Protective & Marine Coatings

KEM KROMIK® UNIVERSAL METAL PRIMER

B50NZ6 Brown
B50WZ1 Off White
B50AZ6 Gray

Revised January 16, 2015

Product Information

2.11

Product Description

KEM KROMIK UNIVERSAL METAL PRIMER is a rust inhibiting, low VOC, modified phenolic alkyd resin primer designed for use over iron and steel substrates. Can be used as a universal primer under high performance topcoats. Suitable as a barrier coat over conventional coatings which would normally be attacked by strong solvents in high performance coatings.

- High film build to protect sand blasted steel
- Corrosion resistant
- Can be topcoated with epoxies and urethanes
- Low temperature application

Product Characteristics

Finish:	Flat
Color:	Brown (Red Oxide), Off White, Gray
Volume Solids:	53% ± 2%
Weight Solids:	73% ± 2%
VOC (EPA Method 24):	<420 g/L, 3.5 lb/gal

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**6.0** (150)	**8.0** (200)
Dry mils (microns)	**3.0** (75)	**4.0** (100)
~Coverage sq ft/gal (m^2/L)	**212** (5.2)	**283** (7.0)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**848** (20.8)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 6.0 mils wet (150 microns):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 110°F/43°C
To touch:	2 hours	30 minutes	15 minutes
To handle:	2.5 hours	1 hour	20 minutes
To recoat:			
itself & alkyds	2.5 hours	1 hour	45 minutes
high performance/ hot solvent topcoats	36 hours	16 hours	16 hours
To cure:	7 days	7 days	7 days

Note: For maximum adhesion, acrylic topcoats require 48 - 72 hours drying of primer.

Drying time is temperature, humidity, and film thickness dependent.

Shelf Life:	36 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	80°F (27°C), PMCC
Reducer:	Not recommended
Clean Up:	Xylene R2K4

Recommended Uses

For use over prepared steel.

- Universal primer
- Shopcoat primer
- Barrier coating
- Maintenance primer
- Interior / exterior metal primer
- Structural steel
- Equipment / machinery
- Marine vessels
- Hand rails
- Conforms to AWWA D102, OCS #1
- Suitable for use in USDA inspected facilities
- Conforms to MPI #'s 69, 79, & 95

According to AISC, shop coat primers are intended for protection for only a short period of exposure in ordinary atmospheric conditions, and is considered a temporary and provisional coating.

Not recommended for immersion service or exposure to acids, alkalis, or strong solvents.

Performance Characteristics

Substrate*: Steel
Surface Preparation*: SSPC-SP6
System Tested*:
1 ct. Kem Kromik Universal @ 3.0 mils (75 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	250 mg loss
Adhesion	ASTM D4541	260 psi
Direct Impact Resistance	ASTM D2794	70 in. lbs.
Dry Heat Resistance	ASTM D2485	200°F (93°C)
Flexibility	ASTM D522, 180° bend, 1/4" mandrel	Passes
Moisture Condensation Resistance	ASTM D4585, 100°F (38°C), 500 hours	Good
Pencil Hardness	ASTM D3363	H
Salt Fog Resistance	ASTM B117, 500 hours	Good
Thermal Shock	ASTM D2246, 5 cycles	Passes

Provides performance comparable to products formulated to federal specifications: TT-P-664D.

continued on back

Protective & Marine Coatings

KEM KROMIK® UNIVERSAL METAL PRIMER

B50NZ6 Brown
B50WZ1 Off White
B50AZ6 Gray

Revised January 16, 2015

PRODUCT INFORMATION

2.11

RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Steel, Alkyd Topcoat:			
1 ct.	Kem Kromik Universal Metal Primer	3.0-4.0	(75-100)
1-2 cts.	Industrial Enamel HS	2.0-4.0	(50-100)
or	WB Industrial Enamel	1.5-3.0	(40-75)
or	Steel Spec Fast Dry Alkyd	3.0-5.0	(75-125)
Steel, Aluminum Finish:			
1 ct.	Kem Kromik Universal Metal Primer	3.0-4.0	(75-100)
1-2 cts.	Silver-Brite Aluminum	1.0-1.5	(25-40)
Steel, Acrylic Topcoat:			
1 ct.	Kem Kromik Universal Metal Primer	3.0-4.0	(75-100)
1-2 cts.	Pro Industrial DTM Acrylic Coating	2.5-4.0	(63-100)
or	Sher-Cryl HPA	2.5-4.0	(63-100)
Steel, Epoxy Topcoat:			
1 ct.	Kem Kromik Universal Metal Primer	3.0-4.0	(75-100)
1-2 cts.	Tile-Clad HS Epoxy	2.5-4.0	(63-100)
Steel, Polyurethane Topcoat:			
1 ct.	Kem Kromik Universal Metal Primer	3.0-4.0	(75-100)
1-2 cts.	Hi-Solids Polyurethane	3.0-4.0	(75-100)
or	Polylon HP Polyurethane	2.0-3.0	(50-75)
Steel, Silicone Alkyd Topcoat:			
1 ct.	Kem Kromik Universal Metal Primer	3.0-4.0	(75-100)
1-2 cts.	Steel Master 9500	2.5-4.0	(63-100)
Steel, Water Based Epoxy Topcoat:			
1 ct.	Kem Kromik Universal Metal Primer	3.0-4.0	(75-100)
1-2 cts.	Water Based Catalyzed Epoxy	2.5-4.0	(63-100)
or	Waterbased Tile Clad Epoxy	2.0-4.0	(50-100)

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

DISCLAIMER

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.

SURFACE PREPARATION

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.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:
Iron & Steel: SSPC-SP2

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Sa 3	Sa 3	SP 5	1
Near White Metal		Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast		Sa 2	Sa 2	SP 6	3
Brush-Off Blast		Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted	C St 2	C St 2	SP 2	-
	Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	D St 3	SP 3	-

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature: 40°F (4.5°C) minimum, 120°F (49°C) maximum
(air, surface, and material)
At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging: 1 gallon (3.78L) and 5 gallon (18.9L) containers

Weight: 12.5 ± 0.35 lb/gl 1.5 Kg/L

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

WARRANTY

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.

Protective & Marine Coatings

KEM KROMIK® UNIVERSAL METAL PRIMER

B50NZ6	Brown
B50WZ1	Off White
B50AZ6	Gray

Revised January 16, 2015

Application Bulletin

2.11

Surface Preparations

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.

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/NACE 3, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel within 8 hours or before flash rusting occurs.

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.

As a "Barrier" Coat:

If it 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.

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Sa 3	Sa 3	SP 5	1
Near White Metal		Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast		Sa 2	Sa 2	SP 6	3
Brush-Off Blast		Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted	C St 2	C St 2	SP 2	-
	Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	D St 3	SP 3	-

Application Conditions

Temperature:	40°F (4.5°C) minimum, 120°F (49°C) maximum (air, surface, and material) At least 5°F (2.8°C) above dew point
Relative humidity:	85% maximum

Application Equipment

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.

Reducer .....Not recommended

Clean Up .....Xylene, R2K4

Airless Spray

Pressure.....1800-3000 psi
Hose.....1/4" ID
Tip .....015" - .019"
Filter .....60 mesh

Conventional Spray

Gun .....Binks 95
Fluid Nozzle 63C
Air Nozzle.....63PB
Atomization Pressure.....50 psi
Fluid Pressure.....15-20 psi

Brush

Brush.....Natural Bristle

Roller

Cover .....3/8" woven solvent resistant core

If specific application equipment is not listed above, equivalent equipment may be substituted.

continued on back

Protective & Marine Coatings

KEM KROMIK® UNIVERSAL METAL PRIMER

B50NZ6	Brown
B50WZ1	Off White
B50AZ6	Gray

Revised January 16, 2015

Application Bulletin

2.11

Application Procedures

Surface preparation must be completed as indicated.

Mixing Instructions: Mix paint thoroughly to a uniform consistency with low speed power agitation prior to use.

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**6.0** (150)	**8.0** (200)
Dry mils (microns)	**3.0** (75)	**4.0** (100)
~Coverage sq ft/gal (m^2/L)	**212** (5.2)	**283** (7.0)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**848** (20.8)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 6.0 mils wet (150 microns):

	@ 40°F/4.5°C	@ 77°F/25°C *50% RH*	@ 110°F/43°C
To touch:	2 hours	30 minutes	15 minutes
To handle:	2.5 hours	1 hour	20 minutes
To recoat:			
itself & alkyds	2.5 hours	1 hour	45 minutes
high performance/ hot solvent topcoats	36 hours	16 hours	16 hours
To cure:	7 days	7 days	7 days

Note: For maximum adhesion, acrylic topcoats require 48 - 72 hours drying of primer.

Drying time is temperature, humidity, and film thickness dependent.

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

Clean Up Instructions

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.

Disclaimer

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.

Performance Tips

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

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.

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.

No reduction of material is recommended as it can affect film build, appearance, and adhesion.

Intimate contact with the steel surface and primer is necessary for adequate rust inhibition and adhesion.

Refer to Product Information sheet for additional performance characteristics and properties.

Safety Precautions

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

Warranty

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.