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FOR: Southern Brick & Tile Company

cc: James Holt

Paul Tessier Steve Dean

SUBJECT: Southern Brick & Tile Company

Byhalia, MS

DATE: November 3, 2003

PROJECT: 0309-10 PTP

SAMPLES SUBMITTED: (10) types of clay brick (5 of each)

Sample	Color/Coating	Size
"Greenwood Modular"	Red with black/green surface	
"Burgundy Blend Modular"	Red with maroon surface	
"Rosewood Modular"	Red	
"Millstone Modular"	Pink with tan surface	
"Brandywine Modular"	Maroon	7 ¾" x 3 ½" x 2 ¼"
"Byhalia Peach Orchard Modular"	Orange/peach with light tan sandy surface	1 74 X 3 72 X Z 74
"Early American Modular"	Red with black and tan sandy surface	
"Southern Antique"	Red with black and tan surface	
"641"	Orange/peach	
"642"	Red	

Submitted by: Southern Brick & Tile Company





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PURPOSE OF TESTING:

Ten different types of clay brick were submitted to PROSOCO, Inc.'s Testing Laboratory with a request to determine if application of the products evaluated will produce any surface alteration during new construction cleaning operations. Additionally, the effectiveness of water repellent treatments and graffiti control products suitable for clay brick masonry will also be evaluated.

A. New Construction Cleaning – Sure Klean[®] Vana Trol[®] was evaluated for removal of laboratory applied mortar.

To simulate new construction soiling, all bricks were placed on a bench with finished surface facing upward. Hollow cylinders measuring 50 mm in dameter and 75 mm tall were positioned on top of each brick and filled with a wet mixture of Ash Grove[®] Type N cementitious mortar. The wet mortar-filled cylinder was allowed to remain in contact with the brick for 10 minutes before removal.

Soiled bricks were allowed to dry before test cleaning.

Heavy deposits of mortar were removed with dry scraping after 24 hours. Prepared cleaning solutions were then evaluated for their effectiveness in removing residual Ash Grove[®] Type N mortar after 7, 14, and 21 days of curing.

B. Limiting Surface Alterations – Sure Klean[®] Vana Trol[®] was tested at various dilutions to determine if a cleaning program implemented to remove excess mortar and related new construction soiling would otherwise alter the appearance of cleaned surfaces. Surface Alteration was evaluated visually based upon perceived discoloration or erosion/etching of the masonry unit.

<u>Surface Finish Removal</u> is the visual examination of the brick comparing the surface finish of the untreated control surface to the surface finish cleaned with selected product(s) at given dilutions.

<u>Substrate Deterioration</u> is the visual examination of the brick comparing the surface of the untreated control to surfaces cleaned with selected product(s) at given dilutions looking for any potential erosion/digestion of the brick.

<u>Color Change</u> is the visual examination comparing the color of the untreated control surface to color of surfaces cleaned with selected products at given dilutions.

<u>Staining</u> is the visual examination for changes that are the result of a chemical reaction that leaves a staining precipitate.

- **C. Water Repellent Evaluation -** Sure Klean[®] Weather Seal Siloxane PD and Sure Klean[®] Weather Seal Siloxane WB Concentrate were evaluated on the submitted samples for their ability to provide water repellency.
- **D.** Graffiti Control Evaluation Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control was evaluated for its ability to control graffiti on the submitted samples. Defacer Eraser[®] Graffiti Wipe and Sure Klean[®] Fast Acting Stripper were evaluated for their ability to remove graffiti from the submitted samples.





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PRODUCTS EVALUATED FOR CLEANING AND LIMITING SURFACE ALTERATIONS

SAMPLE	TREATMENT	DILUTION
All submitted clay brick	Sure Klean [®] Vana Trol [®]	1:6, 1:8

WATER REPELLENT PRODUCTS EVALUATED

SAMPLE	TREATMENT	DILUTION
	Sure Klean [®] Weather Seal Siloxane PD	Concentrate
All submitted clay brick	Sure Klean [®] Weather Seal Siloxane WB Concentrate	1:9, 1:14

GRAFFITI CONTROL PRODUCTS EVALUATED

SAMPLE	TREATMENT
All submitted clay brick	Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control

GRAFFITI REMOVAL PRODUCTS EVALUATED

SAMPLE	TREATMENT
All submitted clay brick	Defacer Eraser [®] Graffiti Wipe
All Submitted Clay Brick	Sure Klean [®] Fast Acting Stripper

Dilution ratios refer to mixtures of concentrated product : fresh water.





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SECTION A - NEW CONSTRUCTION CLEANING

DESCRIPTION OF PRODUCTS EVALUATED – New Construction Cleaning

These cleaning trials were conducted to determine the optimal cleaning/cure time combination to most efficiently remove Ash Grove[®] Type N mortar from the submitted fired clay bricks.

Ash Grove[®] Type N cementitious mortar was prepared in compliance with the manufacturers instructions, applied to the brick surface and allowed to cure for 7, 14 and 21 days. Mortar removal was accomplished using chemical assistance and a high-pressure water rinse with pressure rinsing equipment. The removal of Ash Grove[®] Type N cementitious masonry cement mortar was visually evaluated after 7, 14 and 21 days of curing.

Sure Klean[®] Vana Trol[®] - A concentrated acidic cleaner for new masonry surfaces that are subject to vanadium, manganese and other metallic stains. Use on: gray, brown, white, and most light-colored brick; natural stone; cast stone. Dissolves mortar smears and construction dirt quickly, leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 4-10 parts water. Apply by brush or low-pressure spray.

TEST METHOD – New Construction Cleaning

Dilution ratios refer to mixtures of concentrated cleaner : fresh water. Chemical cleaners were evaluated using the following procedure:

- 1. Prewet the surface with water.
- 2. Apply the cleaner.
- 3. Allow the appropriate dwell time, as specified.

 Vana Trol[®]3-5 minutes
- 4. Pressure rinse thoroughly. *

Pressure rinsing was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.





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Test Results - New Construction Cleaning

% Removal

"Greenwood Modular"

Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	97%	97%	97%
Sure Rieari Varia 1101	1:8	95%	95%	95%

"Burgundy Blend Modular"

Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	98%	98%	98%
Sufe Realt Valla 1101	1:8	95%	95%	95%

"Rosewood Modular"

Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	90%	98%	95%
Sure Rieam Vana 110	1:8	90%	95%	98%

"Millstone Modular"

Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	95%
	1:8	98%	100%	95%

"Brandywine Modular"

Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	80%	80%	80%
Suie Riedii Valla 1101	1:8	75%	75%	75%

"Byhalia Peach Orchard Modular"

Product	Dilution	7 day	14 day	21 day
	1:6	100%	100%	95%
Sure Klean [®] Vana Trol [®]	1:8	95%	95%	95%

"Early American Modular"

Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	85%	80%	95%
Sure Rieari Varia 1101	1:8	85%	90%	95%

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Test Results - New Construction Cleaning (continued)

% Removal

"Southern Antique"

Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	95%	95%	95%
Sure Kleari Varia 1101	1:8	95%	95%	95%

"641"

Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	95%	95%	95%
Sure Kleari Varia 1101	1:8	90%	95%	95%

"642"

Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	98%	95%	98%
Sure Riearr Varia 1101	1:8	95%	95%	98%

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CONCLUSIONS - New Construction Cleaning

Based on the test results, Sure Klean[®] Vana Trol in most dilutions tested performed extremely well in removing excess mortar smears on the submitted clay bricks. Sure Klean[®] Vana Trol[®] performed well in removing the mortar soils even after allowing the mortar to remain on the surface of the brick for 21 days under ideal curing conditions.

It is recommended that the selected cleaners always be used in the lowest possible concentration. They should be rinsed with the lowest pressure of water as practical, at least 400 psi, to minimize removal of the decorative finish. Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction.

RECOMMENDATIONS – New Construction Cleaning

Recommendations for cleaning for each type of clay brick submitted by Southern Brick & Tile Company, Byhalia, MS are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar while limiting surface alterations.

Brick Type	New Construction Cleaning (Type N, 21 Days)
"Greenwood" "Burgundy Blend" "Brandywine"	Sure Klean [®] Vana Trol [®] 1:6
"Rosewood"	Sure Klean [®] Vana Trol [®] 1:8
"Millstone" "Byhalia Peach Orchard" "Early American" "Southern Antique" "641" "642"	Sure Klean [®] Vana Trol [®] 1:6; 1:8

Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction. Rinsing with high-pressure spray (400-800 psi) is recommended.

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. On-site testing should always be conducted to determine the most appropriate cleaning product and procedures for a particular project.

See product literature for additional application and product information.





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PHOTOGRAPHS - Cleaning

"642" after 21 day cleaning







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SECTION B – LIMITING SURFACE ALTERATIONS

DESCRIPTION OF PRODUCTS EVALUATED – Limiting Surface Alterations

Sure Klean® Vana Trol® - A concentrated acidic cleaner for new masonry surfaces that are subject to vanadium, manganese and other metallic stains. Designed for use on gray, brown, white and most light-colored brick, natural stone and cast stone. Dissolves mortar smears and construction dirt quickly, leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 4-10 parts water. Apply by brush or low-pressure spray.

TEST METHOD – Limiting Surface Alterations:

Dilution ratios refer to mixtures of concentrated cleaner: fresh water. Chemical cleaners were evaluated using the following procedure

- 1. Prewet the surface with water.
- 2. Apply the cleaner.
- 4. Pressure rinse thoroughly. *
- * Pressure rinsing was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.





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TEST RESULTS – Limiting Surface Alterations

Substrate: Clay brick	Pigment Col	Pigment Color: "Greenwood Modular"					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining		
Sure Klean [®] Vana Trol [®]	1:6	0	0	0	0		
Sure Klean [®] Vana Trol [®]	1:8	0	0	0	0		
Substrate: Clay brick	Pigment Col	or: "Burgundy Blend I	Modular"				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining		
Sure Klean [®] Vana Trol [®]	1:6	0	0	0	0		
Sure Klean [®] Vana Trol [®]	1:8	0	0	0	0		
Substrate: Clay brick	Pigment Col	Pigment Color: "Rosewood Modular"					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining		
Sure Klean [®] Vana Trol [®]	1:6	0	0	0	0		
Sure Klean [®] Vana Trol [®]	1:8	0	0	0	0		
Substrate: Clay brick	Pigment Col	or: "Millstone Modula	r"				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining		
Sure Klean [®] Vana Trol [®]	1:6	0	0	0	0		
Sure Klean [®] Vana Trol [®]	1:8	0	0	0	0		
Substrate: Clay brick	Pigment Col	Pigment Color: "Brandywine Modular"					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining		
Sure Klean [®] Vana Trol [®]	1:6	0	0	0	0		
Sure Klean [®] Vana Trol [®]	1:8	0	0	0	0		

0 – No change

3 - change - heavy

4 - change - excessive

1 – change – slight 2 – change – moderate





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TEST RESULTS – Limiting Surface Alterations

Substrate: Clay brick	Pigment Co	Pigment Color: "Byhalia Peach Orchard Modular"					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining		
Sure Klean [®] Vana Trol [®]	1:6	0	0	0	0		
Sure Klean [®] Vana Trol [®]	1:8	0	0	0	0		
Substrate: Clay brick	Pigment Co	lor: "Early American N	lodular"				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining		
Sure Klean [®] Vana Trol [®]	1:6	0	0	0	0		
Sure Klean [®] Vana Trol [®]	1:8	0	0	0	0		
Substrate: Clay brick	Pigment Co	Pigment Color: "Southern Antique"					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining		
Sure Klean [®] Vana Trol [®]	1:6	0	0	0	0		
Sure Klean [®] Vana Trol [®]	1:8	0	0	0	0		
Substrate: Clay brick	Pigment Co	lor:"641"					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining		
Sure Klean [®] Vana Trol [®]	1:6	0	0	0	0		
Sure Klean [®] Vana Trol [®]	1:8	0	0	0	0		
Substrate: Clay brick	Pigment Co	lor:"642"					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining		
Sure Klean [®] Vana Trol [®]	1:6	0	0	0	0		
Sure Klean [®] Vana Trol [®]	1:8	0	0	0	0		

0 – No change 1 – change – slight 2 – change – moderate

3 – change – heavy 4 – change - excessive





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CONCLUSIONS – Limiting Surface Alterations

Test results indicate that none of the products tested caused any surface alterations on any of the submitted clay bricks. It is recommended that the selected cleaners always be used in the lowest possible concentration. They should be rinsed with the lowest pressure of water as practical to minimize removal of the decorative finish. Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction.

RECOMMENDED PRODUCTS AND DILUTIONS – Limiting Surface Alterations

Product recommendations for limiting surface alterations for each type of clay brick submitted by Southern Brick & Tile, Byhalia, MS are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar while limiting surface alterations.

Brick Type	New Construction Cleaning (Type N, 21 Days)
All Submitted Clay Brick	Sure Klean [®] Vana Trol [®] 1:6, 1:8

Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction. Rinsing with high-pressure spray (400-800 psi) is recommended.

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. On-site testing should always be conducted to determine the most appropriate cleaning product and procedures for a particular project.

See product literature for additional application and product information.





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SECTION C - PROTECTIVE WATER REPELLENTS:

The testing described below evaluates the suitability of water repellent treatments.

The surface treatments evaluated were selected for their suitability for application based on the following selection criteria:

- 1. Weatherproofing properties
- 2. Color change
- 3. Ease of application

DESCRIPTIONS OF PRODUCTS EVALUATED - Protective Water Repellents:

Sure Klean[®] Weather Seal Siloxane PD – A ready-to-use, water-based silane/siloxane water repellent for concrete, GFRC, and most masonry and stucco surfaces. Siloxane PD penetrates more deeply than conventional water repellents. It helps masonry resist cracking, spalling, staining, and other damage related to water intrusion. Low odor and alkaline stable, Siloxane PD is ideal for field and in-plant application.

Sure Klean® Weather Seal Siloxane WB Concentrate – A concentrated water repellent designed for dilution with fresh water at the jobsite. A solvent-free blend of silanes and oligomeric alkoxysiloxanes, it mixes easily with water to produce a penetrating water repellent ideal for application to dense or porous masonry surfaces.

SAMPLE PREPARATION - Protective Water Repellents:

The submitted brick were cut, oven dried and allowed to reabsorb atmospheric humidity for at least 24 hours prior to treatment. The treatment method adhered to the 2003 PROSOCO, Inc. Product Guide. All treatments were allowed to cure for at least 3 days prior to testing.





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TEST METHODS - Protective Water Repellents:

Water Absorption Tube Test: RILEM II.4, 5.0 milliliters, 20 minutes

The water absorption tube test simulating wind driven and wind blown rain conditions was also performed. Tests were run with 5.0-milliliter head pressures. Filled to 5 milliliters, a water absorption tube produces a 98 mph dynamic wind pressure. See RILEM II.4 Tech Note for additional information.

The ranking system used to evaluate the effectiveness of the products applied to each submitted sample is as follows:

AA = "Above Average" correlates to less than or equal to 20% of the maximum untreated absorption.

 $\underline{\mathbf{A}}$ = "Average" correlates to less than or equal to 50% of the maximum untreated absorption.

BA = "Below Average" correlates to greater than 50% of the maximum untreated absorption.

EXAMPLE: If RILEM tubes applied to an untreated sample result in loss of 5 ml of water or more, then:

A rating of $\underline{\mathbf{AA}}$ Above Average water repellent performance would require loss of no more than 5 ml X 20% = 1 ml.

A rating of <u>A</u>Average water repellent performance would require loss of no more than 5 ml X 50% = 2.5ml.

A rating of <u>BA</u> Below Average water repellent performance would be reported for treatments which result in a loss of more than 50% X 5ml = 2.5ml+

Water Absorption Tube Test: RILEM II.4, 5.0 milliliters, 20 minutes

 \underline{AA} = Above Average \underline{A} = Average \underline{BA} = Below Average

"Greenwood Modular"	Results in mL loss	Ranking
Untreated Control	0.8	
Weather Seal Siloxane PD	0.2	<u>A</u>
Weather Seal Siloxane WB (1:9)	0.0	<u>AA</u>
"Burgundy Blend Modular"	Results in mL loss	Ranking
Untreated Control	1.1	
Weather Seal Siloxane PD	0.2	<u>AA</u>
Weather Seal Siloxane WB (1:9)	0.2	<u>AA</u>
"Rosewood Modular"	Results in mL loss	Ranking
"Rosewood Modular" Untreated Control	Results in mL loss 2.5	Ranking
		Ranking <u>A</u>
Untreated Control	2.5	-
Untreated Control Weather Seal Siloxane PD	2.5 0.7	 <u>A</u>
Untreated Control Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9)	2.5 0.7 1.1	 <u>A</u> <u>A</u>
Untreated Control Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9) "Millstone"	2.5 0.7 1.1 Results in mL loss	 <u>A</u> <u>A</u>

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Water Absorption Tube Test: RILEM II.4, 5.0 milliliters, 20 minutes

 \underline{AA} = Above Average \underline{A} = Average \underline{BA} = Below Average

"Brandywine Modular"	Results in mL loss	Ranking
Untreated Control	1.7	<u>-</u>
Weather Seal Siloxane PD	0.3	AA
Weather Seal Siloxane WB (1:9)	0.2	AA
"Byhalia Peach Orchard Modular"	Results in mL loss	Ranking
Untreated Control	1.9	
Weather Seal Siloxane PD	0.1	AA
Weather Seal Siloxane WB (1:9)	0.2	<u>AA</u>
"Early American Modular"	Results in mL loss	Ranking
Untreated Control	16	
Weather Seal Siloxane PD	0.2	<u>AA</u>
Weather Seal Siloxane WB (1:9)	0.2	<u>AA</u>
1		
"Southern Antique"	Results in mL loss	Ranking
"Southern Antique" Untreated Control	Results in mL loss 0.5	Ranking
·		Ranking <u>AA</u>
Untreated Control		<u> </u>
Untreated Control Weather Seal Siloxane PD	0.5	 <u>AA</u>
Untreated Control Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9)	0.5 0.1	 <u>AA</u> <u>AA</u>
Untreated Control Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9) "641"	0.5 0.1 Results in mL loss	 <u>AA</u> <u>AA</u>
Untreated Control Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9) "641" Untreated Control	0.5 0.1 Results in mL loss 3.6	AA AA Ranking
Untreated Control Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9) "641" Untreated Control Weather Seal Siloxane PD	0.5 0.1 Results in mL loss 3.6 0.1	AA AA Ranking AA
Untreated Control Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9) "641" Untreated Control Weather Seal Siloxane PD Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9)	0.5 0.1 Results in mL loss 3.6 0.1 0.1	AA AA Ranking AA AA AA
Untreated Control Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9) "641" Untreated Control Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9) "642"	0.5 0.1 Results in mL loss 3.6 0.1 0.1 Results in mL loss	AA AA Ranking AA AA AA



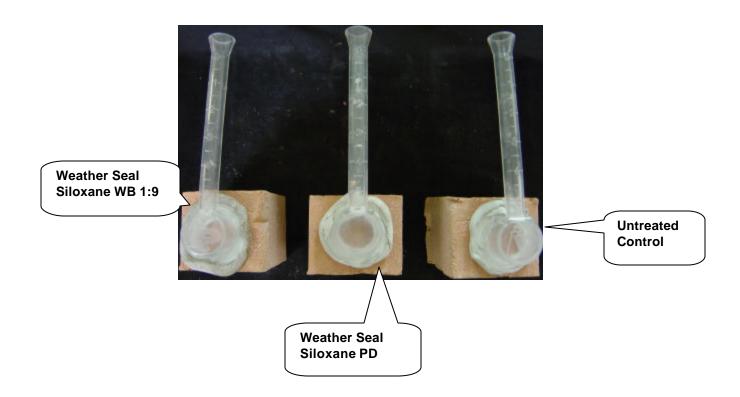


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PHOTOGRAPH – Water Repellents

"Byhalia Peach Orchard"- RILEM Testing







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CONCLUSIONS - Protective Water Repellents:

RILEM test results indicate that Sure Klean[®] Weather Seal Siloxane WB Concentrate diluted (1:9) and Sure Klean[®] Siloxane PD exhibited above average or average water repellency on all submitted clay bricks.

RECOMMENDATIONS - Protective Water Repellents:

Recommendations for water repellent treatments for each type of clay brick submitted by Southern Brick & Supply, Byhalia, MS are provided in the chart below. Recommendations are based on the treatments that proved most effective by RILEM results and can provide water repellency on all types indicated.

Brick Type	Water Repellent
All Submitted Clay Brick	Sure Klean [®] Weather Seal Siloxane PD OR Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:9)

It must be pointed out that in any installation; the brick are a single component of the masonry facade. The ability of a water repellent treatment to prevent the ingress of water is affected by a variety of other factors. Therefore, on-site testing should be carried out for all installations with the recommended systems to ensure job site workmanship yields equivalent results.

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate water repellent product and procedures for a particular project. See product literature for additional application and product information.





PROSOCO, Inc.

SECTION D - GRAFFITI CONTROL

DESCRIPTION OF PRODUCTS EVALUATED

These trials were conducted to determine the optimal graffiti control treatment.

Graffiti Control Treatments

Sure Klean[®] **Weather Seal Blok-Guard**[®] **& Graffiti Control** – A clear, solvent-based silicone elastomer formulated to weatherproof custom masonry units, cast stone, and concrete block without altering the natural appearance. Blok-Guard[®] & Graffiti Control penetrates and fills pores to prevent water penetration through exterior walls exposed to normal weathering as well as long-lasting protection against many types of graffiti.

Products Evaluated for Graffiti Removal

Defacer Eraser[®] **Graffiti Wipe** – An easy-to-use graffiti remover that does not contain methanol, methylene chloride or other "halogenated" solvents prohibited on many projects. Graffiti Wipe removed a variety of graffiti stains from most smooth masonry, wood and metal surfaces.

Sure Klean Fast Acting Stripper – A thixotropic stripping compound designed for removing coatings and epoxies from masonry, wood and metal surfaces. Also removes oil, grease, and waxes from concrete decks, tile and terrazzo floors.

Graffiti Agents

Interior/Exterior Spray Paint (Red) Permanent Marker (Green) Permanent Marker (Red) Permanent Marker (Black)

SAMPLE PREPARATION – Graffiti Control

This evaluation compares the effectiveness in preventing staining of enamel spray paint and permanent markers.

Sections of the brick samples were treated with Sure Klean® Weather Seal Blok-Guard® & Graffiti Control in accordance with PROSOCO, Inc.'s Product Guide application recommendations and then allowed to cure for at least 24 hours. At the end of the cure period, a visual adverse effects evaluation was made and then the graffiti agents were applied to the substrates.

Spray paint and markers were applied as graffiti agents to all treated surfaces at least 24 hours following application of Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control. Removal of the graffiti agents was attempted 24 hours after application of the graffiti agents, using Defacer Eraser[®] Graffiti Wipe and Sure Klean[®] Fast Acting Stripper.





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TEST METHOD - Graffiti Control

Chemical cleaners were evaluated using the following procedure:

- 1. Apply the product to a dry surface, soiled with graffiti.
- 2. Allow appropriate dwell time:

- 3. Pressure rinse thoroughly until water runs clear. *
- 4. Allow the surface to dry thoroughly and visually examine to determine effectiveness.
- * Pressure rinsing was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.

TEST RESULTS - Graffiti Control

	"Gre	enwood"			
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Graffiti Wipe	100%	95%	95%	100%	98%
Fast Acting Stripper	95%	95%	98%	100%	97%
Blok-Guard [®] & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Graffiti Wipe	100%	100%	100%	100%	100%
Fast Acting Stripper	100%	100%	100%	100%	100%
	"Burgı	ındy Blend"			
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Graffiti Wipe	100%	95%	100%	100%	99%
Fast Acting Stripper	100%	95%	100%	100%	99%
Blok-Guard [®] & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Graffiti Wipe	100%	100%	100%	100%	100%
Fast Acting Stripper	100%	100%	100%	100%	100%





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TEST RESULTS – Graffiti Control (continued)

	1	"Rosewood"			
Untroated Control	Red	Black	Green	Red	% Avg.
Untreated Control	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	95%	100%	100%	100%	99%
Fast Acting Stripper	95%	100%	100%	100%	99%
Blok-Guard [®] & Graffiti Control	Red	Black	Green	Red	% Avg.
	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	100%	100%	100%	100%	100%
Fast Acting Stripper	100%	100%	100%	100%	100%
		"Millstone"			
Untreated Control	Red	Black	Green	Red	% Avg.
	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	80%	95%	95%	95%	91%
Fast Acting Stripper	60%	95%	95%	95%	86%
Blok-Guard [®] & Graffiti Control	Red	Black	Green	Red	% Avg.
Blok-Guard & Grammi Control	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	85%	95%	100%	100%	95%
Fast Acting Stripper	80%	95%	100%	100%	94%
	66	Brandywine"			
Untreated Control	Red	Black	Green	Red	% Avg.
Ontreated Control	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	100%	100%	100%	100%	100%
Fast Acting Stripper	85%	100%	100%	100%	96%
Blok-Guard [®] & Graffiti Control	Red	Black	Green	Red	% Avg.
	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	100%	100%	100%	100%	100%
Fast Acting Stripper	95%	100%	100%	100%	99%
		lia Peach Orcha		т	.
Untreated Control	Red	Black	Green	Red	% Avg.
	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	85%	90%	90%	80%	87%
Fast Acting Stripper	90%	90%	90%	90%	90%
	Dari	Die ele	0	D!	0/ 4
Blok-Guard [®] & Graffiti Control	Red	Black	Green	Red	% Avg.
	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	85%	95%	100%	100%	95%
Fast Acting Stripper	90%	95%	100%	100%	96%





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TEST RESULTS – Graffiti Control (continued)

	"E	arly American"			
Untreated Control	Red	Black	Green	Red	% Avg.
Officeated Cofficion	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	80%	95%	95%	100%	93%
Fast Acting Stripper	40%	95%	98%	95%	82%
Blok-Guard [®] & Graffiti Control	Red	Black	Green	Red	% Avg.
	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	90%	100%	100%	100%	98%
Fast Acting Stripper	90%	100%	100%	100%	98%
	"So	uthern Antique	,,		
	Red	Black	Green	Red	% Avg.
Untreated Control	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	100%	95%	95%	100%	98%
Fast Acting Stripper	95%	100%	95%	100%	98%
Blok-Guard [®] & Graffiti Control	Red	Black	Green	Red	% Avg.
	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	100%	100%	100%	100%	100%
Fast Acting Stripper	100%	100%	100%	100%	100%
		"641"			
	Red	Black	Green	Red	% Avg.
Untreated Control	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	100%	90%	90%	98%	95%
Fast Acting Stripper	95%	95%	95%	98%	96%
Blok-Guard [®] & Graffiti Control	Red	Black	Green	Red	% Avg.
	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	100%	100%	100%	100%	100%
Fast Acting Stripper	100%	100%	100%	100%	100%
		"642"			
Untreated Control	Red	Black	Green	Red	% Avg.
	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	100%	98%	95%	98%	98%
Fast Acting Stripper	100%	98%	98%	98%	99%
Blok-Guard [®] & Graffiti Control	Red	Black	Green	Red	% Avg.
	Paint	Marker	Marker	Marker	Removal
Graffiti Wipe	100%	100%	100%	100%	100%
Fast Acting Stripper	100%	100%	100%	100%	100%

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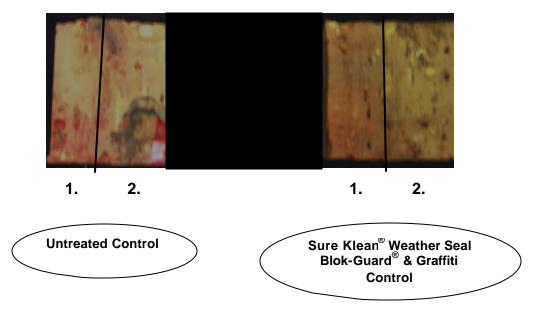
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PHOTOGRAPHS - Graffiti Control

"Greenwood" Before Graffiti Removal



"Greenwood" After Graffiti Removal



- Sure Klean[®] Fast Acting Stripper
 Defacer Eraser[®] Graffiti Wipe





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RECOMMENDATIONS - GRAFFITI CONTROL

Recommendations for graffiti control treatment for each type of clay brick submitted by Southern Brick & Tile Company, Byhalia, MS, are provided in the chart below. Recommendations are based on the treatment that proved most effective for providing graffiti repellency and the product that was most effective at removing the graffiti on all types submitted.

Brick Type	Graffiti Repellents	Graffiti Removers		
"Greenwood" "Burgundy Blend" "Rosewood" "Millstone" "Brandywine" "Byhalia Peach Orchard" "Early American" "Southern Antique" "641" "642"	Sure Klean [®] Weather Seal Blok-Guard & Graffiti Control	Defacer Eraser [®] Graffiti Wipe OR Sure Klean [®] Fast Acting Stripper		

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate graffiti control product and procedure for a particular project. See product literature for application and product information.

Nathan R. Colaner Technical Analyst

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NRC/



Laboratory Report

Pallet Tag Program Evaluation

Southern Brick & Tile Byhalia, MS

Project No. 0309-10 PTP

Prepared For:

Southern Brick & Tile Company Byhalia, MS

Prepared By:



PROSOCO, Inc. October 2003