



PROSOCO, Inc.

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### **ATTACHMENTS**

Technical Services TECH Note RILEM Test Method No. II.4 Product Data literature for all products evaluated





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**FOR:** The Brick Factory, Inc.

cc: Steve Dean

Mike Burdette Paul Tessier

**SUBJECT:** The Brick Factory, Inc.

Miami, FL

DATE:

**PROJECT:** 0411-01 PTP

**SAMPLES SUBMITTED:** One type of red clay paver.

<u>Sample</u>	<u>Number</u>	<u>Color</u>	<u>Size</u>
"Antique Brick"	6	Red/Orange	8" x 4" x 3"

Submitted by: Steve Dean





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#### **PURPOSE OF TESTING:**

One type of clay paver was submitted to PROSOCO, Inc.'s Testing Laboratory with a request to determine if application of the products evaluated will effectively remove unsanded grout from the clay pavers and produce any surface alteration during new construction cleaning operations. Additionally, the effectiveness of water repellents and stain repellents suitable for clay pavers were evaluated.

**A.** New Construction Cleaning – Sure Klean® 600 Detergent and Enviro Klean® Safety Klean were evaluated for removal of laboratory applied grout.

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 unsanded grout. The wet grout-filled cylinder was allowed to remain in contact with the pavers for 10 minutes before removal.

Soiled pavers were allowed to dry before test cleaning.

Heavy deposits of grout were removed with dry scraping after 24 hours. Prepared cleaning solutions were then evaluated for their effectiveness in removing residual grout after 3 and 7 days of curing.

**B.** Limiting Surface Alterations – Sure Klean<sup>®</sup> 600 Detergent and Enviro Klean<sup>®</sup> Safety Klean were tested at various dilutions to determine if a cleaning program implemented to remove excess grout 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 pavers 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 pavers 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 paver.

<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, Sure Klean® Weather Seal Siloxane WB Concentrate (1:9), Consolideck® Saltguard® WB, Stand Off® SLX100 Water & Oil Repellent, and Stand Off® Limestone & Marble Protector were evaluated on the submitted samples for their ability to provide water repellency.
- **D.** Stain Repellency Stand Off<sup>®</sup> SLX100 Water & Oil Repellent, Stand Off<sup>®</sup> Limestone & Marble Protector, and Stand Off<sup>®</sup> Stone, Tile & Masonry Protector were evaluated for their ability to repel stains.





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### PRODUCTS EVALUATED FOR CLEANING AND LIMITING SURFACE ALTERATIONS

Sample	Product	Dilution
"Antique Priok" Clov Pover	Sure Klean <sup>®</sup> 600 Detergent	1:6, 1:8
"Antique Brick" Clay Paver	Enviro Klean <sup>®</sup> Safety Klean	1:2, 1:3

### WATER REPELLENT PRODUCTS EVALUATED

SAMPLE	TREATMENT	DILUTION
	Sure Klean® Weather Seal Siloxane WB Concentrate	1:9
	Consolideck <sup>®</sup> Saltguard <sup>®</sup> WB	Concentrate
"Antique Brick" Clay Paver	Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	Concentrate
	Sure Klean® Weather Seal Siloxane PD	Concentrate
	Stand Off® Limestone & Marble Protector	Concentrate

#### STAIN REPELLENT PRODUCTS EVALUATED

SAMPLE	TREATMENT	DILUTION
	Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	Concentrate
"Antique Brick" Clay Paver	Stand Off® Limestone & Marble Protector	Concentrate
	Stand Off <sup>®</sup> Stone, Tile & Masonry Protector	Concentrate

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 the unsanded grout from the submitted clay pavers.

Unsanded grout was applied to the paver surface and allowed to cure for 3 and 7 days. Grout removal was accomplished using chemical assistance and a high-pressure water rinse with pressure rinsing equipment. Removal of unsanded grout was evaluated after 3 and 7 days.

**Sure Klean**<sup>®</sup> **600 Detergent** – A general purpose, concentrated acidic cleaner for brick, tile and concrete surfaces. 600 Detergent dissolves mortar smears and construction dirt quickly, leaving the masonry clean and uniform with no acid burning or streaking.

**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. Nonfuming 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. 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 - New Construction Cleaning** 

% Removal (Unsanded Grout)

"Antique Brick"

Product	Dilution	3 day	7 day
Sure Klean <sup>®</sup> 600 Detergent	1:6	100%	100%
Sure Rieam 600 Detergent	1:8	100%	95%
Enviro Klean <sup>®</sup> Safety Klean	1:2	100%	99%
	1:3	95%	95%





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PHOTOGRAPHS - Cleaning (Unsanded Grout Removal)

"Antique Brick" Clay Paver; 3 Day Cleaning



Sure Klean<sup>®</sup> 600 Detergent 1:6 Sure Klean<sup>®</sup> 600 Detergent 1:8 Enviro Klean<sup>®</sup>
Safety Klean 1:2

Enviro Klean<sup>®</sup> Safety Klean 1:3

"Antique Brick" Clay Paver; 7 day cleaning



Sure Klean<sup>®</sup> 600 Detergent 1:6 Sure Klean<sup>®</sup> 600 Detergent 1:8 Enviro Klean<sup>®</sup> Safety Klean 1:2

Enviro Klean<sup>®</sup> Safety Klean 1:3





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#### **CONCLUSIONS – New Construction Cleaning**

Based on the test results, all PROSOCO, Inc. products tested performed well in removing excess grout smears from the submitted clay pavers. These products performed well in removing the grout soils even after 7 days of curing.

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. Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess grout and construction dirt while minimizing any potential surface alterations, clean within 7 days of construction.

### **RECOMMENDATIONS- New Construction Cleaning**

Recommendations for cleaning the clay pavers submitted by The Brick Factory, Inc., Miami, FL, are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of grout while limiting surface alterations.

Paver Type	New Construction Cleaning (Unsanded Grout, 7 Days)
"Antique Brick" Clay Paver	Sure Klean <sup>®</sup> 600 Detergent (1:8) OR Enviro Klean <sup>®</sup> Safety Klean (1:3)

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 B – LIMITING SURFACE ALTERATIONS**

### **DESCRIPTION OF PRODUCTS EVALUATED – Limiting Surface Alterations**

**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. Nonfuming 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.

**Sure Klean**<sup>®</sup> **600 Detergent** – A general purpose, concentrated acidic cleaner for brick, tile and concrete surfaces. 600 Detergent dissolves mortar smears and construction dirt quickly, leaving the masonry clean and uniform with no acid burning or streaking.

### **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 Paver	Pigment Co	Pigment Color: "Antique Brick"			
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Sure Klean® 600 Detergent	1:6	0	0	0	0
Sure Klean® 600 Detergent	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

0 - No change

3 - change - heavy

1 - change - slight

4 - change - excessive

2 - change - moderate





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#### **CONCLUSIONS – Limiting Surface Alterations**

Test results indicate that none of the products tested caused any surface alterations on the submitted clay pavers. 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. Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess grout and construction dirt while minimizing any potential surface alterations, clean within 7 days of construction.

#### **RECOMMENDED PRODUCTS AND DILUTIONS – Limiting Surface Alterations**

Product recommendations for limiting surface alterations for the clay pavers submitted by The Brick Factory, Inc., Miami, FL, are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of grout while limiting surface alterations.

Paver Type	Limiting Surface Alterations	
"Antique Brick"	Sure Klean <sup>®</sup> 600 Detergent (1:8) OR Enviro Klean <sup>®</sup> Safety Klean (1:3)	

Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess grout 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 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.

**Stand Off<sup>®</sup> SLX100 Water & Oil Repellent -** A modified "neat" silane system that offers invisible protection and low volatility. SLX100 combines water and oil repellency on most substrates to prevent staining by waterborne and oily substances. The small molecular structure of SLX100 allows for maximum penetration at coverage rates higher than that of conventional silanes. Depth of penetration is controlled by the application rate (loading rate). This makes SLX100 ideal for protecting granite and other dense, color-sensitive 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.

**Consolideck® Saltguard® WB** – A ready-to-use water-based, VOC compliant silane/siloxane water repellent and "chloride screen" for the protection of concrete and masonry surfaces. Saltguard® WB penetrates more deeply than conventional water- or solvent-based water repellents. Low odor and alkaline stable, Saltguard® WB is ideal for field or in-plant application to concrete and most masonry surfaces. Saltguard® WB protects horizontal and vertical surfaces from moisture intrusion and chemical attack of chloride salts.

Stand Off<sup>®</sup> Limestone & Marble Protector – A clear, penetrating water and oil repellent suitable for use on interior or exterior calcareous surfaces such as limestone, marble and travertine. It's also suitable for many other types of masonry surfaces. Limestone & Marble Protector penetrates deeply to provide surface and subsurface protection without forming a glossy surface film. Treated surfaces retain their natural color, texture and appearance. Limestone & Marble Protector combines high quality siloxane resins with "oleophobic" resins to produce a penetrating water and oil repellent ideal for long-term protection against food, oil and waterborne staining. Unlike conventional penetrating oil repellent products, Limestone & Marble Protector has been modified to ensure effectiveness on limestone, marble and other calcareous or neutral pH surfaces.





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#### **SAMPLE PREPARATION - Protective Water Repellents:**

The submitted pavers were cut, dried and allowed to reabsorb atmospheric humidity for at least 24 hours prior to treatment. The treatment method adhered to the 2004 PROSOCO, Inc. Product Guide. All treatments were allowed to cure for at least 3 days prior to testing.

#### **TEST METHODS - Protective Water Repellents:**

### Water Absorption Tube Test: Horizontal 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 103 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  $\underline{\mathbf{A}}$  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+.





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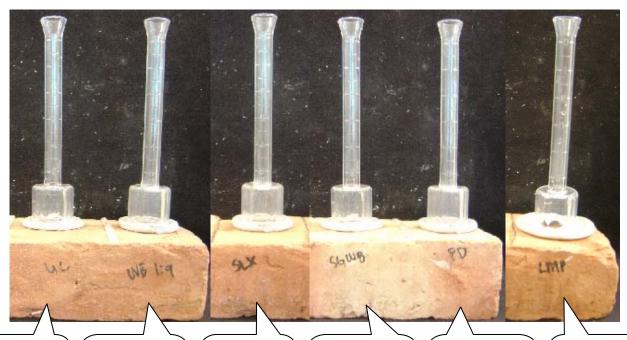
#### **TEST RESULTS:**

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

"Antique Brick"	Results in mL loss	Ranking
Untreated Control	-5.0	
Siloxane WB 1:9	-0.0	AA
SLX100	-0.0	AA
Siloxane PD	-0.0	AA
Saltguard <sup>®</sup> WB	-0.3	AA
Limestone & Marble Protector	-0.0	AA

### **PHOTOGRAPH – Water Repellents**

"Antique Brick" Clay Paver; RILEM Testing



Untreated Control

Sure Klean<sup>®</sup> Weather Seal Siloxane WB Concentrate Stand Off<sup>®</sup> SLX100 Water & Oil Repellent Consolideck<sup>®</sup> Saltguard<sup>®</sup> WB Sure Klean<sup>®</sup> Weather Seal Siloxane PD

Stand Off<sup>®</sup> Limestone & Marble Protector





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### **CONCLUSIONS – Protective Water Repellents:**

Test results indicate that all of the water repellents tested exhibited above average water repellency on the clay pavers.

### **RECOMMENDATIONS – Protective Water Repellents:**

Recommendations for water repellent treatments for the clay pavers submitted by The Brick Factory, Inc., Miami, FL, are provided in the chart below. Recommendations are based on the treatments that proved most effective and can provide water repellency on all types indicated.

Brick Type	Water Repellent
"Antique Brick" Clay Paver	Consolideck <sup>®</sup> Saltguard <sup>®</sup> WB OR Stand Off <sup>®</sup> SLX100 Water & Oil Repellent OR Sure Klean <sup>®</sup> Weather Seal Siloxane PD OR Sure Klean <sup>®</sup> Weather Seal Siloxane WB (1:9) OR Stand Off <sup>®</sup> Limestone & Marble Protector

The ability of a water repellent treatment to prevent the ingress of water is affected by a variety of 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.





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### SECTION D - STAIN REPELLENCY

These trials were conducted to determine the effectiveness of treatments in preventing food, oil, and miscellaneous staining on the submitted samples.

#### **DESCRIPTION OF PRODUCTS EVALUATED - Stain Protection:**

**Stand Off SLX100 Water & Oil Repellent** – Combines water and oil repellency on most substrates to prevent staining by waterborne and oily substances. This modified "neat" silane system offers invisible protection and low volatility. The small molecular structure of SLX100 allows for maximum penetration at coverage rates higher than that of conventional silanes. Depth of penetration is controlled by the application rate (loading rate). This makes SLX100 ideal for protecting granite and other dense, color-sensitive surfaces.

**Stand Off**<sup>®</sup> **Limestone & Marble Protector** – A clear, penetrating water and oil repellent suitable for use on interior or exterior calcareous surfaces such as limestone, marble and travertine. It's also suitable for many other types of masonry surfaces. Limestone & Marble Protector penetrates deeply to provide surface and subsurface protection without forming a glossy surface film. Treated surfaces retain their natural color, texture and appearance. Limestone & Marble Protector combines high quality siloxane resins with "oleophobic" resins to produce a penetrating water and oil repellent ideal for long-term protection against food, oil and waterborne staining. Unlike conventional penetrating oil repellent products, Limestone & Marble Protector has been modified to ensure effectiveness on limestone, marble and other calcareous or neutral pH surfaces.

\*Stand Off<sup>®</sup> Stone, Tile & Masonry Protector – A penetrating oil and stain repellent. Easy-to-use. Low-VOC, low-odor protective treatment improves the stain resistance and simplifies maintenance cleaning of interior and exterior stone, quarry tile, concrete and masonry surfaces.

\*NOTE: Application of Stand Off<sup>®</sup> Stone, Tile & Masonry Protector caused moderate surface alterations on the submitted clay pavers. Therefore, Stand Off<sup>®</sup> Stone, Tile & Masonry Protector was not tested and is not recommended to be used on the submitted pavers.

<u>Kitchen Products Evaluated:</u>	Temperature:
Coca Cola	ambient (~70°F)
Ketchup	ambient (~70°F)
Mustard	ambient (~70°F)
Red wine	ambient (~70°F)
Balsamic Vinegar	ambient (~70°F)
Soy Sauce	ambient (~70°F)
Olive Oil	ambient (~70°F)
Wesson Oil	(~250°F)
Coffee	(~120°F)

### **SAMPLE PREPARATION – Stain Repellency**

Samples were cleaned with Enviro Klean<sup>®</sup> 2010 All Surface Cleaner diluted with 10 parts water, allowed to dry and absorb atmospheric moisture for 24 hours prior to treatment. The method of application for protective treatments followed the PROSOCO, Inc. 2004 Product Guide.





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#### **TEST METHOD – Stain Repellency**

### **Surface Beading Evaluation**

The food and oil products were applied to the test areas by using a dropper creating a bead  $0.5-1.0\,\mathrm{cm}$  in diameter. The beading properties of the oils and liquids were visually evaluated within two minutes after application. The results are reported as a rating based on the angle of contact between the base of the droplet and the substrate. A rating of "1 or 2" indicated the smallest angle of contact ( $<90^\circ$ ) which correlates to "above average" repellency. A rating of "3 or 4" indicates "average" repellency. A rating of "5 or greater" indicated that the oil quickly absorbed into the substrate and correlates to "below average" repellency.

Note: Non-free flowing staining agents such as ketchup and mustard are applied in a blob and not evaluated for their beading properties.

#### Rating System (1-5)

1. No wetting of contact area (no darkening); angle less than 90°



2. Wetting contained to the contact area (slight darkening); angle is less than 90°



3. Wetting contained to the contact area (slight darkening); angle is greater than 90°, but less than 135°.



4. Wetting beyond the contact area (darkening); angle is greater than 135°



5. Wetting beyond the contact area (darkening); angle is flat.



### **Stain Removal Evaluation**

The soiling agents were allowed to dwell on the treated and untreated substrates for times of 24 hours, 4 hours, 1 hour, and 10 minutes. The test areas were then cleaned with Enviro Klean® 2010 All Surface Cleaner diluted 1 part concentrate to 10 parts fresh water and scrubbed under a stream of running water from a faucet. Samples were allowed to dry for 24 hours. Evaluation consisted of a visual examination of the tested areas to determine the percentage of staining removal.



1 hour

10 min.

### **PALLET TAG PROGRAM** LABORATORY REPORT



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### **TEST RESULTS – Surface Beading**

"Antique Brick"									
Coco- Cola Ketchup Mustard Red Wine Balsamic Soy Olive Wesson Hot Vinegar Sauce Oil Oil Coffee									
Untreated Control	5		-	5	5	5	5	5	5
SLX100	2			2	2	2	2	2	2
LMP	2			2	3	3	2	2	2

### **TEST RESULTS – Staining Removal**

% Removal

100%

100%

	"Antique Brick"								
	Untreate	d Control							
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	90%	50%	100%	100%	60%	10%	10%	10%
4 hour	100%	100%	90%	100%	100%	60%	10%	10%	10%
1 hour	100%	100%	100%	100%	100%	60%	10%	10%	10%
10 min.	100%	100%	100%	100%	100%	60%	10%	10%	10%
	Stand Off <sup>®</sup> SLX100 Water & Oil Repellent								
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	30%	30%	100%
4 hour	100%	100%	100%	100%	100%	100%	50%	50%	100%

90%	90%
50%	50%
5	0%

	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	90%	90%	100%
4 hour	100%	100%	100%	100%	100%	100%	95%	95%	100%
1 hour	100%	100%	100%	100%	100%	100%	99%	99%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%





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### **PHOTOGRAPHS- Stain Results**

"Antique Brick" Clay Paver; Stains applied



Stand Off® SLX100 Water & Oil Repellent Stand Off® Limestone & Marble Protector **Untreated Control** 

### "Antique Brick" Clay Paver; Stains removed



Stand Off<sup>®</sup> SLX100 Water & Oil Repellent Stand Off® Limestone & Marble Protector **Untreated Control** 





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### **CONCLUSIONS – Stain Repellency**

Based upon laboratory evaluations, Stand Off<sup>®</sup> Limestone & Marble Protector was the most effective treatment in repelling the staining agents from the samples. Both Stand Off® SLX100 Water & Oil Repellent and Stand Off® Limestone & Marble Protector improved the surface beading of the pavers.

### **RECOMMENDATIONS – Stain Repellency**

Recommendations for stain resistance treatment for the clay pavers submitted by The Brick Factory, Inc., Miami, FL, are provided in the charts below. Recommendations are based on the treatments that proved most effective for providing stain repellency on the submitted clay pavers.

Sample	Stain Repellent	Maintenance Cleaner		
"Antique Brick" Clay Paver	Stand Off <sup>®</sup> Limestone & Marble Protector	Enviro Klean <sup>®</sup> 2010 All Surface Cleaner (1:10)		

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 product and procedures for a particular project. See product literature for additional application and product information.

Christopher A. Moore

Project Testing Laboratory Technician

CAM



### Laboratory Report

### **Pallet Tag Program Evaluation**

# The Brick Factory, Inc. Miami, FL

Project No. 0411-01 PTP

Prepared For:

The Brick Factory, Inc. P.O. Box 832136 Miami, FL 33283-2136

Prepared By:



PROSOCO, Inc. December 2004