



**Industrial  
&  
Marine  
Coatings**

**PART A B65-600**  
**PART A B65-650**  
**PART B B65V600**

**5.22**  
**ACROLON™ 218 HS**  
**ACRYLIC POLYURETHANE**  
**GLOSS SERIES**  
**SEMI-GLOSS SERIES**  
**HARDENER**

**PRODUCT INFORMATION**

Revised 6/05

PRODUCT DESCRIPTION		RECOMMENDED USES																													
<p><b>ACROLON 218 HS</b> acrylic polyurethane is a VOC compliant, polyester modified, aliphatic, acrylic polyurethane formulated specifically for in-shop applications. Also suitable for industrial applications. A fast drying, high gloss urethane that provides color and gloss retention for exterior exposure.</p> <ul style="list-style-type: none"> <li>• Can be used directly over organic zinc rich primers (epoxy zinc primer and moisture cure urethane zinc primer)</li> <li>• Color and gloss retention for exterior exposure</li> <li>• Fast dry</li> </ul>		<p>Specifically formulated for in-shop applications. For use over prepared metal and masonry surfaces in industrial environments such as:</p> <ul style="list-style-type: none"> <li>• Structural steel</li> <li>• Rail cars and locomotives</li> <li>• Conveyors</li> <li>• Bridges</li> <li>• Offshore platforms - exploration and production</li> <li>• Suitable for use in USDA inspected facilities</li> </ul> <p>Conforms to AWWA D102-03, OCS #5&amp;#6 Acceptable for use in high performance architectural applications.</p>																													
PRODUCT CHARACTERISTICS		PERFORMANCE CHARACTERISTICS																													
<p><b>Finish:</b> High Gloss or Semi-Gloss</p> <p><b>Color:</b> Wide range of colors available</p> <p><b>Volume Solids:</b> 65% ± 2%, mixed, may vary by color</p> <p><b>Weight Solids:</b> 78% ± 2%, mixed, may vary by color</p> <p><b>VOC (EPA Method 24):</b> Unreduced: &lt;300 g/L; 2.5 lb/gal mixed Reduced 10%: &lt;340 g/L; 2.8 lb/gal Reduced 15%: &lt;360 g/L; 3.0 lb/gal Maximum</p> <p><b>Mix Ratio:</b> 6:1 by volume, 1 gallon or 5 gallon mixes premeasured components</p> <p><b>Recommended Spreading Rate per coat:</b> Wet mils: 4.5 - 9.0 Dry mils: 3.0 - 6.0 Coverage: 175 - 346 sq ft/gal approximate</p> <p><b>NOTE:</b> Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.</p> <p><b>Drying Schedule @ 6.0 mils wet @ 50% RH:</b></p> <table border="1"> <thead> <tr> <th></th> <th>@ 50°F</th> <th>@ 77°F</th> <th>@ 120°F</th> </tr> </thead> <tbody> <tr> <td>To touch:</td> <td>2 hours</td> <td>30 minutes</td> <td>20 minutes</td> </tr> <tr> <td>To handle:</td> <td>10 hours</td> <td>6 hours</td> <td>4 hours</td> </tr> <tr> <td>To recoat:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    minimum:</td> <td>12 hours</td> <td>8 hours</td> <td>6 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>7 days</td> <td>5 days</td> </tr> </tbody> </table> <p>Drying time is temperature, humidity, and film thickness dependent.</p> <p><b>Pot Life:</b> 4 hours 2 hours 45 minutes (reduced 5% with Reducer R7K15)</p> <p><b>Sweat in Time:</b> none none none If maximum recoat time is exceeded, abrade surface before recoating.</p> <p><b>Shelf Life:</b> Part A: 36 months, unopened Part B: 12 months, unopened Store indoors at 40°F to 100°F</p> <p><b>Flash Point:</b> 55°F, Seta, mixed</p> <p><b>Reducer/Clean Up:</b> Spray Reducer R7K15 Brush/Roll Reducer #132, R7K132</p>			@ 50°F	@ 77°F	@ 120°F	To touch:	2 hours	30 minutes	20 minutes	To handle:	10 hours	6 hours	4 hours	To recoat:				minimum:	12 hours	8 hours	6 hours	maximum:	3 months	3 months	3 months	To cure:	14 days	7 days	5 days	<p><b>System Tested:</b> (unless otherwise indicated) Substrate: Steel Surface Preparation: SSPC-SP10 1 ct. Macropoxy 646 @ 6.0 mils dft 1 ct. Acrolon 218 HS Gloss @ 4.0 mils dft</p> <p><b>Abrasion Resistance:</b> <sup>1</sup> Method: ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load Result: 43 mg loss</p> <p><b>Adhesion:</b> Method: ASTM D4541 Result: 975 psi</p> <p><b>Corrosion Weathering:</b> <sup>2</sup> Method: ASTM D5894, 9 cycles, 3024 hours Result: Rating 10 per ASTM D610, for rusting Rating 10 per ASTM D714, for blistering</p> <p><b>Direct Impact Resistance:</b> <sup>1</sup> Method: ASTM D2794 Result: 50 in. lb.</p> <p><b>Dry Heat Resistance:</b> <sup>1</sup> Method: ASTM D2485, Method A Result: 200°F</p> <p><b>Flexibility:</b> <sup>1</sup> Method: ASTM D522, 180° bend, 1/8" mandrel Result: Passes</p> <p><b>Humidity Resistance:</b> <sup>2</sup> Method: ASTM D4585, 100°F, 1500 hours Result: Rating 10 per ASTM D610 for rusting Rating 10 per ASTM D714 for blistering</p> <p><b>Pencil Hardness:</b> Method: ASTM D3363 Result: 3H</p> <p><b>Salt Fog Resistance:</b> <sup>2</sup> Method: ASTM B117, 7000 hours Result: Rating 10 per ASTM D610 for rusting Rating 9 per ASTM D714 for blistering</p>	
	@ 50°F	@ 77°F	@ 120°F																												
To touch:	2 hours	30 minutes	20 minutes																												
To handle:	10 hours	6 hours	4 hours																												
To recoat:																															
minimum:	12 hours	8 hours	6 hours																												
maximum:	3 months	3 months	3 months																												
To cure:	14 days	7 days	5 days																												
		<p><sup>1</sup> Finish coat only tested <sup>2</sup> Primer Zinc-Clad II Plus Intermediate Macropoxy 646 Finish Acrolon 218 HS</p> <p><b>Meets the requirements of SSPC Paint No. 36, Level 3.</b></p>																													



**Industrial  
&  
Marine  
Coatings**

**5.22**

**ACROLON™ 218 HS  
ACRYLIC POLYURETHANE**

**PART A B65-600**  
**PART A B65-650**  
**PART B B65V600**

**GLOSS SERIES**  
**SEMI-GLOSS SERIES**  
**HARDENER**

**PRODUCT INFORMATION**

RECOMMENDED SYSTEMS	SURFACE PREPARATION															
<p><b>Steel:</b> 1 ct. Macropoxy 646 @ 5.0 - 10.0 mils dft 1-2 cts. Acrolon 218 HS Acrylic Polyurethane @ 3.0 - 6.0 mils dft/ct</p> <p><b>Steel:</b> 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. Acrolon 218 HS Acrylic Polyurethane @ 3.0 - 6.0 mils dft/ct</p> <p><b>Steel:</b> 1 ct. Zinc Clad IV @ 3.0 - 5.0 mils dft 1-2 cts. Acrolon 218 HS Acrylic Polyurethane @ 3.0 - 6.0 mils dft/ct</p> <p><b>Steel:</b> 1 ct. Corothane I - GalvaPac Zinc Primer @ 3.0 - 4.0 mils dft 1-2 cts. Acrolon 218 HS Acrylic Polyurethane @ 3.0 - 6.0 mils dft/ct</p> <p><b>Steel:</b> 1 ct. Epoxy Mastic Aluminum II @ 6.0 mils dft 1-2 cts. Acrolon 218 HS Acrylic Polyurethane @ 3.0 - 6.0 mils dft/ct</p> <p><b>Steel:</b> 1 ct. Recoatable Epoxy Primer @ 4.0 - 6.0 mils dft 1-2 cts. Acrolon 218 HS Acrylic Polyurethane @ 3.0 - 6.0 mils dft/ct</p> <p><b>Concrete/Masonry:</b> 1 ct. Kem Cati-Coat HS Epoxy Filler/Sealer @ 10.0 - 20.0 mils dft 1-2 cts. Acrolon 218 HS Acrylic Polyurethane @ 3.0 - 6.0 mils dft/ct</p> <p><b>Aluminum/Galvanizing:</b> 1 ct. DTM Wash Primer @ 0.7 - 1.3 mils dft 1-2 cts. Acrolon 218 HS Acrylic Polyurethane @ 3.0 - 6.0 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 &amp; Steel: SSPC-SP6/NACE 3, 1-2 mils pro file * Galvanizing: SSPC-SP1 * Concrete &amp; Masonry: SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3 * Primer required</p>															
	<p style="text-align: center;"><b>TINTING</b></p> <p>Tint Part A with 844 Colorants.</p> <ul style="list-style-type: none"> <li>• Extra white tints at 100% tint strength</li> <li>• Ultradeep base tints at 150% tint strength</li> </ul> <p>Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.</p>															
	<p style="text-align: center;"><b>APPLICATION CONDITIONS</b></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;"><b>ORDERING INFORMATION</b></p> <table border="0"> <tr> <td>Packaging:</td> <td><u>1 gallon mix:</u></td> <td><u>5 gallon mix:</u></td> </tr> <tr> <td>Part A:</td> <td>.86 gal</td> <td>4.29 gal</td> </tr> <tr> <td>Part B:</td> <td>.14 gal</td> <td>0.71 gal</td> </tr> <tr> <td>(premeasured components)</td> <td></td> <td></td> </tr> <tr> <td>Weight per gallon:</td> <td colspan="2">11.2 ± 0.2 lb mixed, may vary with color</td> </tr> </table>	Packaging:	<u>1 gallon mix:</u>	<u>5 gallon mix:</u>	Part A:	.86 gal	4.29 gal	Part B:	.14 gal	0.71 gal	(premeasured components)			Weight per gallon:	11.2 ± 0.2 lb mixed, may vary with color	
Packaging:	<u>1 gallon mix:</u>	<u>5 gallon mix:</u>														
Part A:	.86 gal	4.29 gal														
Part B:	.14 gal	0.71 gal														
(premeasured components)																
Weight per gallon:	11.2 ± 0.2 lb mixed, may vary with color															
	<p style="text-align: center;"><b>SAFETY PRECAUTIONS</b></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>															
<p style="text-align: center;"><b>DISCLAIMER</b></p>	<p style="text-align: center;"><b>WARRANTY</b></p>															
<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>															



**Industrial  
&  
Marine  
Coatings**

**5.22A  
ACROLON™ 218 HS  
ACRYLIC POLYURETHANE**

<b>PART A</b>	<b>B65-600</b>	<b>GLOSS SERIES</b>
<b>PART A</b>	<b>B65-650</b>	<b>SEMI-GLOSS SERIES</b>
<b>PART B</b>	<b>B65V600</b>	<b>HARDENER</b>

**APPLICATION BULLETIN**

Revised 6/05

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><b>Iron &amp; Steel</b> 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 (1-2 mils). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.</p> <p><b>Aluminum</b> Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1. Primer required</p> <p><b>Galvanized Steel</b> 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 or before flash rusting occurs.</p> <p><b>Poured Concrete</b> <b>New</b> For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3. Surfaces must be clean, dry, sound and offer sufficient profile to achieve adequate adhesion. Minimum substrate cure is 28 days at 75°F. Remove all form release agents, curing compounds, salts, efflorescence, laitance, and other foreign matter by sandblasting, shotblasting, mechanical scarification, or suitable chemical means. Refer to ASTM D4260. Rinse thoroughly to achieve a final pH between 8.0 and 10.0. Allow to dry thoroughly prior to coating.</p> <p><b>Old</b> Surface preparation is done in much the same manner as new concrete, however, if the concrete is contaminated with oils, grease, chemicals, etc., they must be removed by cleaning with a strong detergent. Refer to ASTM D4258. Form release agents, hardeners, etc. must be removed by sandblasting, shotblasting, mechanical scarification, or suitable chemical means. If surface deterioration presents an unacceptably rough surface, Kem Cati-Coat Epoxy HS Filler/Sealer is recommended to patch and resurface damaged concrete. Fill all cracks, voids and bugholes with Steel Seam VSE</p> <p><b>Always follow the standard methods listed below:</b> ASTM D4258 Standard Practice for Cleaning Concrete. ASTM D4259 Standard Practice for Abrading Concrete. ASTM D4260 Standard Practice for Etching Concrete. ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete. SSPC-SP 13/Nace 6 Surface Preparation of Concrete. ICRI 03732 Concrete Surface Preparation</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> <tr> <th colspan="2" style="text-align: center;">APPLICATION EQUIPMENT</th> </tr> <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 environmental and application conditions.</p> <p><b>Reducer/Clean Up:</b> Spray ..... Reducer R7K15 Brush/Roll ..... Reducer #132, R7K132 If reducer is used, reduce at time of catalyzation.</p> <p><b>Airless Spray</b> Pressure ..... 2500 - 2800 psi Hose ..... 3/8" ID Tip ..... .013" - .017" Filter ..... 60 mesh Reduction ..... As needed up to 15% by volume</p> <p><b>Conventional Spray</b> Gun ..... Binks 95 Cap ..... 63P Atomization Pressure .. 50 - 70 psi Fluid Pressure ..... 20 - 25 psi Reduction ..... As needed up to 15% by volume</p> <p><b>Brush</b> Brush ..... Natural Bristle Reduction ..... As needed up to 15% by volume</p> <p><b>Roller</b> 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>	APPLICATION EQUIPMENT	
APPLICATION EQUIPMENT			



**Industrial  
&  
Marine  
Coatings**

**5.22A**

**ACROLON™ 218 HS  
ACRYLIC POLYURETHANE**

**PART A B65-600  
PART A B65-650  
PART B B65V600**

**GLOSS SERIES  
SEMI-GLOSS SERIES  
HARDENER**

**APPLICATION BULLETIN**

APPLICATION PROCEDURES	PERFORMANCE TIPS																																								
<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 six parts by volume of Part A with one part by volume of Part B (premeasured components). Thoroughly agitate the mixture with power agitation. Re-stir before using.</p> <p>If reducer 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><b>Recommended Spreading Rate per coat:</b>  Wet mils: 4.5 - 9.0  Dry mils: 3.0 - 6.0  Coverage: 175 - 346 sq ft/gal approximate</p> <p><b>NOTE:</b> Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.</p> <p><b>Drying Schedule @ 6.0 mils wet @ 50% RH:</b></p> <table border="0"> <tr> <td></td> <td><b>50°F</b></td> <td><b>@ 77°F</b></td> <td><b>@ 120°F</b></td> </tr> <tr> <td>To touch:</td> <td>2 hours</td> <td>30 minutes</td> <td>20 minutes</td> </tr> <tr> <td>To handle:</td> <td>10 hours</td> <td>6 hours</td> <td>4 hours</td> </tr> <tr> <td>To recoat:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    minimum:</td> <td>12 hours</td> <td>8 hours</td> <td>6 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>7 days</td> <td>5 days</td> </tr> <tr> <td><b>Pot Life:</b></td> <td>4 hours</td> <td>2 hours</td> <td>45 minutes</td> </tr> <tr> <td></td> <td colspan="3">(reduced 5% with Reducer R7K15)</td> </tr> <tr> <td><b>Sweat in Time:</b></td> <td>none</td> <td>none</td> <td>none</td> </tr> </table> <p>Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.</p>		<b>50°F</b>	<b>@ 77°F</b>	<b>@ 120°F</b>	To touch:	2 hours	30 minutes	20 minutes	To handle:	10 hours	6 hours	4 hours	To recoat:				minimum:	12 hours	8 hours	6 hours	maximum:	3 months	3 months	3 months	To cure:	14 days	7 days	5 days	<b>Pot Life:</b>	4 hours	2 hours	45 minutes		(reduced 5% with Reducer R7K15)			<b>Sweat in Time:</b>	none	none	none	<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 #15, R7K15.</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>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>
	<b>50°F</b>	<b>@ 77°F</b>	<b>@ 120°F</b>																																						
To touch:	2 hours	30 minutes	20 minutes																																						
To handle:	10 hours	6 hours	4 hours																																						
To recoat:																																									
minimum:	12 hours	8 hours	6 hours																																						
maximum:	3 months	3 months	3 months																																						
To cure:	14 days	7 days	5 days																																						
<b>Pot Life:</b>	4 hours	2 hours	45 minutes																																						
	(reduced 5% with Reducer R7K15)																																								
<b>Sweat in Time:</b>	none	none	none																																						
<p><b>CLEAN UP INSTRUCTIONS</b></p>	<p><b>SAFETY PRECAUTIONS</b></p>																																								
<p>Clean spills and splatters immediately with Reducer #132, R7K132. Clean tools immediately after use with Reducer #132, R7K132. 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>																																								
<p><b>DISCLAIMER</b></p>	<p><b>WARRANTY</b></p>																																								
<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>																																								