



**Industrial
&
Marine
Coatings**

4.19

WATERBASED TILE-CLAD® EPOXY FINISH

PART A B73-100
PART B B73V100

SERIES
HARDENER

PRODUCT INFORMATION

Revised 5/05

PRODUCT DESCRIPTION	RECOMMENDED USES																																				
<p>WATERBASED TILE-CLAD EPOXY FINISH is a two component, VOC complying, high performance, water based, epoxy/cycloaliphatic amine finish coating. Developed for use in industrial environments. Waterbased Tile-Clad is a high gloss, abrasion resistant, low yellowing epoxy finish with excellent weathering properties.</p> <ul style="list-style-type: none"> • Early moisture resistance • Chemical resistant • Impact and abrasion resistant • Low VOC • Low odor • Resists yellowing • Fast dry • Nonflammable 	<p>For use over prepared steel and concrete surfaces in industrial exposures such as:</p> <ul style="list-style-type: none"> • Marine applications • Structural steel • Storage tank exteriors • Nuclear power facilities • Food processing facilities • Wastewater treatment facilities • Suitable for use in USDA inspected facilities <p>Conforms to AWWA D102-03 OCS #5</p> <p>Acceptable for general purpose use on floors.</p> <p>Acceptable for use in high performance architectural applications.</p>																																				
PRODUCT CHARACTERISTICS	PERFORMANCE CHARACTERISTICS																																				
<p>Finish: High Gloss</p> <p>Color: Wide range of colors available</p> <p>Volume Solids: 44% ± 2%, mixed</p> <p>Weight Solids: 54% ± 2%, mixed</p> <p>VOC (EPA Method 24): <200 g/L; 1.67 lb/gal, mixed</p> <p>Mix Ratio: 4:1</p> <p>Recommended Spreading Rate per coat:</p> <p>Wet mils: 4.5 - 9.0 Dry mils: 2.0 - 4.0 Coverage: 176 - 352 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 @ 5.0 mils wet @ 50% RH:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">@ 50°F</th> <th style="text-align: center;">@ 77°F</th> <th style="text-align: center;">@ 100°F</th> </tr> </thead> <tbody> <tr> <td>To touch:</td> <td style="text-align: center;">1-1/2 hours</td> <td style="text-align: center;">45 minutes</td> <td style="text-align: center;">25 minutes</td> </tr> <tr> <td>To handle:</td> <td style="text-align: center;">5-1/2 hours</td> <td style="text-align: center;">4-1/2 hours</td> <td style="text-align: center;">2 hours</td> </tr> <tr> <td>To recoat:</td> <td></td> <td></td> <td></td> </tr> <tr> <td> minimum:</td> <td style="text-align: center;">8 hours</td> <td style="text-align: center;">6 hours</td> <td style="text-align: center;">3 hours</td> </tr> <tr> <td> maximum:</td> <td style="text-align: center;">30 days</td> <td style="text-align: center;">30 days</td> <td style="text-align: center;">30 days</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> <tr> <td>Pot Life:</td> <td style="text-align: center;">4-1/2 hours</td> <td style="text-align: center;">3-1/2 hours</td> <td style="text-align: center;">1-1/2 hours</td> </tr> <tr> <td>Sweat-in-time:</td> <td style="text-align: center;">30 minutes</td> <td style="text-align: center;">30 minutes</td> <td style="text-align: center;">10 minutes</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>Shelf Life: 36 months, unopened Store indoors at 40°F to 100°F.</p> <p>Flash Point: >200°F, SETA Flash, mixed</p> <p>Reducer/Clean Up: Water</p>		@ 50°F	@ 77°F	@ 100°F	To touch:	1-1/2 hours	45 minutes	25 minutes	To handle:	5-1/2 hours	4-1/2 hours	2 hours	To recoat:				minimum:	8 hours	6 hours	3 hours	maximum:	30 days	30 days	30 days	To cure:	7 days	7 days	7 days	Pot Life:	4-1/2 hours	3-1/2 hours	1-1/2 hours	Sweat-in-time:	30 minutes	30 minutes	10 minutes	<p>System Tested: (unless otherwise indicated)</p> <p>Substrate: Steel Surface Preparation: SSPC-SP10 1 ct: Waterbased Tile-Clad Epoxy Primer @ 4.0 mils dft 1 ct: Waterbased Tile-Clad Epoxy Finish @ 4.0 mils dft</p> <p>Abrasion Resistance: topcoat only Method: ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load Result: 120 mg loss</p> <p>Adhesion: Method: ASTM D4541 Result: 550 psi</p> <p>Corrosion Weathering: Method: ASTM D5894, 20 cycles, 6720 hours Result: Passes</p> <p>Dry Heat Resistance: Method: ASTM D2485 Result: 250°F</p> <p>Flexibility: Method: ASTM D522, 180° bend, 1/4" mandrel Result: Passes</p> <p>Impact Resistance, Direct: topcoat only Method: ASTM D2794 Result: 160 in. lb.</p> <p>Impact Resistance, Indirect: topcoat only Method: ASTM D2794 Result: 100 in. lb.</p> <p>Irradiation-Effects on Coatings used in Nuclear Power Plants Method: ANSI 5.12 / ASTM D4082-89 Result: Passes</p> <p>Moisture Condensation Resistance: Method: ASTM D4585, 100°F, 2000 hours Result: Passes</p> <p>Pencil Hardness: Method: ASTM D3363 Result: HB</p> <p>Salt Fog Resistance: Method: ASTM B117, 2000 hours Result: Passes</p> <p>Thermal Shock: Method: ASTM D2246, 20 cycles Result: Passes</p>
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RECOMMENDED SYSTEMS	SURFACE PREPARATION																
<p>Steel: 1 ct. Waterbased Tile-Clad Epoxy Primer @ 2.0 - 4.0 mils dft 1-2 cts. Waterbased Tile-Clad Epoxy Finish @ 2.0 - 4.0 mils dft/ct</p> <p>Steel: 1 ct. ProCryl Universal WB Primer @ 3.0 - 4.0 mils dft 1-2 cts. Waterbased Tile-Clad Epoxy Finish @ 2.0 - 4.0 mils dft/ct</p> <p>Steel: 1 ct. Recoatable Epoxy Primer @ 4.0 - 6.0 mils dft 1-2 cts. Waterbased Tile-Clad Epoxy Finish @ 2.0 - 4.0 mils dft/ct</p> <p>Steel: 1 ct. Zinc-Clad VI @ 2.0 - 3.0 mils dft 1 ct. Waterbased Tile-Clad Epoxy Finish @ 2.0 - 4.0 mils dft 1-2 cts. Centurion Water Based Polyurethane @ 2.0 - 3.0 mils dft/ct</p> <p>Concrete/Masonry: 1ct. Cement-Plex 875 @ 13.0-25.0 mils dft, as required to fill voids and provide a continuous surface.</p> <p><u>Other suitable surfacers are:</u> Heavy Duty Block Filler Kem Cati-Coat HS Epoxy Filler/Sealer</p> <p><u>Topcoat</u> 1-2 cts. Waterbased Tile-Clad Epoxy Finish @ 2.0 - 4.0 mils dft/ct</p> <p>Concrete, smooth: 2 cts. Waterbased Tile-Clad Epoxy Finish @ 2.0 - 4.0 mils dft/ct</p> <p>Galvanized Steel: 1 ct. Waterbased Tile-Clad Epoxy Primer @ 2.0 - 4.0 mils dft 1-2 cts. Waterbased Tile-Clad Epoxy Finish @ 2.0 - 4.0 mils dft/ct</p> <p>Drywall: 1ct Preprite 200 Latex Primer @ 1.0-1.4 mils dft 2cts Waterbased Tile-Clad Epoxy Finish @ 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>Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure good adhesion.</p> <p>Refer to product Application Bulletin for detailed surface preparation information.</p> <p>Do not use hydrocarbon solvents for cleaning.</p> <p>Minimum recommended surface preparation: * Iron & Steel: SSPC-SP2 Galvanizing: SSPC-SP1 Concrete & Masonry: SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3 Wood, interior: Clean, smooth, dust free * Primer recommended</p> <tr> <th colspan="2" data-bbox="792 919 1485 968">TINTING</th> </tr> <tr> <td colspan="2" data-bbox="792 968 1485 1119"> <p>Tint Part A with EnviroToner Colorants at 100% strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.</p> <p>Do not use Blend-A-Color Toner.</p> </td> </tr> <tr> <th colspan="2" data-bbox="792 1119 1485 1167">APPLICATION CONDITIONS</th> </tr> <tr> <td colspan="2" data-bbox="792 1167 1485 1356"> <p>Temperature: 50°F minimum, 100°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> </td> </tr> <tr> <th colspan="2" data-bbox="792 1356 1485 1404">ORDERING INFORMATION</th> </tr> <tr> <td colspan="2" data-bbox="792 1404 1485 1581"> <p>Packaging: 5 gallons mixed Part A: 4 gallons in a 5 gallon can and 1 gallon Part B: 1 gallon and 1 quart</p> <p>Weight per gallon: 10.5 ± 0.2 lb, mixed</p> </td> </tr> <tr> <th colspan="2" data-bbox="792 1581 1485 1629">SAFETY PRECAUTIONS</th> </tr> <tr> <td colspan="2" data-bbox="792 1629 1485 1774"> <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> </td> </tr>	TINTING		<p>Tint Part A with EnviroToner Colorants at 100% strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.</p> <p>Do not use Blend-A-Color Toner.</p>		APPLICATION CONDITIONS		<p>Temperature: 50°F minimum, 100°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>		ORDERING INFORMATION		<p>Packaging: 5 gallons mixed Part A: 4 gallons in a 5 gallon can and 1 gallon Part B: 1 gallon and 1 quart</p> <p>Weight per gallon: 10.5 ± 0.2 lb, mixed</p>		SAFETY PRECAUTIONS		<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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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.

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.



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APPLICATION BULLETIN

Revised 5/05

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>Do not use hydrocarbon solvents for cleaning.</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 (recommended preparation is Steam Cleaning). 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). Prime any bare steel within 8 hours or before flash rusting occurs.</p> <p>Masonry and Block 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 Cement-Plex 875. 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.</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 (recommended preparation is Steam Cleaning). When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 (recommended preparation is Steam Cleaning) 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>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>Temperature: 50°F minimum, 100°F maximum (air, surface, and material) At least 5°F above dew point</p> <p>Relative humidity: 85% maximum</p>
APPLICATION EQUIPMENT	
<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/Clean Up Water</p> <p>Airless Spray Pressure 2000 psi Hose 1/4" ID Tip015" - .017" Filter 60 mesh Reduction As needed up to 10% by volume</p> <p>Conventional Spray Gun DeVilbiss MBC-510 Fluid Tip E Air Nozzle 704 Atomization Pressure ... 40-60 psi Fluid Pressure 10-20 psi Reduction As needed up to 10% by volume</p> <p>Brush Brush Nylon/Polyester Reduction Not recommended</p> <p>Roller Cover 3/8" woven with phenolic core Reduction Not recommended</p> <p>If specific application equipment is not listed above, equivalent equipment may be substituted.</p>	



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APPLICATION BULLETIN

APPLICATION PROCEDURES	PERFORMANCE TIPS																																				
<p>Surface preparation must be completed as indicated.</p> <p>Mix contents of each component thoroughly using power agitation. Make certain no pigment remains on the bottom of the can. Then combine four parts by volume of Part A with one part by volume of Part B. Thoroughly agitate the mixture with power agitation. Allow the material to sweat-in as indicated prior to application. Re-stir before using.</p> <p>If reducer is used, add only after both components have been thoroughly mixed, after sweat-in.</p> <p>Apply paint to the recommended film thickness and spreading rate as indicated below:</p> <p>Recommended Spreading Rate per coat: Wet mils: 4.5 - 9.0 Dry mils: 2.0 - 4.0 Coverage: 176 - 352 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 @ 5.0 mils wet @ 50% RH:</p> <table style="width: 100%; border: none;"> <tr> <td></td> <td style="text-align: center;">@ 50°F</td> <td style="text-align: center;">@ 77°F</td> <td style="text-align: center;">@ 100°F</td> </tr> <tr> <td>To touch:</td> <td style="text-align: center;">1-1/2 hours</td> <td style="text-align: center;">45 minutes</td> <td style="text-align: center;">25 minutes</td> </tr> <tr> <td>To handle:</td> <td style="text-align: center;">5-1/2 hours</td> <td style="text-align: center;">4-1/2 hours</td> <td style="text-align: center;">2 hours</td> </tr> <tr> <td>To recoat:</td> <td></td> <td></td> <td></td> </tr> <tr> <td> minimum:</td> <td style="text-align: center;">8 hours</td> <td style="text-align: center;">6 hours</td> <td style="text-align: center;">3 hours</td> </tr> <tr> <td> maximum:</td> <td style="text-align: center;">30 days</td> <td style="text-align: center;">30 days</td> <td style="text-align: center;">30 days</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> <tr> <td>Pot Life:</td> <td style="text-align: center;">4-1/2 hours</td> <td style="text-align: center;">3-1/2 hours</td> <td style="text-align: center;">1-1/2 hours</td> </tr> <tr> <td>Sweat-in-time:</td> <td style="text-align: center;">30 minutes</td> <td style="text-align: center;">30 minutes</td> <td style="text-align: center;">10 minutes</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>Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.</p>		@ 50°F	@ 77°F	@ 100°F	To touch:	1-1/2 hours	45 minutes	25 minutes	To handle:	5-1/2 hours	4-1/2 hours	2 hours	To recoat:				minimum:	8 hours	6 hours	3 hours	maximum:	30 days	30 days	30 days	To cure:	7 days	7 days	7 days	Pot Life:	4-1/2 hours	3-1/2 hours	1-1/2 hours	Sweat-in-time:	30 minutes	30 minutes	10 minutes	<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 mix previously catalyzed material with new.</p> <p>Do not apply the material beyond recommended pot life.</p> <p>In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with water.</p> <p>Do not use hydrocarbon solvents for cleaning.</p> <p>Refer to Product Information sheet for additional performance characteristics and properties.</p>
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<p>Clean spills and splatters immediately with soap and warm water. Clean hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with Mineral Spirits, R1K4, to prevent rusting of the equipment. 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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