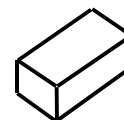




# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

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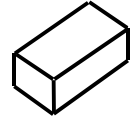
## **ATTACHMENTS**

Technical Services TECH Note RILEM Test Method No. II.4

Product Data literature for all products evaluated



# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

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**FOR:** Boral Bricks, Inc. (Pavers)  
**cc:** Rob Poitevent  
Mike Burdette  
Paul Tessier  
Steve Dean

**SUBJECT:** Boral Bricks, Inc.  
Augusta, GA

**DATE:**

**PROJECT:** 0407-08 PTP

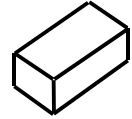
**SAMPLES SUBMITTED:** Fourteen types of clay pavers.

<u>Sample</u>	<u>Number</u>	<u>Color</u>	<u>Size</u>
"Bourbon Street"	12	Red Orange	8" x 4" x 3"
"Burgundy Straight-Edge"	12	Dark Red	8" x 4" x 3"
"Dark Gray"	12	Dark Gray	8" x 4" x 3"
"Dark Pink"	12	Dark Pink	8" x 4" x 3"
"Heartland Flash"	12	Red	8" x 4" x 3"
"Key West"	12	Tan	8" x 4" x 3"
"Medium Brown"	12	Brown	8" x 4" x 3"
"Parquet Tan"	12	Yellow Tan	8" x 4" x 3"
"Peachtree Avenue"	12	Pink	8" x 4" x 3"
"Pink"	12	Pink	8" x 4" x 3"
"Red Straight-Edge"	12	Red	8" x 4" x 3"
"Santee Gray"	12	Dark Gray	8" x 4" x 3"
"Savannah Brown"	12	Dark Brown	8" x 4" x 3"
"Tan"	12	Tan	8" x 4" x 3"

Submitted by: Rob Poitevent



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## PURPOSE OF TESTING:

Fourteen types of clay pavers 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, stain repellents, and color enhancing treatments suitable for clay pavers were evaluated.

**A. New Construction Cleaning** – Enviro Klean® Safety Klean and either Sure Klean® 600 Detergent or Sure Klean® Vana Trol® were evaluated for removal of laboratory applied mortar or 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 paver and filled with a wet mixture of Ash Grove® Type S cementitious mortar or sanded grout. The wet mortar- or 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 mortar or grout were removed with dry scraping after 24 hours. Prepared cleaning solutions were then evaluated for their effectiveness in removing residual Ash Grove® Type S mortar after 3, 7, and 14 days of curing. Prepared cleaning solutions were evaluated for their effectiveness in removing residual grout after 3 and 7 days of curing.

**B. Limiting Surface Alterations** – Enviro Klean® Safety Klean and either Sure Klean® 600 Detergent or Sure Klean® Vana Trol® were tested at various dilutions to determine if a cleaning program implemented to remove excess mortar or 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.

Surface Finish Removal 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.

Substrate Deterioration 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.

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

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

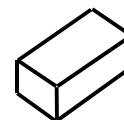
**C. Water Repellent Evaluation** - Consolideck® Saltguard® WB, Stand Off® SLX100 Water & Oil Repellent, Stand Off® Impregnator, and Sure Klean® Paver Enhancer were evaluated on the submitted samples for their ability to provide water repellency.

**D. Stain Repellency** – Stand Off® SLX100 Water & Oil Repellent, Stand Off® Stone, Tile, & Masonry Protector, and Stand Off® Impregnator were evaluated for their ability to repel stains.

**E. Color Enhancement** – Sure Klean® Paver Enhancer and Stand Off® Gloss 'N Guard were evaluated for their ability to provide color enhancement to the submitted pavers.



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## PRODUCTS EVALUATED FOR CLEANING AND LIMITING SURFACE ALTERATIONS

Sample	Product	Dilution
"Bourbon Street" "Burgundy Straight-Edge" "Heartland Flash" "Red Straight-Edge"	Sure Klean® 600 Detergent	1:6, 1:8
	Enviro Klean® Safety Klean	1:2, 1:3
"Dark Gray" "Dark Pink" "Key West" "Medium Brown" "Parquet Tan" "Peachtree Avenue" "Pink" "Santee Gray" "Savannah Brown" "Tan"	Sure Klean® Vana Trol®	1:6, 1:8
	Enviro Klean® Safety Klean	1:2, 1:3

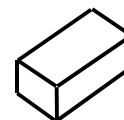
## WATER REPELLENT PRODUCTS EVALUATED

SAMPLE	TREATMENT	DILUTION
All Submitted Clay Pavers	Sure Klean® Paver Enhancer	Concentrate
	Consolideck® Saltguard® WB	Concentrate
	Stand Off® SLX100 Water & Oil Repellent	Concentrate
	Stand Off® Impregnator	Concentrate

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



# PALLET TAG PROGRAM LABORATORY REPORT



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## STAIN REPELLENT PRODUCTS EVALUATED

SAMPLE	TREATMENT	DILUTION
All Submitted Clay Pavers	Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	Concentrate
	Stand Off <sup>®</sup> Stone, Tile & Masonry Protector	Concentrate
	Stand Off <sup>®</sup> Impregnator	Concentrate

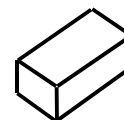
## COLOR ENHANCEMENT PRODUCTS EVALUATED

SAMPLE	TREATMENT	DILUTION
All Submitted Clay Pavers	Sure Klean <sup>®</sup> Paver Enhancer	Concentrate
	Stand Off <sup>®</sup> Gloss 'N Guard	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 Ash Grove® Type S mortar or grout from the submitted clay pavers.

Ash Grove® Type S cementitious mortar was prepared in compliance with the manufacturers instructions, applied to the paver surface and allowed to cure for 3, 7 and 14 days. Sanded grout was applied to the paver surface and allowed to cure for 3 and 7 days. Mortar and grout removal was accomplished using chemical assistance and a high-pressure water rinse with pressure rinsing equipment. The removal of Ash Grove® Type S cementitious masonry mortar was visually evaluated after 3, 7 and 14 days of curing. Removal of sanded grout was evaluated after 3 and 7 days.

**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.

**Sure Klean® 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.

**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.

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### **TEST METHOD – New Construction Cleaning**

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

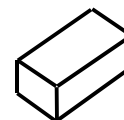
1. Prewet the surface with water.
2. Apply the cleaner.
3. Allow the appropriate dwell time, as specified.

Safety Klean.....	3-5 minutes
600 Detergent .....	3-5 minutes
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 (Type S Mortar)

#### “Bourbon Street”

Product	Dilution	3 day	7 day	14 day
Sure Klean® 600 Detergent	1:6	100%	100%	100%
	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%	100%
	1:3	100%	100%	100%

#### “Burgundy Straight-Edge”

Product	Dilution	3 day	7 day	14 day
Sure Klean® 600 Detergent	1:6	100%	100%	100%
	1:8	100%	100%	99%
Enviro Klean® Safety Klean	1:2	100%	100%	99%
	1:3	100%	100%	99%

#### “Dark Gray”

Product	Dilution	3 day	7 day	14 day
Sure Klean® Vana Trol®	1:6	100%	100%	100%
	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%	100%
	1:3	100%	100%	100%

#### “Dark Pink”

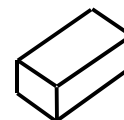
Product	Dilution	3 day	7 day	14 day
Sure Klean® Vana Trol®	1:6	100%	100%	100%
	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%	100%
	1:3	100%	100%	100%

#### “Heartland Flash”

Product	Dilution	3 day	7 day	14 day
Sure Klean® 600 Detergent	1:6	100%	100%	100%
	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%	100%
	1:3	100%	100%	100%



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## Test Results – New Construction Cleaning

### % Removal (Type S Mortar)

#### “Key West”

Product	Dilution	3 day	7 day	14 day
Sure Klean® Vana Trol®	1:6	100%	99%	99%
	1:8	100%	95%	95%
Enviro Klean® Safety Klean	1:2	99%	99%	95%
	1:3	99%	99%	95%

#### “Medium Brown”

Product	Dilution	3 day	7 day	14 day
Sure Klean® Vana Trol®	1:6	100%	100%	100%
	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%	100%
	1:3	100%	100%	95%

#### “Parquet Tan”

Product	Dilution	3 day	7 day	14 day
Sure Klean® Vana Trol®	1:6	100%	100%	100%
	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%	100%
	1:3	100%	100%	100%

#### “Peachtree Avenue”

Product	Dilution	3 day	7 day	14 day
Sure Klean® Vana Trol®	1:6	100%	100%	100%
	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%	100%
	1:3	100%	100%	100%

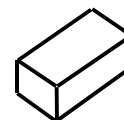
#### “Pink”

Product	Dilution	3 day	7 day	14 day
Sure Klean® Vana Trol®	1:6	100%	100%	95%
	1:8	100%	99%	95%
Enviro Klean® Safety Klean	1:2	99%	95%	95%
	1:3	95%	95%	95%





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## Test Results – New Construction Cleaning

### % Removal (Type S Mortar)

#### “Red Straight-Edge”

Product	Dilution	3 day	7 day	14 day
Sure Klean® 600 Detergent	1:6	100%	100%	100%
	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%	100%
	1:3	100%	100%	100%

#### “Santee Gray”

Product	Dilution	3 day	7 day	14 day
Sure Klean® Vana Trol®	1:6	100%	100%	100%
	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%	100%
	1:3	100%	100%	100%

#### “Savannah Brown”

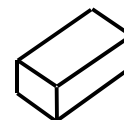
Product	Dilution	3 day	7 day	14 day
Sure Klean® Vana Trol®	1:6	100%	100%	99%
	1:8	100%	100%	90%
Enviro Klean® Safety Klean	1:2	100%	100%	90%
	1:3	100%	100%	90%

#### “Tan”

Product	Dilution	3 day	7 day	14 day
Sure Klean® Vana Trol®	1:6	100%	100%	100%
	1:8	100%	100%	95%
Enviro Klean® Safety Klean	1:2	100%	100%	95%
	1:3	100%	100%	95%



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## Test Results – New Construction Cleaning

### % Removal (Sanded Grout)

#### “Bourbon Street”

Product	Dilution	3 day	7 day
Sure Klean® 600 Detergent	1:6	95%	95%
	1:8	95%	95%
Enviro Klean® Safety Klean	1:2	95%	95%
	1:3	95%	95%

#### “Burgundy Straight-Edge”

Product	Dilution	3 day	7 day
Sure Klean® 600 Detergent	1:6	99%	99%
	1:8	99%	99%
Enviro Klean® Safety Klean	1:2	95%	99%
	1:3	95%	95%

#### “Dark Gray”

Product	Dilution	3 day	7 day
Sure Klean® Vana Trol®	1:6	99%	99%
	1:8	99%	99%
Enviro Klean® Safety Klean	1:2	99%	99%
	1:3	99%	99%

#### “Dark Pink”

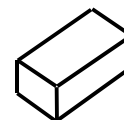
Product	Dilution	3 day	7 day
Sure Klean® Vana Trol®	1:6	95%	95%
	1:8	95%	95%
Enviro Klean® Safety Klean	1:2	95%	95%
	1:3	95%	95%

#### “Heartland Flash”

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



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## Test Results – New Construction Cleaning

### % Removal (Sanded Grout)

#### “Key West”

Product	Dilution	3 day	7 day
Sure Klean® Vana Trol®	1:6	99%	95%
	1:8	99%	95%
Enviro Klean® Safety Klean	1:2	95%	95%
	1:3	95%	95%

#### “Medium Brown”

Product	Dilution	3 day	7 day
Sure Klean® Vana Trol®	1:6	100%	100%
	1:8	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%
	1:3	100%	100%

#### “Parquet Tan”

Product	Dilution	3 day	7 day
Sure Klean® Vana Trol®	1:6	100%	100%
	1:8	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%
	1:3	100%	100%

#### “Peachtree Avenue”

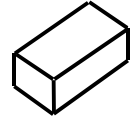
Product	Dilution	3 day	7 day
Sure Klean® Vana Trol®	1:6	99%	95%
	1:8	99%	95%
Enviro Klean® Safety Klean	1:2	95%	90%
	1:3	95%	90%

#### “Pink”

Product	Dilution	3 day	7 day
Sure Klean® Vana Trol®	1:6	99%	99%
	1:8	95%	95%
Enviro Klean® Safety Klean	1:2	99%	99%
	1:3	99%	99%



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## Test Results – New Construction Cleaning

### % Removal (Sanded Grout)

#### “Red Straight-Edge”

Product	Dilution	3 day	7 day
Sure Klean® 600 Detergent	1:6	95%	95%
	1:8	95%	95%
Enviro Klean® Safety Klean	1:2	99%	99%
	1:3	99%	95%

#### “Santee Gray”

Product	Dilution	3 day	7 day
Sure Klean® Vana Trol®	1:6	100%	100%
	1:8	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%
	1:3	100%	100%

#### “Savannah Brown”

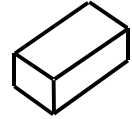
Product	Dilution	3 day	7 day
Sure Klean® Vana Trol®	1:6	99%	99%
	1:8	99%	99%
Enviro Klean® Safety Klean	1:2	99%	100%
	1:3	99%	100%

#### “Tan”

Product	Dilution	3 day	7 day
Sure Klean® Vana Trol®	1:6	99%	99%
	1:8	95%	95%
Enviro Klean® Safety Klean	1:2	95%	95%
	1:3	95%	95%



# PALLET TAG PROGRAM LABORATORY REPORT



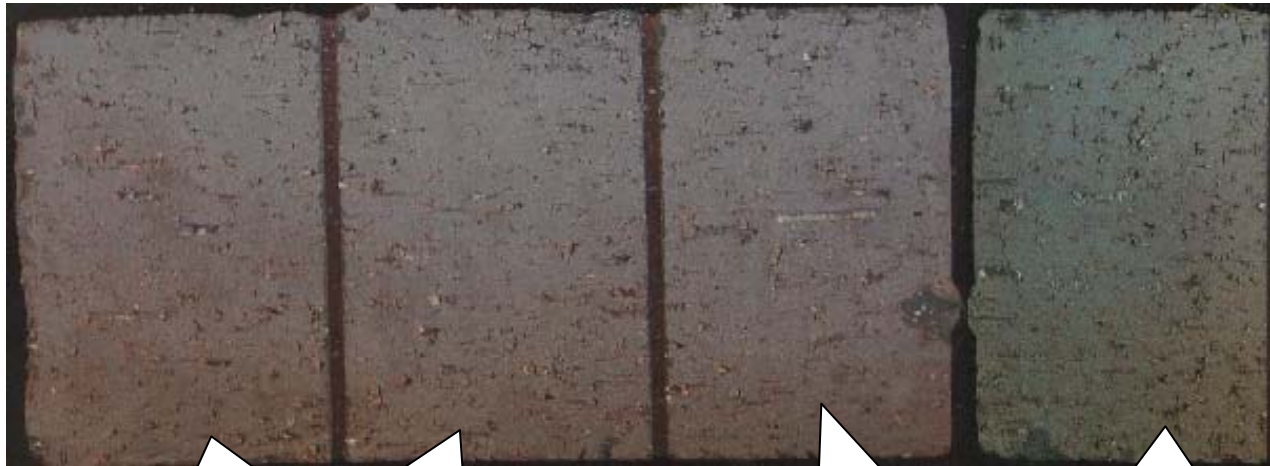
**PROSOCO, Inc.**

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## PHOTOGRAPHS – Cleaning (Type S Mortar Removal)

### “Bourbon Street” Clay Paver; 3 Day Cleaning



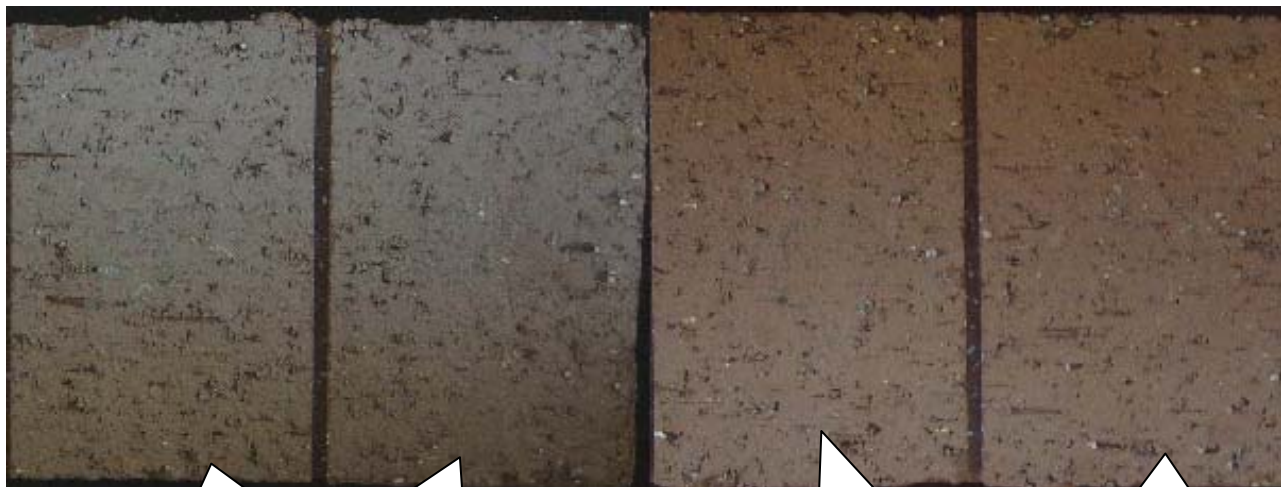
**Sure Klean® 600  
Detergent 1:6**

**Sure Klean® 600  
Detergent 1:8**

**Enviro Klean®  
Safety Klean 1:2**

**Enviro Klean®  
Safety Klean 1:3**

### “Bourbon Street” Clay Paver; 7 day cleaning



**Sure Klean® 600  
Detergent 1:6**

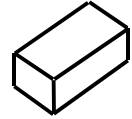
**Sure Klean® 600  
Detergent 1:8**

**Enviro Klean®  
Safety Klean 1:2**

**Enviro Klean®  
Safety Klean 1:3**



# PALLET TAG PROGRAM LABORATORY REPORT



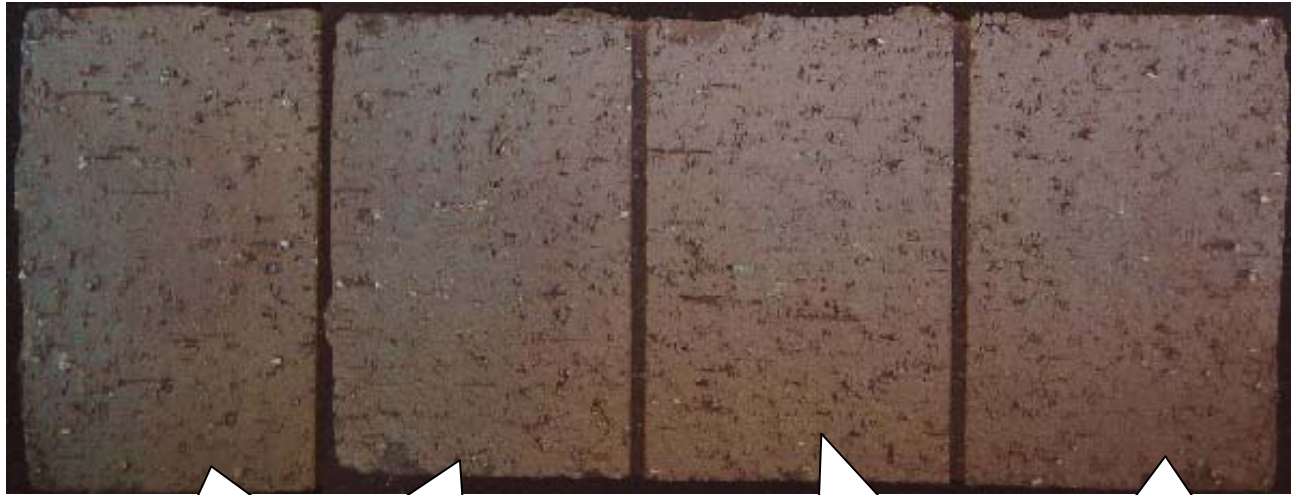
**PROSOCO, Inc.**

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## PHOTOGRAPHS – Continued (Type S Mortar Removal)

**“Bourbon Street” Clay Paver; 14 day cleaning**



**Sure Klean® 600  
Detergent 1:6**

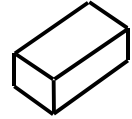
**Sure Klean® 600  
Detergent 1:8**

**Enviro Klean®  
Safety Klean 1:2**

**Enviro Klean®  
Safety Klean 1:3**



# PALLET TAG PROGRAM LABORATORY REPORT



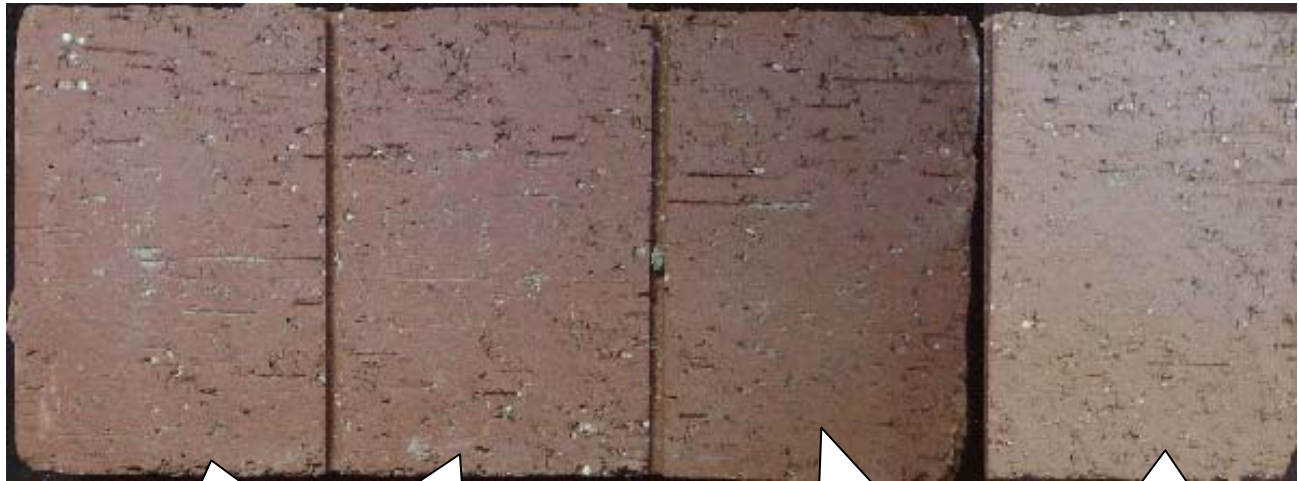
**PROSOCO, Inc.**

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## PHOTOGRAPHS – Cleaning (Sanded Grout Removal)

### “Bourbon Street” Clay Paver; 3 Day Cleaning



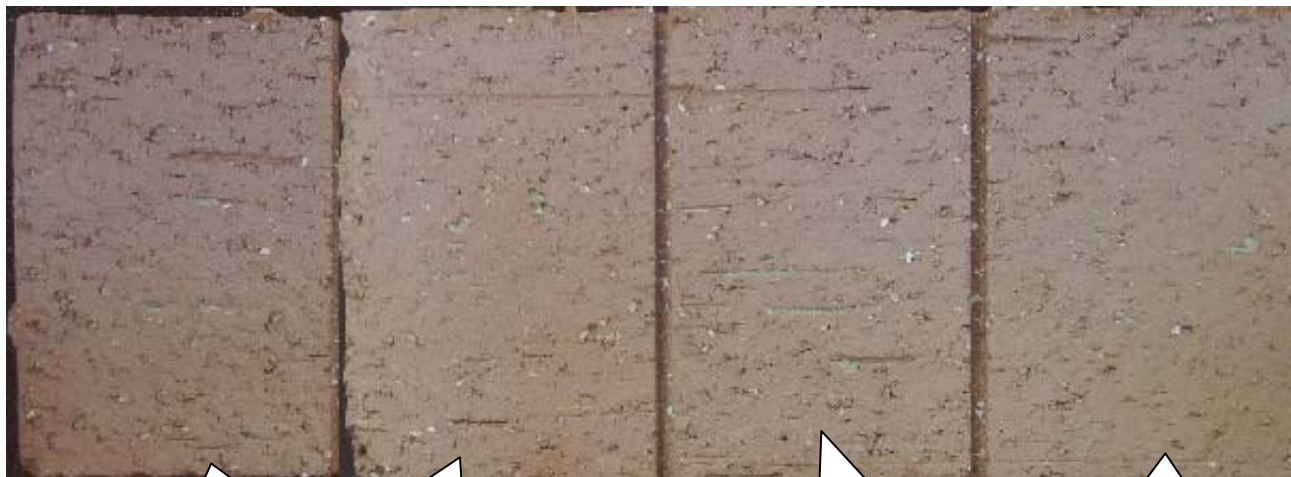
**Sure Klean® 600  
Detergent 1:6**

**Sure Klean® 600  
Detergent 1:8**

**Enviro Klean®  
Safety Klean 1:2**

**Enviro Klean®  
Safety Klean 1:3**

### “Bourbon Street” Clay Paver; 7 day cleaning



**Sure Klean® 600  
Detergent 1:6**

**Sure Klean® 600  
Detergent 1:8**

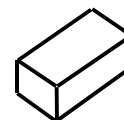
**Enviro Klean®  
Safety Klean 1:2**

**Enviro Klean®  
Safety Klean 1:3**





# PALLET TAG PROGRAM LABORATORY REPORT



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## CONCLUSIONS – New Construction Cleaning

Based on the test results, all PROSOCO, Inc. products tested performed well in removing excess mortar or grout smears from the submitted clay pavers. These products performed well in removing the mortar soils even after allowing the mortar to remain on the surface of the pavers for 14 days under ideal curing conditions, and performed well in removing the grout soils 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, 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 paver submitted by Boral Bricks, Inc., Augusta, GA, are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar while limiting surface alterations.

Paver Type	New Construction Cleaning (Type S, 14 Days)	New Construction Cleaning (Sanded Grout, 7 Days)
“Bourbon Street” “Burgundy Straight-Edge” “Heartland Flash” “Red Straight-Edge”	Sure Klean® 600 Detergent (1:8) OR Enviro Klean® Safety Klean (1:3)	Sure Klean® 600 Detergent (1:8) OR Enviro Klean® Safety Klean (1:3)
“Dark Gray” “Dark Pink” “Key West” “Medium Brown” “Parquet Tan” “Peachtree Avenue” “Pink” “Santee Gray” “Savannah Brown” “Tan”	Sure Klean® Vana Trol® (1:8) OR Enviro Klean® Safety Klean (1:3)	Sure Klean® Vana Trol® (1:8) OR Enviro Klean® Safety Klean (1:3)

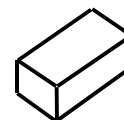
Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar, grout, and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction. Rinsing with high-pressure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

**Sure Klean® 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.

**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.

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### TEST METHOD – Limiting Surface Alterations:

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

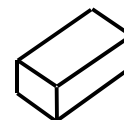
1. Prewet the surface with water.
2. Apply the cleaner.
3. Allow the appropriate dwell time, as specified.

Safety Klean.....	3-5 minutes
600 Detergent .....	3-5 minutes
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 – Limiting Surface Alterations

<b>Substrate:</b> Clay Paver		<b>Pigment Color:</b> “Bourbon Street”			
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
<b>Substrate:</b> Clay Paver		<b>Pigment Color:</b> “Burgundy Straight-Edge”			
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
<b>Substrate:</b> Clay Paver		<b>Pigment Color:</b> “Dark Gray”			
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
<b>Substrate:</b> Clay Paver		<b>Pigment Color:</b> “Dark Pink”			
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
<b>Substrate:</b> Clay Paver		<b>Pigment Color:</b> “Heartland Flash”			
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

1 – change – slight

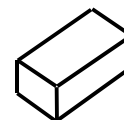
2 – change – moderate

3 – change – heavy

4 – change - excessive



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## TEST RESULTS – Limiting Surface Alterations

Substrate: Clay Paver		Pigment Color: “Key West”			
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 Paver		Pigment Color: “Medium Brown”			
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 Paver		Pigment Color: “Parquet Tan”			
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 Paver		Pigment Color: “Peachtree Avenue”			
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 Paver		Pigment Color: “Pink”			
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

0 – No change

1 – change – slight

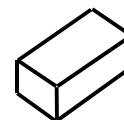
2 – change – moderate

3 – change – heavy

4 – change - excessive



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## TEST RESULTS – Limiting Surface Alterations

Substrate: Clay Paver		Pigment Color: “Red Straight-Edge”			
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
Substrate: Clay Paver		Pigment Color: “Santee Gray”			
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 Paver		Pigment Color: “Savannah Brown”			
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 Paver		Pigment Color: “Tan”			
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

0 – No change

1 – change – slight

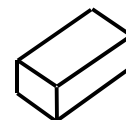
2 – change – moderate

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 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 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 paver submitted by Boral Bricks, Inc., Augusta, GA, are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar while limiting surface alterations.

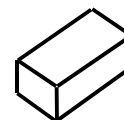
Paver Type	Limiting Surface Alterations
“Bourbon Street” “Burgundy Straight-Edge” “Heartland Flash” “Red Straight-Edge”	Sure Klean® 600 Detergent (1:8) OR Enviro Klean® Safety Klean (1:3)
“Dark Gray” “Dark Pink” “Key West” “Medium Brown” “Parquet Tan” “Peachtree Avenue” “Pink” “Santee Gray” “Savannah Brown” “Tan”	Sure Klean® Vana Trol® (1:8) OR Enviro Klean® Safety Klean (1:3)

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

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## **DESCRIPTIONS OF PRODUCTS EVALUATED - Protective Water Repellents:**

**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.

**Sure Klean® Paver Enhancer** - A solvent-based blend of high-quality siloxanes modified to provide excellent water repellency and color enhancement to interlocking concrete, fired clay, porous tile and many types of natural stone surfaces. Paver Enhancer penetrates and reacts with the surface to form a chemical bond, providing long-term durability, alkali resistance and superior breatheability.

**Stand Off® SLX100 Water & Oil Repellent** - Combines water and oil repellency on most substrates to prevent staining by waterborne and oily substances. This modified “heat” 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® Impregnator** – Combines water and oil repellency to prevent staining by waterborne or oily substances. This special system offers invisible protection and low volatility.

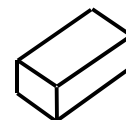
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## **SAMPLE PREPARATION - Protective Water Repellents:**

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.



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## 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 horizontal 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.

**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:

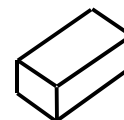
A rating of **AA** *Above Average* water repellent performance would require loss of no more than 5 ml X 20% = 1 ml.

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

A rating of **BA** *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:

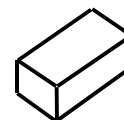
Water Absorption Tube Test: Horizontal RILEM II.4, 5.0 milliliters, 20 minutes  
AA = Above Average      A = Average      BA = Below Average

<b>"Bourbon Street"</b>	<b>Results in mL loss</b>	<b>Ranking</b>
Untreated Control	0.5	--
Paver Enhancer	0.0	<u>AA</u>
SLX100	0.0	<u>AA</u>
Impregnator	0.0	<u>AA</u>
Saltguard® WB	0.3	<u>AA</u>
<b>"Burgundy Straight-Edge"</b>	<b>Results in mL loss</b>	<b>Ranking</b>
Untreated Control	0.3	--
Paver Enhancer	0.0	<u>AA</u>
SLX100	0.0	<u>AA</u>
Impregnator	0.0	<u>AA</u>
Saltguard® WB	0.0	<u>AA</u>
<b>"Dark Gray"</b>	<b>Results in mL loss</b>	<b>Ranking</b>
Untreated Control	4.3	--
Paver Enhancer	0.0	<u>AA</u>
SLX100	0.0	<u>AA</u>
Impregnator	0.0	<u>AA</u>
Saltguard® WB	0.3	<u>AA</u>
<b>"Dark Pink"</b>	<b>Results in mL loss</b>	<b>Ranking</b>
Untreated Control	2.2	--
Paver Enhancer	0.0	<u>AA</u>
SLX100	0.0	<u>AA</u>
Impregnator	0.0	<u>AA</u>
Saltguard® WB	0.2	<u>AA</u>
<b>"Heartland Flash"</b>	<b>Results in mL loss</b>	<b>Ranking</b>
Untreated Control	0.5	--
Paver Enhancer	0.0	<u>AA</u>
SLX100	0.0	<u>AA</u>
Impregnator	0.0	<u>AA</u>
Saltguard WB	0.0	<u>AA</u>
<b>"Key West"</b>	<b>Results in mL loss</b>	<b>Ranking</b>
Untreated Control	5.0	--
Paver Enhancer	0.0	<u>AA</u>
SLX100	0.0	<u>AA</u>
Impregnator	0.0	<u>AA</u>
Saltguard® WB	0.2	<u>AA</u>





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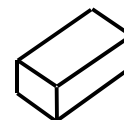
## TEST RESULTS:

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

<b>"Medium Brown"</b>	<b>Results in mL loss</b>	<b><u>Ranking</u></b>
Untreated Control	2.4	--
Paver Enhancer	0.0	<u>AA</u>
SLX100	0.0	<u>AA</u>
Impregnator	0.0	<u>AA</u>
Saltguard® WB	0.0	<u>AA</u>
<b>"Parquet Tan"</b>	<b>Results in mL loss</b>	<b><u>Ranking</u></b>
Untreated Control	0.2	--
Paver Enhancer	0.0	<u>AA</u>
SLX100	0.0	<u>AA</u>
Impregnator	0.0	<u>AA</u>
Saltguard® WB	0.0	<u>AA</u>
<b>"Peachtree Avenue"</b>	<b>Results in mL loss</b>	<b><u>Ranking</u></b>
Untreated Control	1.4	--
Paver Enhancer	0.0	<u>AA</u>
SLX100	0.0	<u>AA</u>
Impregnator	0.0	<u>AA</u>
Saltguard® WB	0.0	<u>AA</u>
<b>"Pink"</b>	<b>Results in mL loss</b>	<b><u>Ranking</u></b>
Untreated Control	5.0	--
Paver Enhancer	0.0	<u>AA</u>
SLX100	0.0	<u>AA</u>
Impregnator	0.0	<u>AA</u>
Saltguard® WB	0.5	<u>AA</u>
<b>"Red Straight-Edge"</b>	<b>Results in mL loss</b>	<b><u>Ranking</u></b>
Untreated Control	1.5	--
Paver Enhancer	0.0	<u>AA</u>
SLX100	0.0	<u>AA</u>
Impregnator	0.0	<u>AA</u>
Saltguard® WB	0.0	<u>AA</u>
<b>"Santee Gray"</b>	<b>Results in mL loss</b>	<b><u>Ranking</u></b>
Untreated Control	0.8	--
Paver Enhancer	0.0	<u>AA</u>
SLX100	0.0	<u>AA</u>
Impregnator	0.0	<u>AA</u>
Saltguard® WB	0.3	<u>AA</u>



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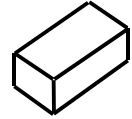
## TEST RESULTS:

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

"Savannah Brown"	Results in mL loss	Ranking
Untreated Control	0.5	--
Paver Enhancer	0.0	<u>AA</u>
SLX100	0.0	<u>AA</u>
Impregnator	0.0	<u>AA</u>
Saltguard® WB	0.5	<u>AA</u>
"Tan"	Results in mL loss	Ranking
Untreated Control	1.1	--
Paver Enhancer	0.0	<u>AA</u>
SLX100	0.0	<u>AA</u>
Impregnator	0.0	<u>AA</u>
Saltguard® WB	0.0	<u>AA</u>



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## PHOTOGRAPH – Water Repellents

### “Bourbon Street” Clay Paver; RILEM Testing



**Sure Klean®  
Paver  
Enhancer**

**Untreated  
Control**

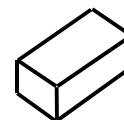
**Stand Off®  
SLX100 Water &  
Oil Repellent**

**Stand Off®  
Impregnator**

**Consolideck®  
Saltguard®  
WB**



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## CONCLUSIONS – Protective Water Repellents:

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

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## RECOMMENDATIONS – Protective Water Repellents:

Recommendations for water repellent treatments for each type of clay paver submitted by Boral Bricks, Inc., Augusta, GA, 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.

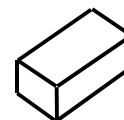
Paver Type	Water Repellent
All Submitted Clay Pavers	Sure Klean <sup>®</sup> Paver Enhancer OR Consolideck <sup>®</sup> Saltguard <sup>®</sup> WB OR Stand Off <sup>®</sup> SLX100 Water & Oil Repellent OR Stand Off <sup>®</sup> Impregnator

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® 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.

**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® Impregnator** – Combines water and oil repellency to prevent staining by waterborne or oily substances. This special system offers invisible protection and low volatility.

### **Kitchen Products Evaluated:**

Coca Cola  
Ketchup  
Mustard  
Red wine  
Balsamic Vinegar  
Soy Sauce  
Olive Oil  
Wesson Oil  
Coffee

### **Temperature:**

ambient (~70°F)  
ambient (~70°F)  
ambient (~70°F)  
ambient (~70°F)  
ambient (~70°F)  
ambient (~70°F)  
ambient (~70°F)  
(~250°F)  
(~120°F)

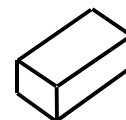
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## **SAMPLE PREPARATION – Stain Repellency**

Samples were cleaned with Enviro Klean® 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 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)

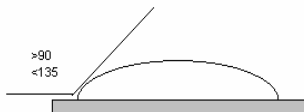
1. No wetting of contact area (no darkening); angle less than  $90^\circ$



2. Wetting contained to the contact area (slight darkening); angle is less than  $90^\circ$



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



4. Wetting beyond the contact area (darkening); angle is greater than  $135^\circ$



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

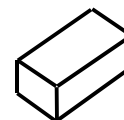


### Stain Removal Evaluation

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.



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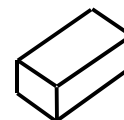
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## TEST RESULTS – Surface Beading

“Bourbon Street”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4	-	-	3	3	3	3	4	4
STMP	3	-	-	3	3	3	2	3	3
SLX 100	2	-	-	2	2	2	2	2	3
Impregnator	2	-	-	2	2	2	2	3	3
“Burgundy Straight-Edge”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4	-	-	3	3	3	3	4	4
STMP	3	-	-	3	3	3	2	3	3
SLX 100	2	-	-	2	2	2	2	2	3
Impregnator	2	-	-	2	2	2	2	3	3
“Dark Gray”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4	-	-	3	3	3	3	4	4
STMP	3	-	-	3	3	3	2	3	3
SLX 100	2	-	-	2	2	2	2	2	3
Impregnator	2	-	-	2	2	2	2	3	3
“Dark Pink”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4	-	-	3	3	3	3	4	4
STMP	3	-	-	3	3	3	2	3	3
SLX 100	2	-	-	2	2	2	2	2	3
Impregnator	2	-	-	2	2	2	2	3	3
“Heartland Flash”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4	-	-	3	3	3	3	4	4
STMP	3	-	-	3	3	3	2	3	3
SLX 100	2	-	-	2	2	2	2	2	3
Impregnator	2	-	-	2	2	2	2	3	3
“Key West”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4	-	-	3	3	3	3	4	4
STMP	3	-	-	3	3	3	2	3	3
SLX 100	2	-	-	2	2	2	2	2	3
Impregnator	2	-	-	2	2	2	2	3	3



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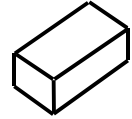
## TEST RESULTS – Surface Beading

“Medium Brown”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4	-	-	3	3	3	3	4	4
STMP	3	-	-	3	3	3	2	3	3
SLX 100	2	-	-	2	2	2	2	2	3
Impregnator	2	-	-	2	2	2	2	3	3
“Parquet Tan”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4	-	-	3	3	3	3	4	4
STMP	3	-	-	3	3	3	2	3	3
SLX 100	2	-	-	2	2	2	2	2	3
Impregnator	2	-	-	2	2	2	2	3	3
“Peachtree Avenue”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4	-	-	3	3	3	3	4	4
STMP	3	-	-	3	3	3	2	3	3
SLX 100	2	-	-	2	2	2	2	2	3
Impregnator	2	-	-	2	2	2	2	3	3
“Pink”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4	-	-	3	3	3	3	4	4
STMP	3	-	-	3	3	3	2	3	3
SLX 100	2	-	-	2	2	2	2	2	3
Impregnator	2	-	-	2	2	2	2	3	3
“Red Straight-Edge”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4	-	-	3	3	3	3	4	4
STMP	3	-	-	3	3	3	2	3	3
SLX 100	2	-	-	2	2	2	2	2	3
Impregnator	2	-	-	2	2	2	2	3	3
“Santee Gray”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4	-	-	3	3	3	3	4	4
STMP	3	-	-	3	3	3	2	3	3
SLX 100	2	-	-	2	2	2	2	2	3
Impregnator	2	-	-	2	2	2	2	3	3





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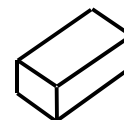
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## TEST RESULTS – Surface Beading

“Savannah Brown”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4	-	-	3	3	3	3	4	4
STMP	3	-	-	3	3	3	2	3	3
SLX 100	2	-	-	2	2	2	2	2	3
Impregnator	2	-	-	2	2	2	2	3	3
“Tan”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4	-	-	3	3	3	3	4	4
STMP	3	-	-	3	3	3	2	3	3
SLX 100	2	-	-	2	2	2	2	2	3
Impregnator	2	-	-	2	2	2	2	3	3



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## TEST RESULTS – Staining Removal

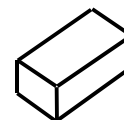
% Removal

### “Bourbon Street”

Untreated Control									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	0%	100%	95%	99%	95%	95%	100%
4 hour	100%	100%	10%	100%	95%	99%	95%	95%	100%
1 hour	100%	100%	90%	100%	99%	100%	95%	95%	100%
10 min.	100%	100%	100%	100%	100%	100%	95%	95%	100%
Stand Off® Stone, Tile & Masonry Protector									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off® 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%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off® Impregnator									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%



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## TEST RESULTS – Staining Removal

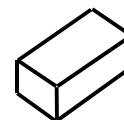
% Removal

### “Burgundy Straight-Edge”

Untreated Control									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	10%	100%	100%	100%	10%	10%	10%
4 hour	100%	100%	10%	100%	100%	100%	10%	10%	10%
1 hour	100%	100%	100%	100%	100%	100%	10%	10%	10%
10 min.	100%	100%	100%	100%	100%	100%	10%	10%	10%
Stand Off <sup>®</sup> Stone, Tile & Masonry Protector									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
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%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off <sup>®</sup> Impregnator									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%



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## TEST RESULTS – Staining Removal

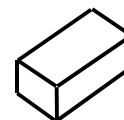
% Removal

### “Dark Gray”

Untreated Control									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	100%	100%	100%	100%	10%	10%	100%
4 hour	100%	100%	10%	100%	100%	100%	10%	10%	100%
1 hour	100%	100%	100%	100%	100%	100%	10%	10%	100%
10 min.	100%	100%	100%	100%	100%	100%	10%	10%	100%
Stand Off <sup>®</sup> Stone, Tile & Masonry Protector									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
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%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off <sup>®</sup> Impregnator									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%



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## TEST RESULTS – Staining Removal

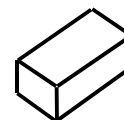
% Removal

“Dark Pink”

Untreated Control									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	100%	100%	100%	100%	10%	10%	10%
4 hour	100%	100%	10%	100%	100%	100%	10%	10%	10%
1 hour	100%	100%	100%	100%	100%	100%	10%	10%	10%
10 min.	100%	100%	100%	100%	100%	100%	10%	10%	10%
Stand Off <sup>®</sup> Stone, Tile & Masonry Protector									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
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%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off <sup>®</sup> Impregnator									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%



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## TEST RESULTS – Staining Removal

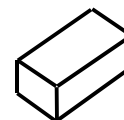
% Removal

### “Heartland Flash”

Untreated Control									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	50%	100%	100%	100%	30%	90%	100%
4 hour	100%	100%	100%	100%	100%	100%	90%	90%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	90%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off <sup>®</sup> Stone, Tile & Masonry Protector									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
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%	50%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off <sup>®</sup> Impregnator									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	30%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%



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## TEST RESULTS – Staining Removal

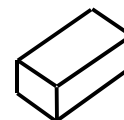
% Removal

### “Key West”

Untreated Control									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	10%	100%	100%	100%	10%	10%	10%
4 hour	100%	100%	30%	100%	100%	100%	10%	10%	10%
1 hour	100%	100%	100%	100%	100%	100%	10%	10%	10%
10 min.	100%	100%	100%	100%	100%	100%	10%	10%	10%
Stand Off <sup>®</sup> Stone, Tile & Masonry Protector									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
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%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off <sup>®</sup> Impregnator									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%



# PALLET TAG PROGRAM LABORATORY REPORT



PROSOCO, Inc.

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## TEST RESULTS – Staining Removal

% Removal

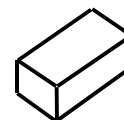
### “Medium Brown”

Untreated Control									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	10%	100%	100%	100%	10%	10%	100%
4 hour	100%	100%	10%	100%	100%	100%	10%	10%	100%
1 hour	100%	100%	100%	100%	100%	100%	10%	10%	100%
10 min.	100%	100%	100%	100%	100%	100%	10%	10%	100%
Stand Off <sup>®</sup> Stone, Tile & Masonry Protector									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
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%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off <sup>®</sup> Impregnator									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	70%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%





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## TEST RESULTS – Staining Removal

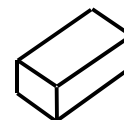
% Removal

### “Parquet Tan”

Untreated Control									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	10%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off <sup>®</sup> Stone, Tile & Masonry Protector									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
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%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off <sup>®</sup> Impregnator									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%



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## TEST RESULTS – Staining Removal

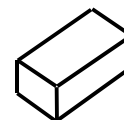
% Removal

### “Peachtree Avenue”

Untreated Control									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	10%	100%	100%	100%	10%	10%	100%
4 hour	100%	100%	10%	100%	100%	100%	10%	10%	100%
1 hour	100%	100%	100%	100%	100%	100%	10%	10%	100%
10 min.	100%	100%	100%	100%	100%	100%	10%	10%	100%
Stand Off® Stone, Tile & Masonry Protector									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off® 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%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off® Impregnator									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	70%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%



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## TEST RESULTS – Staining Removal

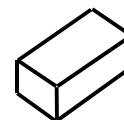
% Removal

“Pink”

Untreated Control									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	10%	100%	30%	30%	10%	10%	100%
4 hour	100%	100%	10%	100%	30%	30%	10%	10%	100%
1 hour	100%	100%	100%	100%	100%	100%	10%	10%	100%
10 min.	100%	100%	100%	100%	100%	100%	10%	10%	100%
Stand Off <sup>®</sup> Stone, Tile & Masonry Protector									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
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%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off <sup>®</sup> Impregnator									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%



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## TEST RESULTS – Staining Removal

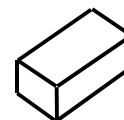
% Removal

### “Red Straight-Edge”

Untreated Control									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	10%	100%	30%	30%	10%	10%	100%
4 hour	100%	100%	10%	100%	100%	100%	10%	10%	100%
1 hour	100%	100%	100%	100%	100%	100%	10%	10%	100%
10 min.	100%	100%	100%	100%	100%	100%	10%	10%	100%
Stand Off <sup>®</sup> Stone, Tile & Masonry Protector									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
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%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off <sup>®</sup> Impregnator									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%



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## TEST RESULTS – Staining Removal

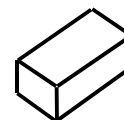
% Removal

### “Santee Gray”

Untreated Control									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	10%	100%	100%	100%	10%	10%	100%
4 hour	100%	100%	10%	100%	100%	100%	10%	10%	100%
1 hour	100%	100%	10%	100%	100%	100%	10%	10%	100%
10 min.	100%	100%	100%	100%	100%	100%	10%	10%	100%
Stand Off® Stone, Tile & Masonry Protector									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off® 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%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off® Impregnator									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%



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## TEST RESULTS – Staining Removal

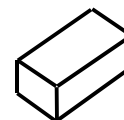
% Removal

### “Savannah Brown”

Untreated Control									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	90%	10%	100%	70%	70%	10%	10%	100%
4 hour	100%	90%	100%	100%	70%	80%	10%	10%	100%
1 hour	100%	100%	100%	100%	100%	100%	10%	10%	100%
10 min.	100%	100%	100%	100%	100%	100%	10%	10%	100%
Stand Off <sup>®</sup> Stone, Tile & Masonry Protector									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
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%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off <sup>®</sup> Impregnator									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%



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## TEST RESULTS – Staining Removal

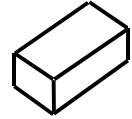
% Removal

“Tan”

Untreated Control									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	30%	70%	100%	100%	100%	10%	10%	10%
4 hour	100%	100%	70%	100%	100%	100%	10%	10%	10%
1 hour	100%	100%	100%	100%	100%	100%	10%	10%	10%
10 min.	100%	100%	100%	100%	100%	100%	10%	10%	10%
Stand Off <sup>®</sup> Stone, Tile & Masonry Protector									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
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%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off <sup>®</sup> Impregnator									
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	100%	100%	100%	100%	100%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%



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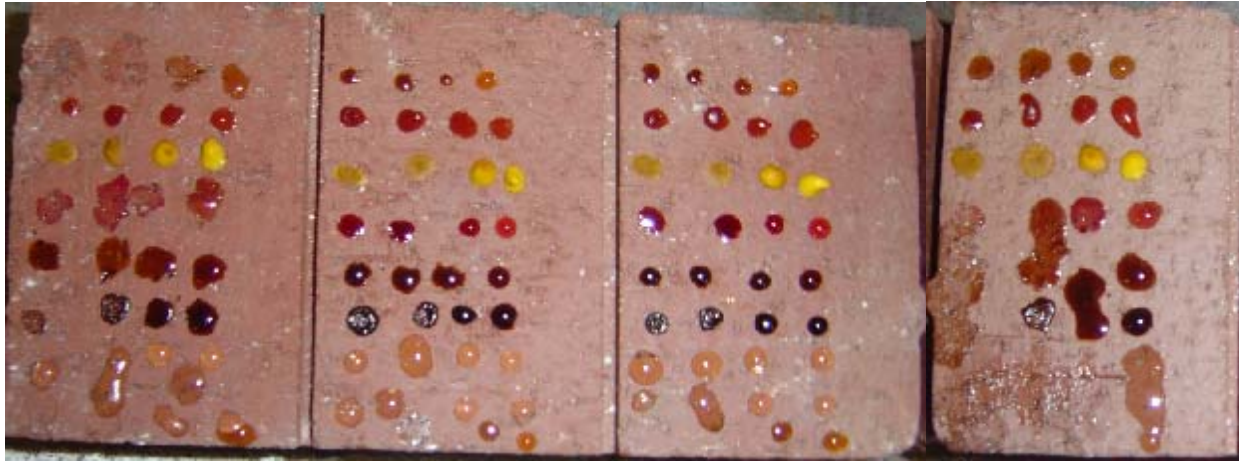


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## PHOTOGRAPHS- Stain Results

### “Bourbon Street” Clay Paver; Stains Applied



Stand Off® Stone,  
Tile, & Masonry  
Protector

Stand Off® SLX  
100 Water & Oil  
Repellent

Stand Off®  
Impregnator

Untreated Control

### “Bourbon Street” Clay Paver; Stains Removed



Stand Off® Stone,  
Tile, & Masonry  
Protector

Stand Off® SLX  
100 Water & Oil  
Repellent

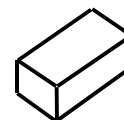
Stand Off®  
Impregnator

Untreated Control





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## **CONCLUSIONS – Stain Repellency**

Based upon laboratory evaluations, all of the treatments tested improved the surface beading of the samples. In addition, all of the treatments were effective in repelling the staining agents from the samples.

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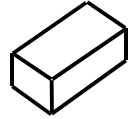
## **RECOMMENDATIONS – Stain Repellency**

Recommendations for stain resistance treatment for each type of clay paver submitted by Boral Bricks, Inc., Augusta, GA, are provided in the charts below. Recommendations are based on the treatments that proved most effective for providing stain repellency on all types submitted.

Sample	Stain Repellent	Maintenance Cleaner
All Submitted Clay Pavers	Stand Off <sup>®</sup> Impregnator OR Stand Off <sup>®</sup> Stone, Tile & Masonry Protector OR Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	Enviro Klean <sup>®</sup> 2010 All Surface Cleaner (1:10)



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## **SECTION E – COLOR ENHANCEMENT:**

### **DESCRIPTION OF PRODUCTS EVALUATED – Color Enhancement:**

**Sure Klean® Paver Enhancer** – A solvent-based blend of high-quality siloxanes modified to provide excellent water repellency and color enhancement to interlocking concrete, fired clay, porous tile and many types of natural stone surfaces. Paver Enhancer penetrates and reacts with the surface to form a chemical bond, providing long-term durability, alkali resistance and superior breatheability.

**Stand Off® Gloss 'N Guard** – A highly durable protective coating for tile, pavers, terrazzo and other polished and unpolished masonry. Gloss 'N Guard dries to a high-gloss finish that enhances the natural beauty of treated surfaces.

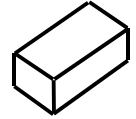
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### **TEST METHOD – COLOR ENHANCEMENT**

The color enhancing products were applied in accordance with the application instructions in the 2004 PROSOCO, Inc. Product Guide.



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## TEST RESULTS- COLOR ENHANCEMENT

Paver Name	Sure Klean <sup>®</sup> Paver Enhancer	Stand Off <sup>®</sup> Gloss N' Guard
"Bourbon Street"	3	3
"Burgundy Straight-Edge"	0	2
"Dark Gray"	1	1
"Dark Pink"	1	0
"Heartland Flash"	3	3
"Key West"	0	0
"Medium Brown"	0	0
"Parquet Tan"	0	1
"Peachtree Avenue"	0	0
"Pink"	1	0
"Red Straight-Edge"	0	1
"Santee Gray"	0	0
"Savannah Brown"	1	2
"Tan"	0	1

**Scale: 0- No enhancement; dull**

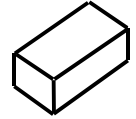
**1- Slight Enhancement**

**2- Moderate Enhancement**

**3- Significant Enhancement**



# PALLET TAG PROGRAM LABORATORY REPORT

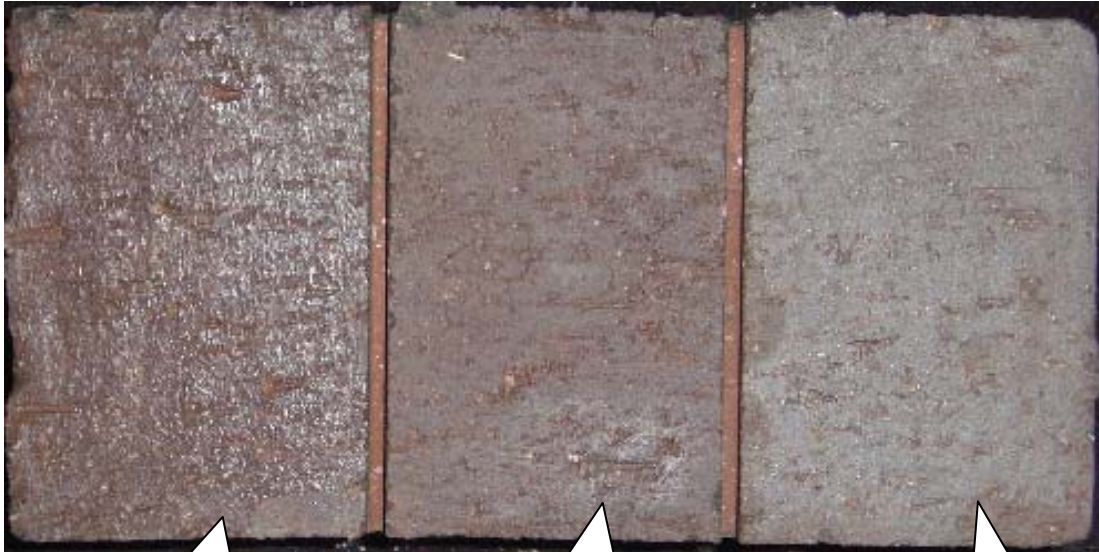


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**PHOTOGRAPH – Color Enhancement**

**“Bourbon Street” Clay Paver; Treatments Applied**



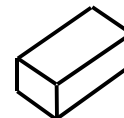
**Stand Off<sup>®</sup>  
Gloss N' Guard**

**Sure Klean<sup>®</sup>  
Paver Enhancer**

**Untreated  
Control**



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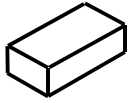
## RECOMMENDATIONS – Color Enhancement

Recommendations for color enhancement for each type of clay paver submitted by Boral Bricks, Inc., Augusta, GA, are provided in the chart below. Recommendations are based on the treatment that proved most effective in providing color enhancement to the samples.

Substrate	Color Enhancer
"Bourbon Street" "Dark Gray" "Heartland Flash"	Sure Klean <sup>®</sup> Paver Enhancer OR Stand Off <sup>®</sup> Gloss N' Guard
"Dark Pink" "Pink"	Sure Klean <sup>®</sup> Paver Enhancer
"Burgundy Straight-Edge" "Parquet Tan" "Red Straight-Edge" "Savannah Brown" "Tan"	Stand Off <sup>®</sup> Gloss N' Guard
"Key West" "Medium Brown" "Peachtree Avenue" "Santee Gray"	No Recommendation

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



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## ***Laboratory Report***

### **Pallet Tag Program Evaluation**

**Boral Bricks, Inc. (Pavers)  
Augusta, GA**

***Project No. 0407-08 PTP***

***Prepared For:***

**Boral Bricks, Inc. (Pavers)  
1449 Doug Barnard Pkwy  
Augusta, GA 30906**

***Prepared By:***



***PROSOCO, Inc.  
December 2004***