Protective & Marine Coatings

TILE-CLAD® HIGH SOLIDS

PART A	B62Z	SERIES
PART B	B60VZ70	GLOSS HARDENER
PART B	B60VZ75	EG-SHEL HARDENER
PART B	B60VZX70	MR GLOSS HARDENER

Revised January 16, 2015

PRODUCT INFORMATION

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PRODUCT DESCRIPTION

TILE-CLAD HIGH SOLIDS is a low VOC, two-package, epoxy-polyamide coating for use in industrial maintenance environments and high performance architectural applications.

- Chemical resistant
- Abrasion resistant
- Low VOC
- B60VZX70 Hardener - resists film attack by mildew
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish: Gloss and Eg-Shel

Color: Wide range of colors available, including safety colors

Volume Solids: 56% ± 2%, mixed, may vary by color

Weight Solids: 70% ± 2%, mixed, may vary by color

VOC (EPA Method 24): mixed
Unreduced: <400 g/L; 3.33 lb/gal
Reduced 10%: <413 g/L; 3.44 lb/gal

Mix Ratio: 1:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**4.0** (100)	**7.0** (175)
Dry mils (microns)	**2.5** (63)	**4.0** (100)
~Coverage sq ft/gal (m^2/L)	**225** (5.5)	**359** (8.8)
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**896** (21.9)	

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

Drying Schedule @ 4.0 mils wet (100 microns):

	@ 55°F/13°C	@ 77°F/25°C *50% RH*	@ 110°F/43°C
To touch:	3 hours	1 hour	20 minutes
Tack free:	6 hours	2 hours	30 minutes
To recoat:			
minimum:	6 hours	2 hours	30 minutes
maximum:	30 days	30 days	30 days
To stack:	18 hours	16 hours	3 hours
To cure:	21 days	14 days	7 days

If maximum recoat time is exceeded, abrade surface before recoating.
Drying time is temperature, humidity, and film thickness dependent.

Pot life:	4 hours	4 hours	2 hours
Sweat-in-time:	1 hour	30 minutes	10 minutes

Shelf Life: 36 months, unopened
Store indoors at 40°F (4.5°C) to 100°F (38°C).

Flash Point: 92°F (33°C), PMCC, mixed

Reducer/Clean Up: Reducer #54, R7K54-Spray R6K25-Brush & Roll

RECOMMENDED USES

For use over prepared substrates such as steel, galvanizing, and concrete in industrial environments.

- Laboratories
- Masonry surfaces
- Offshore structures
- Storage tanks
- Structural & support steel
- Institutional kitchens
- DOE Nuclear Fuel Facilities
- Lavatories
- Power plants
- Schools
- Marine applications
- Clean rooms
- Nuclear Power Plants
- Nuclear fabrication shops
- DOE Nuclear Weapons Facilities
- Chemical processing equipment
- Institutional & commercial wall coating
- Suitable for use in USDA inspected facilities
- Conforms to AWWA D 102, OCS #5
- Acceptable for use in high performance architectural applications.
- Conforms with MPI # 77
- This product meets specific design requirements for non-safety related nuclear plant applications in Level II, III and Balance of Plant, and DOE nuclear facilities*.

* Nuclear qualifications are NRC license specific to the facility.

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP6/NACE 3

System Tested*:
1 ct. Recoatable Epoxy Primer @ 4.0 - 6.0 mils (100-150 microns) dft
1 ct. Tile-Clad HS @ 3.0 mils (25 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	80 mg loss
Accelerated Weathering - QUV	ASTM D4587, QUV-A, 5,000 hours	Passes
Adhesion	ASTM D4541	1050 psi
Corrosion Weathering	ASTM D5894, 10 cycles, 3336 hours	Rating 9 per ASTM D610 for rusting; Rating 10 per ASTM D714 for blistering
Nuclear Decontamination	ASTM D4256/ANSI N 5.12	99% Water Wash; 95% Overall
Direct Impact Resistance	ASTM D2794	95 in. lb.
Dry Heat Resistance	ASTM D2485	200°F (93°C)
Exterior Durability	1 year at 45° South	Excellent, chalks
Flexibility	ASTM D522, 180° bend, 1/4" mandrel	Passes
Moisture Condensation Resistance	ASTM D4585, 100°F (38°C), 1000 hours	Passes, no blistering, rust, or delamination
Pencil Hardness	ASTM D3363	F-H
Radiation Tolerance	ASTM D4082 / ANSI 5.12	Pass
Salt Fog Resistance	ASTM B117, 2,500 hours	Rating 10 per ASTM D610 for rusting; Rating 10 per ASTM D714 for blistering

Epoxy coatings may darken or yellow following application and curing.

Provides performance comparable to products formulated to federal specification: TT-C-535B

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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Steel, Epoxy Primer:			
1 ct.	Recoatable Epoxy Primer	4.0-6.0	(100-150)
1-2 cts.	Tile-Clad High Solids	2.5-4.0	(63-100)
Steel, Universal Primer:			
1 ct.	Kem Bond HS	2.0-5.0	(50-125)
1-2 cts.	Tile-Clad High Solids	2.5-4.0	(63-100)
Steel, Acrylic Primer:			
1 ct	Pro Industrial Pro-Cryl Universal Primer	2.0-4.0	(50-100)
1-2 cts.	Tile-Clad High Solids	2.5-4.0	(63-100)
Steel, Epoxy Mastic Primer:			
1 ct.	Epoxy Mastic Aluminum II	4.0-6.0	(100-150)
1-2 cts.	Tile-Clad High Solids	2.5-4.0	(63-100)
Aluminum:			
1 ct.	DTM Wash Primer	0.7-1.3	(18-32)
1-2 cts.	Tile-Clad High Solids	2.5-4.0	(63-100)
Concrete Block:			
1 ct.	Heavy Duty Block Filler	10.0-18.0	(250-400)
1-2 cts.	Tile-Clad High Solids	2.5-4.0	(63-100)
Galvanized Metal:			
1-2 cts.	Tile-Clad High Solids	2.5-4.0	(63-100)
Poured Concrete/Tilt-Up Concrete Smooth (including floors):			
1-2 cts.	Tile-Clad High Solids	2.5-4.0	(63-100)
Wood, including floors:			
1-2 cts.	Tile-Clad High Solids	2.5-4.0	(63-100)

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

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
* Aluminum:	SSPC-SP1
Galvanizing:	SSPC-SP1
Concrete & Masonry:	SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3
Wood, interior:	Clean, smooth, dust free

* Primer required

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

Tint Part A with Maxitoner colorants or Blend-A-Color Toner at 200% strength into Part A. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

APPLICATION CONDITIONS

Temperature:	55°F (13°C) minimum, 110°F (43°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:	
Parts A & B:	1 gallon (3.78L) and 5 gallon (18.9L) containers
Weight:	10.78 ± 0.2 lb/gal ; 1.3 Kg/L mixed, may vary by color

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.

DISCLAIMER

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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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Revised January 16, 2015

APPLICATION BULLETIN

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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. Primer Required.

Aluminum
Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1. Primer Required.

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. 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.

Concrete and Masonry
For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). 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 Steel-Seam FT910.

Wood
Surface must be clean, dry and sound. Remove any oils and dirt from the surface using a degreasing solvent or strong detergent. Sand to remove any loose or deteriorated surface wood and to obtain a proper surface profile. Prime with recommended primer and paint as soon as possible. No painting should be done immediately after a rain or during foggy weather. Knots and pitch streaks must be scraped or sanded and spot primed before full coat of primer is applied. All nail holes or small openings must be properly caulked.

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:	55°F (13°C) minimum, 110°F (43°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/Clean Up .....Reducer #54, R7K54, R6K25

Airless Spray
Pressure.....2400 psi
Hose.....3/8" ID
Tip .....019"
Filter.....60 mesh
Reduction.....R7K54 as needed up to 10% by volume

Conventional Spray
Gun .....Binks 95
Fluid Nozzle 66
Air Nozzle.....69 PB
Atomization Pressure.....60 psi
Fluid Pressure.....20 psi
Reduction.....R7K54 as needed up to 10% by volume

Brush
Brush.....Nylon/Polyester or Natural Bristle
Reduction.....R6K25 as needed up to 10% by volume

Roller
Cover .....1/4"-3/8" " woven with solvent resistant core
Reduction.....R6K25 as needed up to 10% by volume

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

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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix contents of each component thoroughly with low speed power agitation. Make certain no pigment remains on the bottom of the cans. Then combine one part 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. Re-stir before using.

If reducer solvent is used, add only after both components have been thoroughly mixed, after sweat-in.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**4.0** (100)	**7.0** (175)
Dry mils (microns)	**2.5** (63)	**4.0** (100)
~Coverage sq ft/gal (m^2/L)	**225** (5.5)	**359** (8.8)
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**896** (21.9)	

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

Drying Schedule @ 4.0 mils wet (100 microns):

	@ 55°F/13°C	@ 77°F/25°C *50% RH*	@ 110°F/43°C
To touch:	3 hours	1 hour	20 minutes
Tack free:	6 hours	2 hours	30 minutes
To recoat:			
minimum:	6 hours	2 hours	30 minutes
maximum:	30 days	30 days	30 days
To stack:	18 hours	16 hours	3 hours
To cure:	21 days	14 days	7 days

If maximum recoat time is exceeded, abrade surface before recoating.

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

Pot life:	4 hours	4 hours	2 hours
Sweat-in-time:	1 hour	30 minutes	10 minutes

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 Reducer #54, R7K54. Clean tools immediately after use with Reducer #54, R7K54. Follow manufacturer's safety recommendations when using any solvent.

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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.

Excessive reduction of material can affect film build, appearance, and adhesion.

Do not apply the material beyond recommended pot life.

Do not mix previously catalyzed material with new.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer #54, R7K54.

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

Quik-Kick Epoxy Accelerator is acceptable for use. See data page 4.99 for details.

Insufficient ventilation, incomplete mixing, miscatalyzation, and external heaters may cause premature yellowing.

Excessive film build, poor ventilation, and cool temperatures may cause solvent entrapment and premature coating failure.

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

SAFETY PRECAUTIONS

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