



**Industrial
&
Marine
Coatings**

2.11

KEM KROMIK® UNIVERSAL METAL PRIMER

B50NZ6

BROWN

**B50WZ1
B50AZ6**

**OFF WHITE
GRAY**

PRODUCT INFORMATION

Revised 4/05

PRODUCT DESCRIPTION	RECOMMENDED USES																														
<p>KEM KROMIK UNIVERSAL METAL PRIMER is a rust inhibiting, low VOC, modified alkyd resin primer designed for use over iron and steel substrates. Can be used as a "universal" primer under high performance topcoats and is also suitable as a "barrier" coat over conventional coatings which would normally be attacked by strong solvents in high performance coatings.</p> <ul style="list-style-type: none"> • High film build • Corrosion resistant • Can be topcoated with epoxies and urethanes • Apply down to 40°F 	<p>For use over prepared steel.</p> <ul style="list-style-type: none"> • "Universal" primer • Shopcoat primer • "Barrier" coating • Maintenance primer • Interior / exterior metal primer • Structural steel • Equipment / machinery • Marine vessels • Hand rails • Conforms to AWWA D102-03, OCS #1 • Suitable for use in USDA inspected facilities 																														
PRODUCT CHARACTERISTICS	PERFORMANCE CHARACTERISTICS																														
<p>Finish: Flat</p> <p>Color: Brown, Off White, Gray</p> <p>Volume Solids: 53% ± 2%</p> <p>Weight Solids: 73% ± 2%</p> <p>VOC (EPA Method 24): <420 g/L, 3.5 lb/gal, Off White</p> <p>Recommended Spreading Rate per coat:</p> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;">Wet mils:</td> <td style="padding-left: 20px;">6.0 - 8.0</td> </tr> <tr> <td style="padding-left: 20px;">Dry mils:</td> <td style="padding-left: 20px;">3.0 - 4.0</td> </tr> <tr> <td style="padding-left: 20px;">Coverage:</td> <td style="padding-left: 20px;">212 - 283 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 @ 6.0 mils wet @ 50% RH:</p> <table style="width: 100%; border: none;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: center;">@ 40°F</th> <th style="text-align: center;">@ 77°F</th> <th style="text-align: center;">@ 110°F</th> </tr> </thead> <tbody> <tr> <td>To touch:</td> <td style="text-align: center;">2 hours</td> <td style="text-align: center;">30 minutes</td> <td style="text-align: center;">15 minutes</td> </tr> <tr> <td>Tack free:</td> <td style="text-align: center;">2½ hours</td> <td style="text-align: center;">1 hour</td> <td style="text-align: center;">20 minutes</td> </tr> <tr> <td>To recoat with itself and alkyds:</td> <td style="text-align: center;">2½ hours</td> <td style="text-align: center;">1 hour</td> <td style="text-align: center;">45 minutes</td> </tr> <tr> <td>To recoat with high performance/hot solvent topcoats:</td> <td style="text-align: center;">36 hours</td> <td style="text-align: center;">16 hours</td> <td style="text-align: center;">16 hours</td> </tr> <tr> <td>To cure:</td> <td style="text-align: center;">7 days</td> <td style="text-align: center;">7 days</td> <td style="text-align: center;">7 days</td> </tr> </tbody> </table> <p>Note: For maximum adhesion, acrylic topcoats require 48-72 hours drying of primer.</p> <p>Drying time is temperature, humidity, and film thickness dependent.</p> <p>Shelf Life: 36 months, unopened Store indoors at 40°F to 100°F.</p> <p>Flash Point: 80°F, PMCC</p> <p>Reducer: Not recommended</p> <p>Clean Up: Xylene, R2K4</p>	Wet mils:	6.0 - 8.0	Dry mils:	3.0 - 4.0	Coverage:	212 - 283 sq ft/gal approximate		@ 40°F	@ 77°F	@ 110°F	To touch:	2 hours	30 minutes	15 minutes	Tack free:	2½ hours	1 hour	20 minutes	To recoat with itself and alkyds:	2½ hours	1 hour	45 minutes	To recoat with high performance/hot solvent topcoats:	36 hours	16 hours	16 hours	To cure:	7 days	7 days	7 days	<p>System Tested: (unless otherwise indicated) Substrate: Steel Surface Preparation: SSPC-SP6 1 ct. Kem Kromik Universal @ 3.0 mils dft</p> <p>Abrasion Resistance: Method: ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load Result: 250 mg loss</p> <p>Adhesion: Method: ASTM D4541 Result: 260 psi</p> <p>Direct Impact Resistance: Method: ASTM D2794 Result: 70 in. lbs.</p> <p>Dry Heat Resistance: Method: ASTM D2485 Result: 200°F</p> <p>Flexibility: Method: ASTM D522, 180° bend, 1/4" mandrel Result: Passes</p> <p>Moisture Condensation Resistance: Method: ASTM D4585, 100°F, 500 hours Result: Good</p> <p>Pencil Hardness: Method: ASTM D3363 Result: H</p> <p>Salt Fog Resistance: Method: ASTM B117, 500 hours Result: Good</p> <p>Thermal Shock: Method: ASTM D2246, 5 cycles Result: Passes</p> <p>Provides performance comparable to products formulated to federal specifications: TT-P-664D.</p>
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RECOMMENDED SYSTEMS	SURFACE PREPARATION
<p>Steel, Alkyd Topcoat: 1 ct. Kem Kromik Universal Metal Primer @ 3.0 - 4.0 mils dft 1-2 cts. Industrial Enamel HS @ 2.0 - 4.0 mils dft/ct or WB Industrial Enamel @ 1.5 - 3.0 mils dft/ct or Steel Spec Fast Dry Alkyd @ 3.0 - 5.0 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 adequate adhesion.</p> <p>Refer to product Application Bulletin for detailed surface preparation information.</p>
<p>Steel, Aluminum Finish: 1 ct. Kem Kromik Universal Metal Primer @ 3.0 - 4.0 mils dft 1-2 cts. Silver-Brite Aluminum @ 1.0 - 1.5 mils dft/ct</p>	<p>Minimum recommended surface preparation: Iron & Steel: SSPC-SP2</p>
<p>Steel, Acrylic Topcoat: 1 ct. Kem Kromik Universal Metal Primer @ 3.0 - 4.0 mils dft 1-2 cts. DTM Acrylic Coating @ 2.5 - 4.0 mils dft/ct or Sher-Cryl HPA @ 2.5 - 4.0 mils dft/ct</p>	<p style="text-align: center;">TINTING</p> <p>Do not tint.</p>
<p>Steel, Epoxy Topcoat: 1 ct. Kem Kromik Universal Metal Primer @ 3.0 - 4.0 mils dft 1-2 cts. Tile-Clad HS Epoxy @ 2.5 - 4.0 mils dft/ct</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 Relative humidity: 85% maximum</p> <p>Refer to product Application Bulletin for detailed application information.</p>
<p>Steel, Polyurethane Topcoat: 1 ct. Kem Kromik Universal Metal Primer @ 3.0 - 4.0 mils dft 1-2 cts. Hi-Solids Polyurethane @ 3.0 - 4.0 mils dft/ct or Pylon 1900 Polyurethane @ 2.0 - 3.0 mils dft/ct</p>	<p style="text-align: center;">ORDERING INFORMATION</p> <p>Packaging: 1 and 5 gallon containers Weight per gallon: 12.5 ± 0.35 lb, may vary with color</p>
<p>Steel, Silicone Alkyd Topcoat: 1 ct. Kem Kromik Universal Metal Primer @ 3.0 - 4.0 mils dft 1-2 cts. Steel Master 9500 @ 2.5 - 4.0 mils dft/ct</p>	<p style="text-align: center;">SAFETY PRECAUTIONS</p>
<p>Steel, Water Based Epoxy Topcoat: 1 ct. Kem Kromik Universal Metal Primer @ 3.0 - 4.0 mils dft 1-2 cts. Water Based Catalyzed Epoxy @ 2.5 - 4.0 mils dft/ct or Waterbased Tile Clad Epoxy @ 2.0 - 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>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;">DISCLAIMER</p>	<p style="text-align: center;">WARRANTY</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>



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APPLICATION BULLETIN

Revised 4/05

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>Iron & Steel Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils). Prime any bare steel within 8 hours or before flash rusting occurs.</p> <p>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 product 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.</p> <p>As a "Barrier" Coat: It if is necessary to topcoat a previously painted surface with chemically resistant or strong solvent topcoats, Kem Kromik Universal Metal Primer can be used as a barrier coat to prevent lifting. Apply a coat of Kem Kromik Universal Metal Primer to a small area to test for adhesion or bleeding. If there is evidence of either poor adhesion or bleeding, clean surface to bare substrate and apply recommended system.</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" data-bbox="829 762 1523 804">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 compliant with existing VOC regulations and compatible with the existing environmental and application conditions.</p> <p>Reducer Not recommended</p> <p>Clean Up Xylene, R2K4</p> <p>Airless Spray Pressure 1800-3000 psi Hose 1/4" ID Tip015" - .019" Filter 60 mesh</p> <p>Conventional Spray Gun Binks 95 Fluid Nozzle 63C Air Nozzle 63PB Atomization Pressure ... 50 psi Fluid Pressure 15-20 psi</p> <p>Brush Brush Natural Bristle</p> <p>Roller Cover 3/8" woven with phenolic core</p> <p>If specific application equipment is not listed above, equivalent equipment may be substituted.</p>	APPLICATION EQUIPMENT	
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APPLICATION PROCEDURES	PERFORMANCE TIPS																														
<p>Surface preparation must be completed as indicated.</p> <p>Mixing Instructions: Mix paint thoroughly by boxing and stirring before use.</p> <p>Apply paint at the recommended film thickness and spreading rate as indicated below:</p> <p>Recommended Spreading Rate per coat:</p> <table border="0"> <tr> <td>Wet mils:</td> <td>6.0 - 8.0</td> </tr> <tr> <td>Dry mils:</td> <td>3.0 - 4.0</td> </tr> <tr> <td>Coverage:</td> <td>212 - 283 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 @ 6.0 mils wet @ 50% RH:</p> <table border="0"> <tr> <td></td> <td>@ 40°F</td> <td>@ 77°F</td> <td>@ 110°F</td> </tr> <tr> <td>To touch:</td> <td>2 hours</td> <td>30 minutes</td> <td>15 minutes</td> </tr> <tr> <td>Tack free:</td> <td>2½ hours</td> <td>1 hour</td> <td>20 minutes</td> </tr> <tr> <td>To recoat with itself and alkyds:</td> <td>2½ hours</td> <td>1 hour</td> <td>45 minutes</td> </tr> <tr> <td>To recoat with high performance/hot solvent topcoats:</td> <td>36 hours</td> <td>16 hours</td> <td>16 hours</td> </tr> <tr> <td>To cure:</td> <td>7 days</td> <td>7 days</td> <td>7 days</td> </tr> </table> <p>Note: For maximum adhesion, acrylic topcoats require 48-72 hours drying of primer.</p> <p>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:	6.0 - 8.0	Dry mils:	3.0 - 4.0	Coverage:	212 - 283 sq ft/gal approximate		@ 40°F	@ 77°F	@ 110°F	To touch:	2 hours	30 minutes	15 minutes	Tack free:	2½ hours	1 hour	20 minutes	To recoat with itself and alkyds:	2½ hours	1 hour	45 minutes	To recoat with high performance/hot solvent topcoats:	36 hours	16 hours	16 hours	To cure:	7 days	7 days	7 days	<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>No reduction of material is recommended as it can affect film build, appearance, and adhesion.</p> <p>Intimate contact with the steel surface and primer is necessary for adequate rust inhibition and adhesion.</p> <p>Refer to Product Information sheet for additional performance characteristics and properties.</p>
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CLEAN UP INSTRUCTIONS	SAFETY PRECAUTIONS																														
<p>Clean spills and spatters immediately with Xylene, R2K4. Clean tools immediately after use with Xylene, R2K4. 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>																														