



PROSOCO, Inc.

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Attachments

Technical Services TECH Note RILEM Tube Test Procedures Product Data literature for all products evaluated





PROSOCO, Inc.

Submitted Information

For: Mike Burdette cc: Paul Tessier

Subject: Boral Bricks, Inc.

Alpharetta, GA

Date: January 17, 2006

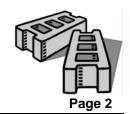
Project: 0510-06 PTP

Samples Submitted: 12 types of clay brick

Name	Finish	Color/Coating	Plant	Size
"Annapolis"	Sand, Slurry	Red	Bessemer Plant 6	7½" × 2¼" × 3¼"
"Antique Rose"	Sand, Slurry	Pink/Gray	Bessemer Plant 6	7½" × 2½" × 2¾"
"Ashbury"	Sand, Slurry	Red	Phenix City Plant	7½" × 2¼" × 3¼"
"Bandera Blend"	Slurry	Red	Marshall, TX	9½" × 2½" × 2½"
"Bastille"	Sand, Slurry	Gray	Smyrna, GA Plant	7½" × 2¼" × 3¼"
"Bayou"	Sand, Slurry	Burgundy	Augusta, GA Plant 6	7½" × 2¼" × 3¼"
"Brentwood"	Sand, Slurry	Red Range	Phenix City Plant	7½" × 2½" × 2¾"
"Fredericksburg"	Slurry	Buff	Marshall, TX	9½" × 2½" × 2½"
"Shadowstone"	Sand, Slurry	Gray/Brown	Bessemer Plant 6	7½" × 2¼" × 3¼"
"Silverstone"	Sand, Slurry	Gray/Brown	Phenix City Plant	7½" × 2¼" × 3¼"
"Virginian"	Sand, Slurry	Red/Orange	Phenix City Plant	7½" × 2¼" × 3¼"
"Wire-cut Medium Brown"	Wire-cut	Brown	Augusta, GA Plant 3	7½" × 2¼" × 3¼"

Submitted by: Mike Burdette





PROSOCO, Inc.

Purpose of Testing

Twelve 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 repellents and graffiti control products suitable for clay brick were evaluated.

New Construction Cleaning – Enviro Klean[®] Safety Klean and Sure Klean[®] Vana Trol[®] were tested at various dilutions to determine the optimal cleaning/cure time combination to most efficiently remove Type S and Type N mortar from the submitted clay brick while limiting surface alterations to the decorative finish. The surface alteration evaluation was visually determined based upon perceived discoloration or erosion/etching of the clay brick.

To simulate new construction soiling, all samples were placed on a bench with finished surface facing upward. Hollow cylinders measuring 50 mm in diameter and 75 mm tall were positioned on top of each brick and filled with a wet mixture of either Type S or Type N cementitious mortar. The wet mortar-filled cylinder was allowed to remain in contact with the brick for 10 minutes before removal. Soiled brick 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 any residual Type S mortar after 3, 7, and 14 days of curing and Type N mortar after 7, 14, and 21 days of curing. A visual examination was also made to determine if the tested cleaners caused any surface alterations to the submitted clay brick based on the following:

<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.

Water Repellent Evaluation – Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control, Sure Klean[®] Weather Seal Siloxane WB Concentrate, and Sure Klean[®] Weather Seal Siloxane PD were evaluated on the submitted samples for their ability to provide water repellency.

Graffiti Repellency Evaluation – Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control was evaluated for its ability to provide graffiti control. Sure Klean[®] Fast Acting Stripper and Defacer Eraser[®] Graffiti Wipe were evaluated for their ability to remove graffiti.





PROSOCO, Inc.

Products Evaluated

New Construction Cleaning Products Evaluated

Sample	Treatment	Dilution
All Submitted Clay Brick	Sure Klean [®] Vana Trol [®]	1:6, 1:8
All Submitted Clay Brick	Enviro Klean [®] Safety Klean	1:2, 1:3

Protective Water Repellent Products Evaluated

Sample	Treatment	Dilution
	Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	Concentrate
All Submitted Clay Brick	Sure Klean® Weather Seal Siloxane WB Concentrate	1:9
	Sure Klean [®] Weather Seal Siloxane PD	Concentrate

Graffiti Repellents Evaluated

Sample	Treatment	Dilution
All Submitted Clay Brick	Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	Concentrate

Graffiti Repellents Evaluated

Sample	Treatment	Dilution
All Submitted Clay Brick	Sure Klean [®] Fast Acting Stripper	Concentrate
All Submitted Glay Blick	Defacer Eraser [®] Graffiti Wipe	Concentrate





PROSOCO, Inc.

New Construction Cleaning

These cleaning trials were conducted to determine the optimal cleaning/cure time combination to most efficiently remove Type S or Type N mortar from the submitted fired clay brick while limiting surface alterations to the decorative finish.

Type S mortar and Type N mortar were prepared in compliance with the manufacturer's instructions, applied to the brick surface and allowed to cure for 3, 7 and 14 days for Type S mortar and 7, 14 and 21 days for Type N mortar. Mortar removal was accomplished using chemical assistance and a high-pressure water rinse with pressure rinsing equipment. The removal of Type S was visually evaluated after 3, 7 and 14 days of curing and Type N masonry mortar was visually evaluated after 7, 14 and 21 days of curing. A visual examination was also made to determine if the tested cleaners caused any surface alterations to the submitted clay brick.

<u>Description of Products Evaluated</u> - New Construction Cleaning

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.

Enviro Klean Safety Klean – An effective, safe, alternative to acidic compounds for cleaning brick, tile, and concrete surfaces. Safety Klean rids new masonry construction of excess mortar, dirt and other common job site soiling. It's ideal for projects where traditional acidic cleaners are not allowed. Non-fuming Safety Klean contains no hydrochloric or other traditional inorganic acids and is safe for use on and around most metal surfaces. Always test. Additionally, it is up to 70 percent more effective than citric and glycolic acids, and 50 percent more effective than phosphoric acid.

Test Method – New Construction Cleaning

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

- 1. Pre-wet the surface with water.
- 2. Apply the cleaner.
- 4. Pressure rinse thoroughly.*

*Pressure Rinsing Equipment – Masonry washing equipment generating approximately 700-800 psi with a water flow rate of 8 gallons per minute delivered through a 45 degree fan spray tip was used for rinsing.





PROSOCO, Inc.

<u>Test Results</u> – New Construction Cleaning; Type S Mortar

	"Annapol	is"		
Product	Dilution	3 day	7 day	14 day
Sure Klean [®] Vana Trol [®]	1:6	99%	99%	95%
Sure Klean [®] Vana Trol [®]	1:8	98%	98%	90%
Enviro Klean [®] Safety Klean	1:2	99%	98%	95%
Enviro Klean® Safety Klean	1:3	95%	95%	90%
	"Antique R	ose"		
Product	Dilution	3 day	7 day	14 day
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	100%
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%
Enviro Klean® Safety Klean	1:3	100%	100%	100%
	"Ashbur	y"		
Product	Dilution	3 day	7 day	14 day
Sure Klean [®] Vana Trol [®]	1:6	100%	99%	99%
Sure Klean [®] Vana Trol [®]	1:8	95%	95%	95%
Enviro Klean® Safety Klean	1:2	98%	98%	95%
Enviro Klean [®] Safety Klean	1:3	95%	95%	90%
	"Bandera B	lend"		
Product	Dilution	3 day	7 day	14 day
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%	100%
Enviro Klean® Safety Klean	1:3	100%	100%	100%
	"Bastille	"		
Product	Dilution	3 day	7 day	14 day
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%
Sure Klean [®] Vana Trol [®]	1:8	100%	98%	98%
Enviro Klean® Safety Klean	1:2	100%	100%	98%
Enviro Klean® Safety Klean	1:3	100%	98%	95%
	"Bayou	,,		
Product	Dilution	3 day	7 day	14 day
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	100%
Enviro Klean [®] Safety Klean	1:2	100%	98%	98%
Enviro Klean [®] Safety Klean	1:3	100%	95%	95%
	"Brentwo	od"		
Product	Dilution	3 day	7 day	14 day
Sure Klean [®] Vana Trol [®]	1:6	100%	98%	98%
Sure Klean [®] Vana Trol [®]	1:8	100%	98%	95%
Enviro Klean® Safety Klean	1:2	100%	98%	90%
Enviro Klean® Safety Klean	1:3	95%	95%	90%





PROSOCO, Inc.

Test Results – New Construction Cleaning; Type S Mortar

"Fredericksburg"					
Product	Dilution	3 day	7 day	14 day	
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%	
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	100%	
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%	
Enviro Klean [®] Safety Klean	1:3	100%	100%	100%	
	"Shadowsto	one"			
Product	Dilution	3 day	7 day	14 day	
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%	
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	100%	
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%	
Enviro Klean® Safety Klean	1:3	100%	100%	100%	
"Silverstone"					
Product	Dilution	3 day	7 day	14 day	
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%	
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	100%	
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%	
Enviro Klean® Safety Klean	1:3	100%	100%	100%	
	"Virginia	n"			
Product	Dilution	3 day	7 day	14 day	
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	98%	
Sure Klean [®] Vana Trol [®]	1:8	100%	98%	98%	
Enviro Klean [®] Safety Klean	1:2	98%	98%	95%	
Enviro Klean [®] Safety Klean	1:3	98%	98%	95%	
"Wir	e-cut Mediui	m Brown"			
Product	Dilution	3 day	7 day	14 day	
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%	
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	98%	
Enviro Klean [®] Safety Klean	1:2	100%	100%	95%	
Enviro Klean [®] Safety Klean	1:3	100%	100%	95%	





PROSOCO, Inc.

Test Results – New Construction Cleaning; Type N Mortar

	"Annapol	is"		
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	100%
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%
Enviro Klean [®] Safety Klean	1:3	95%	90%	90%
	"Antique R	ose"		
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	100%
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%
Enviro Klean [®] Safety Klean	1:3	100%	100%	100%
•	"Ashbur	y"		
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	95%
Enviro Klean [®] Safety Klean	1:2	100%	100%	98%
Enviro Klean® Safety Klean	1:3	100%	98%	90%
	"Bandera B	lend"		
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%	100%
Enviro Klean [®] Safety Klean	1:3	100%	100%	100%
	"Bastille	. "		
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	95%
Sure Klean [®] Vana Trol [®]	1:8	100%	90%	90%
Enviro Klean® Safety Klean	1:2	100%	100%	95%
Enviro Klean [®] Safety Klean	1:3	95%	90%	90%
	"Bayou	"		
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	98%
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	90%
Enviro Klean [®] Safety Klean	1:2	100%	100%	90%
Enviro Klean [®] Safety Klean	1:3	99%	95%	90%
	"Brentwo	od"		
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Vana Trol [®]	1:6	100%	98%	98%
Sure Klean [®] Vana Trol [®]	1:8	100%	98%	95%
Enviro Klean® Safety Klean	1:2	100%	98%	95%
Enviro Klean® Safety Klean	1:3	98%	95%	95%





PROSOCO, Inc.

Test Results – New Construction Cleaning; Type N Mortar

"Fredericksburg"					
Product	Dilution	7 day	14 day	21 day	
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%	
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	100%	
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%	
Enviro Klean [®] Safety Klean	1:3	100%	100%	100%	
	"Shadowsto	one"			
Product	Dilution	7 day	14 day	21 day	
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%	
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	100%	
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%	
Enviro Klean [®] Safety Klean	1:3	100%	100%	100%	
"Silverstone"					
Product	Dilution	7 day	14 day	21 day	
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%	
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	100%	
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%	
Enviro Klean [®] Safety Klean	1:3	100%	100%	100%	
	"Virginia	n"			
Product	Dilution	7 day	14 day	21 day	
Sure Klean [®] Vana Trol [®]	1:6	100%	98%	98%	
Sure Klean [®] Vana Trol [®]	1:8	100%	95%	95%	
Enviro Klean [®] Safety Klean	1:2	98%	95%	90%	
Enviro Klean [®] Safety Klean	1:3	98%	95%	90%	
"Wir	e-cut Mediui	m Brown"			
Product	Dilution	7 day	14 day	21 day	
Sure Klean [®] Vana Trol [®]	1:6	100%	100%	100%	
Sure Klean [®] Vana Trol [®]	1:8	100%	100%	100%	
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%	
Enviro Klean [®] Safety Klean	1:3	100%	100%	100%	





PROSOCO, Inc.

Test Results – Limiting Surface Alterations

Product Dilution Surface Finish Removal Deterioration Change Staining Sure Klean® Vana Trol® 1:8 0 0 0 0 0 0 0 0 0	Substrate: Clay Brick	Pigment Co	olor: "Annapolis"			
Sure Klean® Vana Trol®	Product		Surface Finish			Staining
Enviro Klean® Safety Klean	Sure Klean [®] Vana Trol [®]	1:6	0	0	0	0
Enviro Klean® Safety Klean	Sure Klean [®] Vana Trol [®]	1:8	0	0	0	0
Product Dilution Surface Finish Removal Deterioration Change Staining		1:2	0	0	0	0
Product Dilution Surface Finish Removal Deterioration Change Staining	Enviro Klean [®] Safety Klean	1:3	0	0	0	0
Sure Klean Vana Trol 1:6	Substrate: Clay Brick	Pigment Co	nent Color: "Antique Rose"			
Sure Klean® Vana Trol®		Dilution				Staining
Enviro Klean® Safety Klean		1:6	0	0	0	0
Enviro Klean		1:8	0	0	0	0
Product Dilution Surface Finish Removal Substrate Deterioration Change Staining		1:2	0	0	0	0
Product Dilution Surface Finish Removal Substrate Deterioration Change Staining	Enviro Klean [®] Safety Klean	1:3	0	0	0	0
Staining Staining	Substrate: Clay Brick	Pigment Co	olor: "Ashbury"			
Sure Klean® Vana Trol®		Dilution				Staining
Enviro Klean® Safety Klean		1:6	0	0	0	0
Enviro Klean® Safety Klean		1:8	0	0	0	0
Substrate: Clay Brick Pigment Color: "Bandera Blend" 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 Enviro Klean® Safety Klean 1:2 0 0 0 0 Enviro Klean® Safety Klean 1:3 0 0 0 0 Substrate: Clay Brick Pigment Color: "Bastille" Veriface 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 Enviro Klean® Safety Klean 1:3 0 0 0 0 Substrate: Clay Brick Pigment Color: "Bayou" Color Change Staining Sure Klean® Vana Trol® 1:6 0 0 0 0 Sure Klean® Vana Trol® 1:6		1:2	0	0	0	0
Product Dilution Surface Finish Removal Removal Substrate Deterioration Change Deterioration Color Change Change Potention Staining Sure Klean® Vana Trol® 1:6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <td< td=""><td>Enviro Klean[®] Safety Klean</td><td>1:3</td><td>0</td><td>0</td><td>0</td><td>0</td></td<>	Enviro Klean [®] Safety Klean	1:3	0	0	0	0
Sure Klean® Vana Trol® 1:6 0 0 0 0 0 0 0 0 0	Substrate: Clay Brick Pigment Color: "Bandera Blend"					
Sure Klean® Vana Trol®		Dilution				Staining
Enviro Klean® Safety Klean 1:2	Sure Klean [®] Vana Trol [®]	1:6	0	0	0	0
Enviro Klean® Safety Klean	Sure Klean [®] Vana Trol [®]	1:8	0	0	0	0
Substrate: Clay Brick Pigment Color: "Bastille" 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 Enviro Klean® Safety Klean 1:2 0 0 0 0 Enviro Klean® Safety Klean 1:3 0 0 0 0 Substrate: Clay Brick Pigment Color: "Bayou" 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 Enviro Klean® Safety Klean 1:2 0 0 0 0		1:2	0	0	0	0
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 Enviro Klean® Safety Klean 1:2 0 0 0 0 Enviro Klean® Safety Klean 1:3 0 0 0 0 Substrate: Clay Brick Pigment Color: "Bayou" Color Change Staining 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 Enviro Klean® Safety Klean 1:2 0 0 0 0	Enviro Klean [®] Safety Klean	1:3	0	0	0	0
Sure Klean® Vana Trol® 1:6 0 0 0 0 0	Substrate: Clay Brick	Pigment Co	olor: "Bastille"			
Sure Klean® Vana Trol® 1:8 0 0 0 0 Enviro Klean® Safety Klean 1:2 0 0 0 0 Enviro Klean® Safety Klean 1:3 0 0 0 0 Substrate: Clay Brick Pigment Color: "Bayou" 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 Enviro Klean® Safety Klean 1:2 0 0 0 0		Dilution				Staining
Enviro Klean® Safety Klean 1:2 0 0 0 0 Enviro Klean® Safety Klean 1:3 0 0 0 0 Substrate: Clay Brick Pigment Color: "Bayou" 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 Enviro Klean® Safety Klean 1:2 0 0 0 0		1:6	0	0	0	0
Enviro Klean® Safety Klean 1:3 0 0 0 0 Substrate: Clay Brick Pigment Color: "Bayou" 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 Enviro Klean® Safety Klean 1:2 0 0 0 0		1:8	0	0	0	0
Substrate: Clay Brick Pigment Color: "Bayou" 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 Enviro Klean® Safety Klean 1:2 0 0 0 0	Enviro Klean [®] Safety Klean	1:2	0	0	0	0
ProductDilutionSurface Finish RemovalSubstrate DeteriorationColor ChangeStainingSure Klean® Vana Trol®1:60000Sure Klean® Vana Trol®1:80000Enviro Klean® Safety Klean1:20000	Enviro Klean [®] Safety Klean	1:3	0	0	0	0
Product Dilution Removal Deterioration Change Staining Sure Klean® Vana Trol® 1:6 0 0 0 0 Sure Klean® Vana Trol® 1:8 0 0 0 0 Enviro Klean® Safety Klean 1:2 0 0 0 0		Pigment Color: "Bayou"				
Sure Klean® Vana Trol® 1:8 0 0 0 0 Enviro Klean® Safety Klean 1:2 0 0 0 0	Substrate: Clay Brick	i igiliciti o				
Enviro Klean® Safety Klean 1:2 0 0 0	Product		Surface Finish			Staining
	Product Sure Klean® Vana Trol®	Dilution	Surface Finish Removal	Deterioration	Change	
Enviro Klean [®] Safety Klean 1:3 0 0 0	Product Sure Klean [®] Vana Trol [®] Sure Klean [®] Vana Trol [®]	Dilution 1:6	Surface Finish Removal	Deterioration 0	Change 0	0
	Product Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean	Dilution 1:6 1:8	Surface Finish Removal 0	Deterioration 0 0	Change 0 0	0 0

0 - No change

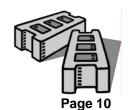
3 - change - heavy

1 - change - slight

4 - change - excessive

2 – change – moderate





PROSOCO, Inc.

Test Results – Limiting Surface Alterations

Substrate: Clay Brick	Pigment Color: "Brentwood"				
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
Enviro Klean [®] Safety Klean	1:2	0	0	0	0
Enviro Klean [®] Safety Klean	1:3	0	0	0	0
Substrate: Clay Brick	Pigment Color: "Fredericksburg"				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Sure Klean [®] Vana Trol [®]	1:6	2	0	0	0
Sure Klean [®] Vana Trol [®]	1:8	2	0	0	0
Enviro Klean [®] Safety Klean	1:2	3	0	0	0
Enviro Klean [®] Safety Klean	1:3	3	0	0	0
Substrate: Clay Brick	Pigment Co	olor: "Shadowsto	ne"		
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
Enviro Klean [®] Safety Klean	1:2	0	0	0	0
Enviro Klean [®] Safety Klean	1:3	0	0	0	0
Substrate: Clay Brick	Pigment Co	olor: "Silverstone"	,		
Product	D'' ''	Surface Finish	Substrate	Color	
	Dilution	Removal	Deterioration	Change	Staining
Sure Klean [®] Vana Trol [®]	Dilution 1:6		Deterioration 0		Staining 0
		Removal		Change	
Sure Klean [®] Vana Trol [®] Sure Klean [®] Vana Trol [®] Enviro Klean [®] Safety Klean	1:6	Removal 0	0	Change 0	0
Sure Klean [®] Vana Trol [®] Sure Klean [®] Vana Trol [®]	1:6 1:8	Removal 0 0	0	Change 0 0	0
Sure Klean [®] Vana Trol [®] Sure Klean [®] Vana Trol [®] Enviro Klean [®] Safety Klean	1:6 1:8 1:2 1:3	Removal 0 0 0	0 0 0	Change 0 0 0	0 0 0
Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean Enviro Klean® Safety Klean Substrate: Clay Brick Product	1:6 1:8 1:2 1:3	Removal	0 0 0	Change 0 0 0	0 0
Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean Enviro Klean® Safety Klean Substrate: Clay Brick Product Sure Klean® Vana Trol®	1:6 1:8 1:2 1:3 Pigment Co	Removal 0 0 0 0 0 slor: "Virginian" Surface Finish	0 0 0 0	Change 0 0 0 0 0 Color	0 0 0 0
Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean Enviro Klean® Safety Klean Substrate: Clay Brick Product Sure Klean® Vana Trol® Sure Klean® Vana Trol®	1:6 1:8 1:2 1:3 Pigment Co	Removal 0 0 0 0 0 string in the string in t	0 0 0 0 Substrate Deterioration	Change 0 0 0 0 Color Change	0 0 0 0
Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean Enviro Klean® Safety Klean Substrate: Clay Brick Product Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean	1:6 1:8 1:2 1:3 Pigment Co Dilution 1:6 1:8 1:2	Removal 0 0 0 0 0 oblor: "Virginian" Surface Finish Removal 0	0 0 0 0 Substrate Deterioration 0	Change 0 0 0 0 Color Change 0	0 0 0 0 0 Staining
Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean Enviro Klean® Safety Klean Substrate: Clay Brick Product Sure Klean® Vana Trol® Sure Klean® Vana Trol®	1:6 1:8 1:2 1:3 Pigment Co Dilution 1:6 1:8 1:2 1:3	Removal 0 0 0 0 0 0 Solor: "Virginian" Surface Finish Removal 0 0 0	0 0 0 0 Substrate Deterioration 0 0	Change 0 0 0 0 Color Change 0 0	0 0 0 0 0 Staining 0
Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean Enviro Klean® Safety Klean Substrate: Clay Brick Product Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean	1:6 1:8 1:2 1:3 Pigment Co Dilution 1:6 1:8 1:2 1:3	Removal 0 0 0 0 0 solor: "Virginian" Surface Finish Removal 0 0 0 0	0 0 0 0 Substrate Deterioration 0 0	Change 0 0 0 0 Color Change 0 0 0 0	0 0 0 0 0 Staining 0 0
Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean Enviro Klean® Safety Klean Substrate: Clay Brick Product Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean Enviro Klean® Safety Klean Enviro Klean® Safety Klean Froduct Product	1:6 1:8 1:2 1:3 Pigment Co Dilution 1:6 1:8 1:2 1:3	Removal 0 0 0 0 0 0 Solor: "Virginian" Surface Finish Removal 0 0 0	0 0 0 0 Substrate Deterioration 0 0	Change 0 0 0 Color Change 0 0 0	0 0 0 0 0 Staining 0 0
Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean Enviro Klean® Safety Klean Substrate: Clay Brick Product Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean Enviro Klean® Safety Klean Enviro Klean® Safety Klean Substrate: Clay Brick Product Sure Klean® Vana Trol®	1:6 1:8 1:2 1:3 Pigment Co Dilution 1:6 1:8 1:2 1:3	Removal 0 0 0 0 0 0 Surface Finish Removal 0 0 0 Surface Finish Removal Surface Finish	0 0 0 0 Substrate Deterioration 0 0 0 0 sedium Brown"	Change 0 0 0 0 Color Change 0 0 0 Color	0 0 0 0 0 Staining 0 0
Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean Enviro Klean® Safety Klean Substrate: Clay Brick Product Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean Enviro Klean® Safety Klean Enviro Klean® Safety Klean Substrate: Clay Brick Product Sure Klean® Vana Trol® Sure Klean® Vana Trol®	1:6 1:8 1:2 1:3 Pigment Co Dilution 1:6 1:8 1:2 1:3 Pigment Co Dilution	Removal 0 0 0 0 0 0 Solor: "Virginian" Surface Finish Removal 0 0 0 Surface Finish Color: "Wire-cut Median Surface Finish Removal	0 0 0 0 Substrate Deterioration 0 0 0 Substrate Deterioration	Change 0 0 0 Color Change 0 0 Color Change	0 0 0 0 Staining 0 0 0
Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean Enviro Klean® Safety Klean Substrate: Clay Brick Product Sure Klean® Vana Trol® Sure Klean® Vana Trol® Enviro Klean® Safety Klean Enviro Klean® Safety Klean Enviro Klean® Safety Klean Substrate: Clay Brick Product Sure Klean® Vana Trol®	1:6 1:8 1:2 1:3 Pigment Co Dilution 1:6 1:8 1:2 1:3 Pigment Co Dilution 1:6	Removal 0 0 0 0 0 slor: "Virginian" Surface Finish Removal 0 0 0 Surface Finish Removal 0 0 0 0 0 0 0 Surface Finish Removal 0	0 0 0 0 Substrate Deterioration 0 0 0 sedium Brown" Substrate Deterioration 0	Change 0 0 0 Color Change 0 Color Change 0 Color Change 0	0 0 0 0 0 Staining 0 0 0 Staining

0 – No change

3 - change - heavy

1 - change - slight

4 - change - excessive

2 – change – moderate





PROSOCO, Inc.

Photographs - New Construction Cleaning; Type S Mortar

"Brentwood" Clay Brick; 3 Day Cleaning



"Brentwood" Clay Brick; 7 Day Cleaning



"Brentwood" Clay Brick; 14 Day Cleaning







PROSOCO, Inc.

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Photographs - New Construction Cleaning; Type N Mortar

"Brentwood" Clay Brick; 7 Day Cleaning



"Brentwood" Clay Brick; 14 Day Cleaning



"Brentwood" Clay Brick; 21 Day Cleaning







PROSOCO, Inc.

Photographs – Limiting Surface Alterations

"Brentwood" Clay Brick; Limiting Surface Alterations



"Fredericksburg" Clay Brick; Limiting Surface Alterations







PROSOCO, Inc.

Conclusions - New Construction Cleaning

Based on the test results, all dilutions of both Enviro Klean[®] Safety Klean and Sure Klean[®] Vana Trol[®] tested performed well in removing excess Type S and Type N mortar from the submitted clay brick even after allowing the mortar to remain on the surface of the brick for 14 days for Type S and 21 days for Type N mortar. In addition, test results indicate that the evaluated cleaners caused no noticeable surface alterations to any of the submitted clay brick except the "Fredericksburg" samples.

*NOTE: Both dilutions of Enviro Klean® Safety Klean and Sure Klean® Vana Trol®, combined with surface agitation and pressure rinsing at 700-800 psi, removed moderate to heavy amounts of the white slurry finish from the surface of the "Fredericksburg" clay brick. Therefore, no recommendations can be made at this time for removal of mortar and new construction soiling.

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 while minimizing any potential surface alterations to the decorative finish, clean within 3 days of construction for Type S mortar and 7 days of construction for Type N mortar.

Recommendations - New Construction Cleaning

Recommendations for cleaning for each type of clay brick submitted by Boral Bricks, Inc., Alpharetta, GA are provided in the charts below. Recommendations are based on the optimum dilution for complete removal of mortar while limiting surface alterations.

Sample	New Construction Cleaning (Type S mortar, 14 day cleaning)	New Construction Cleaning (Type N mortar, 21 day cleaning)
"Fredericksburg"	No Recommendations (See *NOTE Below)	No Recommendations (See *NOTE Below)
All Other Submitted Clay Brick	Sure Klean [®] Vana Trol [®] (1:6) OR (1:8) OR Enviro Klean [®] Safety Klean (1:2) OR (1:3)	Sure Klean [®] Vana Trol [®] (1:6) OR (1:8) OR Enviro Klean [®] Safety Klean (1:2) OR (1:3)

*NOTE: Both dilutions of Enviro Klean[®] Safety Klean and Sure Klean[®] Vana Trol[®], combined with surface agitation and pressure rinsing at 700-800 psi, removed moderate to heavy amounts of the white slurry finish from the surface of the "Fredericksburg" clay brick. Therefore, no recommendations can be made at this time for removal of mortar and new construction soiling.

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.





PROSOCO, Inc.

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

<u>Description of Products Evaluated</u> – Protective Water Repellents

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control – A clear, solvent-based silicone elastomer formulated to weatherproof concrete block and other porous masonry materials. Blok-Guard® & Graffiti Control protects masonry surfaces from repeated graffiti attacks without altering the natural appearance. Blok-Guard® & Graffiti Control penetrates and fills pores to prevent water penetration through exterior walls exposed to normal weathering. Graffiti removal is fast and easy using Defacer Eraser® Graffiti Wipe. Blok-Guard® & Graffiti Control is easy to apply with low-pressure spray, brush or roller.

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

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.

Sample Preparation - Protective Water Repellents

The submitted brick were cut and allowed to dry for at least 24 hours prior to treatment. All treatments were applied by a wet-on-wet brushing application in accordance with the current PROSOCO, Inc. Product Data Sheet instructions and allowed to cure for at least 72 hours prior to testing.





PROSOCO, Inc.

Test Methods - Protective Water Repellents

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

The water absorption tube test simulating wind driven and wind blown rain conditions was 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.

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 <u>AA</u> Above Average water repellent performance would be reported for treatments which result in of no more than:

 $5.0 \text{ mL} \times 20\% = 1.0 \text{ mL}$

A rating of <u>A</u> Average water repellent performance would be reported for treatments which result in loss of no more than:

 $5.0 \text{ mL} \times 50\% = 2.5 \text{ mL}$

A rating of **BA** Below Average water repellent performance would be reported for treatments which result in a loss of more than:

 $5.0 \text{ mL} \times 50\% = 2.5 \text{ mL}$





PROSOCO, Inc.

Test Results - Protective Water Repellents

Water Absorption Tube Test: Vertical RILEM II.4, 5.0 milliliters, 20 minutes \underline{AA} = Above Average \underline{A} = Average \underline{BA} = Below Average

"Annapolis"	Results in mL loss	Ranking
Untreated Control	-5.0	
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	-0.0	AA
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-2.6	BA
Sure Klean® Weather Seal Siloxane PD	-4.5	BA
"Antique Rose"	Results in mL loss	Ranking
Untreated Control	-2.1	
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	-0.0	AA
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-0.0	AA
Sure Klean® Weather Seal Siloxane PD	-0.3	AA
"Ashbury"	Results in mL loss	Ranking
Untreated Control	-5.0	
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	-0.0	AA
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-0.0	AA
Sure Klean® Weather Seal Siloxane PD	-4.2	BA
"Bandera Blend"	Results in mL loss	Ranking
Untreated Control	-1.8	
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	-0.0	AA
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-0.0	AA
Sure Klean® Weather Seal Siloxane PD	-0.0	AA
"Bastille"	Results in mL loss	Ranking
Untreated Control	-0.7	
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	-0.0	AA
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-0.0	<u>AA</u>
Sure Klean® Weather Seal Siloxane PD	-0.0	<u>AA</u>
"Bayou"	Results in mL loss	Ranking
Untreated Control	-5.0	
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	-0.0	<u>AA</u>
Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:9)	-0.0 -0.2	<u>AA</u> <u>AA</u>
Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:9)	-0.2	AA
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD "Brentwood" Untreated Control	-0.2 -2.6	AA BA
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD "Brentwood" Untreated Control Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	-0.2 -2.6 Results in mL loss	AA BA Ranking
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD "Brentwood" Untreated Control Sure Klean® Weather Seal Blok-Guard® & Graffiti Control Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-0.2 -2.6 Results in mL loss -5.0	AA BA Ranking
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD "Brentwood" Untreated Control Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	-0.2 -2.6 Results in mL loss -5.0 -0.0	AA BA Ranking AA
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD "Brentwood" Untreated Control Sure Klean® Weather Seal Blok-Guard® & Graffiti Control Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-0.2 -2.6 Results in mL loss -5.0 -0.0 -3.5	AA BA Ranking AA BA
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD "Brentwood" Untreated Control Sure Klean® Weather Seal Blok-Guard® & Graffiti Control Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD "Fredericksburg" Untreated Control	-0.2 -2.6 Results in mL loss -5.0 -0.0 -3.5 -5.0	AA BA Ranking AA BA BA
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD "Brentwood" Untreated Control Sure Klean® Weather Seal Blok-Guard® & Graffiti Control Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD "Fredericksburg" Untreated Control Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	-0.2 -2.6 Results in mL loss -5.0 -0.0 -3.5 -5.0 Results in mL loss	AA BA Ranking AA BA BA Ranking
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD "Brentwood" Untreated Control Sure Klean® Weather Seal Blok-Guard® & Graffiti Control Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD "Fredericksburg" Untreated Control	-0.2 -2.6 Results in mL loss -5.0 -0.0 -3.5 -5.0 Results in mL loss -0.2	AA BA Ranking AA BA BA Ranking





PROSOCO, Inc.

Test Results - Protective Water Repellents

Water Absorption Tube Test: Vertical RILEM II.4, 5.0 milliliters, 20 minutes \underline{AA} = Above Average \underline{A} = Average \underline{BA} = Below Average

"Shadowstone"	Results in mL loss	Ranking
Untreated Control	-2.2	
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	-0.0	<u>AA</u>
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-0.0	<u>AA</u>
Sure Klean® Weather Seal Siloxane PD	-0.4	<u>AA</u>
"Silverstone"	Results in mL loss	Ranking
Untreated Control	-5.0	
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	-0.0	<u>AA</u>
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-0.0	<u>AA</u>
Sure Klean® Weather Seal Siloxane PD	-0.2	<u>AA</u>
"Virginian"	Results in mL loss	Ranking
"Virginian" Untreated Control	Results in mL loss -2.7	Ranking
		Ranking <u>AA</u>
Untreated Control	-2.7	
Untreated Control Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	-2.7 -0.0	 <u>AA</u>
Untreated Control Sure Klean® Weather Seal Blok-Guard® & Graffiti Control Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-2.7 -0.0 -0.0	 <u>AA</u> <u>AA</u>
Untreated Control Sure Klean® Weather Seal Blok-Guard® & Graffiti Control Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD	-2.7 -0.0 -0.0 -1.3	 AA AA A
Untreated Control Sure Klean® Weather Seal Blok-Guard® & Graffiti Control Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD "Wire-cut Medium Brown"	-2.7 -0.0 -0.0 -1.3 Results in mL loss	 AA AA A
Untreated Control Sure Klean® Weather Seal Blok-Guard® & Graffiti Control Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD "Wire-cut Medium Brown" Untreated Control	-2.7 -0.0 -0.0 -1.3 Results in mL loss -4.5	AA AA AA Ranking

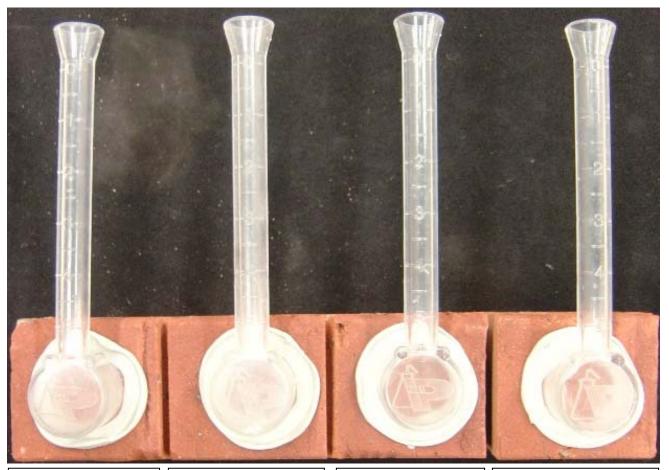




PROSOCO, Inc.

Photographs - Protective Water Repellents

"Ashbury"; RILEM Testing



Sure Klean[®]
Weather Seal
Siloxane WB
Concentrate (1:9)

Sure Klean[®] Weather Seal Siloxane PD Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control

Untreated Control





PROSOCO, Inc.

Conclusions – Protective Water Repellents

Test results indicate that at least one of the treatments evaluated exhibited above average water repellency on all of the submitted clay brick. In addition, Sure Klean® Weather Seal Blok-Guard® & Graffiti Control exhibited a slight to moderate color enhancement to the submitted clay brick. Sure Klean® Weather Seal Siloxane WB Concentrate diluted with nine parts water and Sure Klean® Weather Seal Siloxane PD did not alter the appearance of any of the submitted clay brick.

Recommendations – Protective Water Repellents

Recommendations for water repellent treatments for each type of clay brick submitted by Boral Bricks, Inc., Alpharetta, GA are provided in the chart below. Recommendations are based on the treatments that proved most effective at providing water repellency on all types submitted.

Sample	Protective Water Repellents
"Annapolis" "Brentwood"	Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control
"Ashbury" "Bayou" "Virginian" "Wire-cut Medium Brown"	Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control OR Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:9)
"Antique Rose" "Bandera Blend" "Bastille" "Fredericksburg" "Shadowstone" "Silverstone"	Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control OR Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:9) OR Sure Klean [®] Weather Seal Siloxane PD

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.

Graffiti Control

These trials were conducted to determine the optimal graffiti control treatment for the submitted clay brick samples.

Description of Products Evaluated – Graffiti Control

Graffiti Control Treatments

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control – A clear, solvent-based silicone elastomer formulated to weatherproof concrete block and other porous masonry materials. Blok-Guard® & Graffiti Control protects masonry surfaces from repeated graffiti attacks without altering the natural appearance. Blok-Guard® & Graffiti Control penetrates and fills pores to prevent water penetration through exterior walls exposed to normal weathering. Graffiti removal is fast and easy using Defacer Eraser® Graffiti Wipe. Blok-Guard® & Graffiti Control is easy to apply with low-pressure spray, brush or roller.

Products Evaluated for Graffiti Removal

Sure Klean[®] **Fast Acting Stripper** – A thixotropic stripping compound formulated specifically for removal of high strength paints and coatings such as epoxies, polyurethanes, and floor enamels. Additionally, Fast Acting Stripper dissolves most spray paints, marking pens, lacquers and other graffiti.

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 removes a variety of graffiti stains from most smooth masonry, split-face concrete block, wood and metal surfaces.

Graffiti Agents

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





PROSOCO, Inc.

Sample Preparation - Graffiti Control

This evaluation compares the effectiveness of the treatments tested to the untreated surfaces of the submitted samples in preventing staining of enamel spray paint and permanent markers.

Sections of the clay brick samples were treated with Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control in a wet-on-wet brushing application in accordance with the current PROSOCO, Inc. Product Data Sheet application instructions and then allowed to cure for at least 24 hours. At the end of the one-day 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 no sooner than one day 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.

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 Equipment – Masonry washing equipment generating approximately 700-800 psi with a water flow rate of 8 gallons per minute delivered through a 45 degree fan spray tip was used for rinsing.





PROSOCO, Inc.

<u>Test Results</u> – Graffiti Control

		"Annapolis"			
Untreated Control	Red Paint		Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	90%	80%	100%	88%
Graffiti Wipe	40%	50%	70%	100%	65%
Blok-Guard [®] & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	98%	100%	100%	97%
Graffiti Wipe	98%	95%	100%	100%	98%
·		"Antique Rose	·"		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	95%	75%	95%	86%
Graffiti Wipe	60%	30%	60%	80%	58%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	99%	98%	100%	98%
Graffiti Wipe	99%	95%	95%	99%	97%
·	•	"Ashbury"	•		•
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	95%	90%	90%	89%
Graffiti Wipe	40%	85%	90%	90%	76%
Blok-Guard [®] & Graffiti Control	Red Paint		Green Marker		
Fast Acting Stripper	90%	98%	98%	100%	97%
Graffiti Wipe	98%	98%	100%	100%	99%
		Bandera Blen		<u>I</u>	
Untreated Control		Black Marker		Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	100%	100%	98%
Graffiti Wipe	80%	20%	60%	80%	60%
Blok-Guard [®] & Graffiti Control		Black Marker			% Avg. Removal
Fast Acting Stripper	95%	100%	100%	100%	99%
Graffiti Wipe	100%	100%	100%	100%	100%
Grama Mps	10070	"Bastille"	10070	10070	10070
Untreated Control	Red Paint		Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	40%	90%	80%	80%	73%
Graffiti Wipe	80%	60%	80%	80%	75%
Blok-Guard [®] & Graffiti Control		Black Marker			% Avg. Removal
Fast Acting Stripper	70%	95%	90%	95%	88%
Graffiti Wipe	98%	100%	100%	100%	100%
Graina Wipo	0070	"Bayou"	10070	10070	10070
Untreated Control	Ped Paint	Black Marker	Groon Marker	Ped Marker	% Avg. Removal
Fast Acting Stripper	80%	100%	100%	100%	95%
Graffiti Wipe	60%	10%	90%	100%	65%
Blok-Guard [®] & Graffiti Control	Red Paint		Green Marker		
Fast Acting Stripper	90%	100%	100%	100%	98%
Graffiti Wipe	99%	100%	100%	100%	100%
Grainii vvipe	<i>33 /</i> 0	"Brentwood"		100/0	100/0
Hatrooto d Control	Dad Daint			Dod Maria	0/ Ava Damassal
Untreated Control	Red Paint				% Avg. Removal
Fast Acting Stripper	80%	100%	100%	100%	95%
Graffiti Wipe	60%	30%	90%	95%	69%
Blok-Guard® & Graffiti Control	Red Paint		Green Marker	Red Marker	
Fast Acting Stripper	90%	100%	100%	100%	98%
Graffiti Wipe	100%	100%	100%	100%	100%





PROSOCO, Inc.

Test Results - Graffiti Control

"Fredericksburg"					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	90%	90%	90%	88%
Graffiti Wipe	60%	20%	70%	80%	58%
Blok-Guard [®] & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	85%	90%	100%	100%	94%
Graffiti Wipe	100%	80%	100%	100%	95%
		"Shadowstone	·"		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	70%	95%	20%	90%	69%
Graffiti Wipe	10%	10%	20%	70%	28%
Blok-Guard® & Graffiti Control		Black Marker		Red Marker	% Avg. Removal
Fast Acting Stripper	85%	95%	80%	90%	88%
Graffiti Wipe	99%	95%	85%	90%	92%
		"Silverstone"	1		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	99%	60%	90%	82%
Graffiti Wipe	60%	10%	60%	80%	53%
Blok-Guard [®] & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	85%	99%	98%	100%	96%
Graffiti Wipe	99%	99%	99%	100%	99%
		"Virginian"			
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	50%	100%	95%	95%	85%
Graffiti Wipe	70%	30%	90%	90%	70%
Blok-Guard [®] & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	85%	100%	100%	100%	96%
Graffiti Wipe	100%	100%	100%	100%	100%
"Wire-cut Medium Brown"					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	85%	100%	90%	95%	93%
Graffiti Wipe	80%	10%	70%	90%	63%
Blok-Guard [®] & Graffiti Control	Red Paint			Red Marker	% Avg. Removal
Fast Acting Stripper	85%	100%	100%	100%	96%
Graffiti Wipe	99%	100%	100%	100%	100%

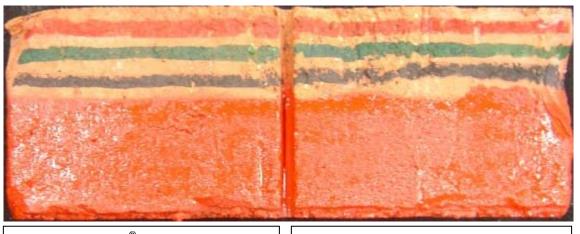




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Photographs - Graffiti Control

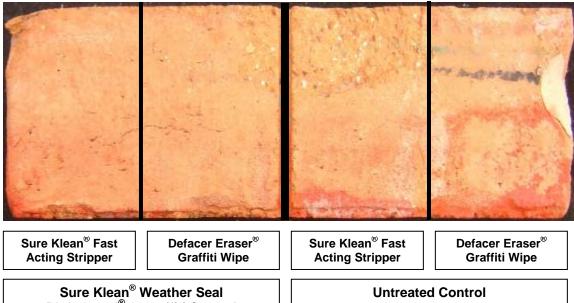
"Antique Rose"; Graffiti Applied



Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control

Untreated Control

"Antique Rose"; Graffiti Removed



Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control





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Conclusions - Graffiti Control

Based upon laboratory evaluations, graffiti removal was improved when the submitted samples were treated with Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control prior to graffiti application. In addition, Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control exhibited a slight to moderate color enhancement to the submitted clay brick.

*NOTE: Both Sure Klean[®] Fast Acting Stripper and Defacer Eraser[®] Graffiti Wipe, combined with surface agitation and pressure rinsing at 700-800 psi, may remove some of the white slurry finish from the surface of the "Fredericksburg" clay brick. It is therefore recommended that on-site testing be conducted to determine if the change in appearance is acceptable.

Recommendations – Graffiti Control

Recommendations for graffiti control treatment for each type of clay brick submitted by Boral Bricks, Inc., Alpharetta, GA 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 of clay brick submitted.

Sample	Graffiti Repellent	Graffiti Removers
"Fredericksburg"	Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	Sure Klean [®] Fast Acting Stripper OR Defacer Eraser [®] Graffiti Wipe (See *NOTE Below)
All Other Submitted Clay Brick	Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	Sure Klean [®] Fast Acting Stripper OR Defacer Eraser [®] Graffiti Wipe

*NOTE: Both Sure Klean[®] Fast Acting Stripper and Defacer Eraser[®] Graffiti Wipe, combined with surface agitation and pressure rinsing at 700-800 psi, may remove some of the white slurry finish from the surface of the "Fredericksburg" clay brick. It is therefore recommended that on-site testing be conducted to determine if the change in appearance is acceptable.

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

Christopher A. Moore

Project Testing Laboratory Technician

CAM





Boral Bricks, Inc. Alpharetta, GA

Project No. 0510-06 PTP

Prepared For:

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Prepared By:

PROSOCO, Inc. January 2006