



**Industrial
&
Marine
Coatings**

2.12
KEM BOND® HS
UNIVERSAL METAL PRIMER

B50NZ3 **RED OXIDE**
B50WZ4 **OFF WHITE**
B50AZ8 **GRAY**

PRODUCT INFORMATION

Revised 6/06

PRODUCT DESCRIPTION	RECOMMENDED USES																																
<p>KEM BOND HS is a fast drying, high solids, low VOC, heavy metal free, rust inhibitive, universal, alkyd metal primer. Kem Bond HS can be topcoated with alkyd, acrylic, and high performance coatings. 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 build to protect sandblasted steel • Good corrosion and rust protection • Can be used as a "universal" primer under high performance topcoats • Fast drying 	<p>For industrial application on steel to protect against atmospheric corrosion. Interior/exterior use. A premium shopcoat primer. For use under a variety of coatings, including high performance topcoats.</p> <ul style="list-style-type: none"> • Rail cars • Structural steel • Machinery and equipment • Piping and pipe racks • Marine applications • Conforms to AWWA D102-03, OCS #1 • Suitable for use in USDA inspected facilities <p>Acceptable for use in high performance architectural applications.</p> <ul style="list-style-type: none"> • Tanks • Bridges • Vessels • Bulkheads 																																
PRODUCT CHARACTERISTICS	PERFORMANCE CHARACTERISTICS																																
<p>Finish: Flat</p> <p>Color: Red Oxide, Off White, Gray</p> <p>Volume Solids: 61% ± 2%, may vary by color</p> <p>Weight Solids: 79% ± 2%, may vary by color</p> <p>VOC (EPA Method 24): Unreduced: <320 g/L; 2.65 lb/gal Reduced 5%: <340 g/L; 2.80 lb/gal</p> <p>Recommended Spreading Rate per coat:</p> <p>Wet mils: 3.0 - 8.0 Dry mils: 2.0 - 5.0 Coverage: 195 - 490 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 @ 4.0 mils wet @ 50% RH:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">@ 40°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;">1 hour</td> <td style="text-align: center;">30 minutes</td> <td style="text-align: center;">10 minutes</td> </tr> <tr> <td>Tack free:</td> <td style="text-align: center;">3 hours</td> <td style="text-align: center;">60 minutes</td> <td style="text-align: center;">15 minutes</td> </tr> <tr> <td>To recoat with:</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Alkyd</td> <td style="text-align: center;">6 hours</td> <td style="text-align: center;">2 hours</td> <td style="text-align: center;">1 hour</td> </tr> <tr> <td> Urethane</td> <td style="text-align: center;">24 hours</td> <td style="text-align: center;">24 hours</td> <td style="text-align: center;">6 hours</td> </tr> <tr> <td> Acrylic</td> <td style="text-align: center;">48 hours</td> <td style="text-align: center;">24 hours</td> <td style="text-align: center;">6 hours</td> </tr> <tr> <td>To cure:</td> <td style="text-align: center;">5 days</td> <td style="text-align: center;">2 days</td> <td style="text-align: center;">1 day</td> </tr> </tbody> </table> <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: 90°F, PMCC</p> <p>Reducer/Clean Up: Xylene, R2K4</p>		@ 40°F	@ 77°F	@ 120°F	To touch:	1 hour	30 minutes	10 minutes	Tack free:	3 hours	60 minutes	15 minutes	To recoat with:				Alkyd	6 hours	2 hours	1 hour	Urethane	24 hours	24 hours	6 hours	Acrylic	48 hours	24 hours	6 hours	To cure:	5 days	2 days	1 day	<p>System Tested: (unless otherwise indicated) Substrate: Steel Surface Preparation: SSPC-SP2 1 ct. Kem Bond HS @ 3.0 mils dft 1 ct. Industrial Enamel HS @ 3.0 mils dft</p> <p>Abrasion Resistance: Method: ASTM D4060, 500 cycles, 500 gm Load Result: 46 mg loss</p> <p>Adhesion: Method: ASTM D4541 Result: 392 psi</p> <p>Direct Impact Resistance: (primer only) Method: ASTM D2794 Result: 60 in. lbs.</p> <p>Dry Heat Resistance, primer only: Method: ASTM D2485 Result: 250°F (discolors)</p> <p>Exterior Durability: Method: 1 year at 45° South Result: Excellent</p> <p>Flexibility: (primer only) Method: ASTM D522, 180° bend, 1" mandrel Result: Passes</p> <p>Moisture Condensation Resistance: Method: ASTM D4585, 100°F, 500 hours Result: No blisters, rust, delamination, or creepage</p> <p>Pencil Hardness: Method: ASTM D3363 Result: H</p> <p>Salt Fog Resistance: Method: ASTM B117, 500 hours Result: No softening, cracking, or delamination No more than 1/32" rust creepage at scribe</p> <p>Thermal Shock: Method: ASTM D2246, 15 cycles Result: Passes</p> <p>Provides performance comparable to products formulated to federal specifications: TT-P-664.</p>
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APPLICATION BULLETIN

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 style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Wet mils:</td> <td style="width: 30%;">3.0 - 8.0</td> <td style="width: 30%;"></td> </tr> <tr> <td>Dry mils:</td> <td>2.0 - 5.0</td> <td></td> </tr> <tr> <td>Coverage:</td> <td colspan="2">195 - 490 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 @ 4.0 mils wet @ 50% RH:</p> <table style="width: 100%; border: none;"> <thead> <tr> <th></th> <th style="text-align: center;">@ 40°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;">1 hour</td> <td style="text-align: center;">30 minutes</td> <td style="text-align: center;">10 minutes</td> </tr> <tr> <td>Tack free:</td> <td style="text-align: center;">3 hours</td> <td style="text-align: center;">60 minutes</td> <td style="text-align: center;">15 minutes</td> </tr> <tr> <td>To recoat with:</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">Alkyd</td> <td style="text-align: center;">6 hours</td> <td style="text-align: center;">2 hours</td> <td style="text-align: center;">1 hour</td> </tr> <tr> <td style="padding-left: 20px;">Urethane</td> <td style="text-align: center;">24 hours</td> <td style="text-align: center;">24 hours</td> <td style="text-align: center;">6 hours</td> </tr> <tr> <td style="padding-left: 20px;">Acrylic</td> <td style="text-align: center;">48 hours</td> <td style="text-align: center;">24 hours</td> <td style="text-align: center;">6 hours</td> </tr> <tr> <td>To cure:</td> <td style="text-align: center;">5 days</td> <td style="text-align: center;">2 days</td> <td style="text-align: center;">1 day</td> </tr> </tbody> </table> <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:	3.0 - 8.0		Dry mils:	2.0 - 5.0		Coverage:	195 - 490 sq ft/gal approximate			@ 40°F	@ 77°F	@ 120°F	To touch:	1 hour	30 minutes	10 minutes	Tack free:	3 hours	60 minutes	15 minutes	To recoat with:				Alkyd	6 hours	2 hours	1 hour	Urethane	24 hours	24 hours	6 hours	Acrylic	48 hours	24 hours	6 hours	To cure:	5 days	2 days	1 day	<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>In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Xylene, R2K4.</p> <p>Intimate contact of the steel surface and primer is necessary for adhesion and rust inhibition.</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>																																									
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>																																									