shock: Method: ASTM D2246, 15 cycles Result: Excellent</p> <p>Meets the requirements of SSPC Paint No. 36, Level 3.</p>	
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RECOMMENDED SYSTEMS	SURFACE PREPARATION
<p>Steel: Epoxy Primer 1 ct. Recoatable Epoxy Primer @ 4.0 - 6.0 mils dft 1-2 cts. Hi-Solids Polyurethane @ 3.0 - 4.0 mils dft/ct</p> <p>Steel: Epoxy Primer 1 ct. Dura-Plate 235 @ 4.0 - 8.0 mils dft 1-2 cts. Hi-Solids Polyurethane @ 3.0 - 4.0 mils dft/ct</p> <p>Steel: Zinc Rich Primer 1 ct. Zinc Clad II Plus @ 3.0 - 5.0 mils dft 1 ct. Macropoxy 646 @ 5.0 - 10.0 mils dft 1-2 cts. Hi-Solids Polyurethane @ 3.0 - 4.0 mils dft/ct</p> <p>Steel: Epoxy Mastic Primer 1 ct. Macropoxy 646 @ 5.0 - 10.0 mils dft 1-2 cts. Hi-Solids Polyurethane @ 3.0 - 4.0 mils dft/ct</p> <p>Steel: Universal Primer 1 ct. Kem Bond HS Metal @ 2.0 - 5.0 mils dft 1-2 cts. Hi-Solids Polyurethane @ 3.0 - 4.0 mils dft/ct</p> <p>Aluminum: 1 ct. DTM Wash Primer @ 0.7 - 1.3 mil dft 1-2 cts. Hi-Solids Polyurethane @ 3.0 - 4.0 mils dft/ct</p> <p>Concrete: 1 ct. Kem Cati-Coat Epoxy HS Filler/Sealer @ 10.0 - 15.0 mils dft 1-2 cts. Hi-Solids Polyurethane @ 3.0 - 4.0 mils dft/ct</p> <p>Galvanized Metal: 1 ct. Recoatable Epoxy Primer @ 4.0 - 6.0 mils dft 1-2 cts. Hi-Solids Polyurethane @ 3.0 - 4.0 mils dft/ct</p> <p>The systems listed above are representative of the product's use. Other systems may be appropriate.</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 adequate adhesion.</p> <p>Refer to product Application Bulletin for detailed surface preparation information.</p> <p>Minimum recommended surface preparation: * Iron & Steel: SSPC-SP6/NACE 3, 2 mil profile * Aluminum: SSPC-SP1 * Galvanizing: SSPC-SP1 * Concrete & Masonry: SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3</p> <p>* Primer Required</p> <p style="text-align: center;">TINTING</p> <p>Tint with 844 Colorants only into Part S. Extra White tints at 200% tint strength. Ultradeep tints at 150% tint strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.</p> <p style="text-align: center;">APPLICATION CONDITIONS</p> <p>Temperature: 40°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> <p>Packaging: Part S: 1 gallon and 4 gallon kits Part T: quarts and gallons</p> <p>Weight per gallon: 10.7 ± 0.2 lb mixed, may vary with color</p> <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>
DISCLAIMER	WARRANTY
<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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SURFACE PREPARATION	APPLICATION CONDITIONS
<p>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.</p> <p>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 Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.</p>	<p>Temperature: 40°F minimum, 120°F maximum (air, surface, and material) At least 5°F above dew point</p> <p>Relative humidity: 85% maximum</p>
<p>Aluminum Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1. Primer required.</p>	<h3>APPLICATION EQUIPMENT</h3> <p>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 compatible with the existing VOC regulations and compatible with existing environmental and application conditions.</p>
<p>Galvanized Steel Allow to weather a minimum of six months prior to coating. Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning 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.</p>	
<p>Concrete and Masonry For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F. 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 ArmorSeal Crack Filler. Weathered masonry and soft or porous cement board must be brush blasted or power tool cleaned to remove loosely adhering contamination and to get to a hard, firm surface. Laitance must be removed by etching with a 10% muriatic acid solution and thoroughly neutralized with water. Primer required. Brick must be allowed to weather for one year prior to surface preparation and painting.</p>	<p>Airless Spray Pressure 2500 - 2800 psi Hose 3/8" ID Tip013" - .017" Filter none Reduction As needed up to 10% by volume</p>
	<p>Conventional Spray Gun Binks 95 Fluid Nozzle 63 B Atomization Pressure .. 50 - 70 psi Fluid Pressure 20 - 25 psi Reduction As needed up to 15% by volume</p>
	<p>Brush Brush Natural bristle Reduction As needed up to 15% by volume</p>
	<p>Roller Cover 3/8" woven with phenolic core Reduction as needed up to 15% by volume</p>
	<p>If specific application equipment is not listed above, equivalent equipment may be substituted.</p>



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<p>Surface preparation must be completed as indicated.</p> <p>Mix contents of each component thoroughly with power agitation. Make certain no pigment remains on the bottom of the can. Then combine 4 parts by volume of Part S with 1 part by volume of Part T. Thoroughly agitate the mixture with power agitation.</p> <p>If reducer solvent is used, add only after both components have been thoroughly mixed.</p> <p>Apply paint at the recommended film thickness and spreading rate as indicated below:</p> <p>Recommended Spreading Rate per coat: Wet mils: 4.5 - 6.0 Dry mils: 3.0 - 4.0 Coverage: 260 - 347 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 @ 4.5 mils wet @ 50% RH:</p> <table border="0"> <tr> <td></td> <td>@ 40°F</td> <td>@ 77°F</td> <td>@ 120°F</td> </tr> <tr> <td>To touch:</td> <td>4 hours</td> <td>2 hours</td> <td>1 hour</td> </tr> <tr> <td>To handle:</td> <td>16 hours</td> <td>8 hours</td> <td>5 hours</td> </tr> <tr> <td>To recoat:</td> <td></td> <td></td> <td></td> </tr> <tr> <td> minimum:</td> <td>24 hours</td> <td>18 hours</td> <td>10 hours</td> </tr> <tr> <td> maximum:</td> <td>14 days</td> <td>14 days</td> <td>14 days</td> </tr> <tr> <td>To cure:</td> <td>14 days</td> <td>10 days</td> <td>7 days</td> </tr> <tr> <td>Pot Life:</td> <td>8 hours</td> <td>4 hours</td> <td>2 hours</td> </tr> </table> <p>If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.</p> <p>Sweat-in-Time: None required</p> <p>Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.</p>		@ 40°F	@ 77°F	@ 120°F	To touch:	4 hours	2 hours	1 hour	To handle:	16 hours	8 hours	5 hours	To recoat:				minimum:	24 hours	18 hours	10 hours	maximum:	14 days	14 days	14 days	To cure:	14 days	10 days	7 days	Pot Life:	8 hours	4 hours	2 hours	<p>Stripe coat all 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>Excessive reduction of material can affect film build, appearance, and adhesion.</p> <p>Do not apply the material beyond recommended pot life.</p> <p>Do not mix previously catalyzed material with new.</p> <p>In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer #58, R7K58.</p> <p>Mixed coating is sensitive to water. Use water traps in all air lines. Moisture contact can reduce pot life and affect gloss and color.</p> <p>Quick-Thane Urethane Accelerator is acceptable for use. See data page 5.97 for details.</p> <p>E-Z Roll Urethane Defoamer is acceptable for use. See data page 5.99 for details.</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 #58, R7K58. Clean tools immediately after use with Reducer #58, R7K58. 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>																																