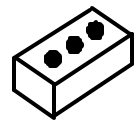




# PALLET CARD PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

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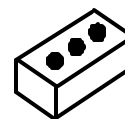
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### ATTACHMENTS

- Attachment #1 – PHOTO A
- Technical Services TECH Note RILEM Test Method No. II.4
- Product Data literature for all products evaluated



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**FOR:** Josh Carter  
**cc:** Bob Helton  
Paul Tessier

**SUBJECT:** Stone Legends  
Dallas, TX

**DATE:** October 29, 2001

**PROJECT:** 0110-03 PC

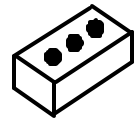
**SAMPLES SUBMITTED:**

<b>Sample</b>	<b>Color/Finish</b>	<b>Size</b>
(2) Smooth cast stone tiles	"Tan"	12" x 12" x 2"
(2) Smooth cast stone tiles	"White"	12" x 12" x 2"
(2) Smooth cast stone tiles	"Buff"	12" x 12" x 2"

Submitted by: Paul Tessier



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PROSOCO, Inc.

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## PURPOSE OF TESTING:

Three different colors of smooth cast stone tiles 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 and stain repellents, suitable for cast stone, will be evaluated.

**A. New Construction Cleaning** – Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner and Sure Klean<sup>®</sup> Vana Trol<sup>®</sup> were evaluated at various dilutions for removal of laboratory applied mortar.

To simulate new construction soiling, all tiles are placed on a bench with finished surface facing upward. Hollow cylinders measuring 50 mm in diameter and 75 mm tall are positioned on top of each tile and filled with a wet mixture of Ash Grove<sup>®</sup> Type N cementitious mortar. The wet, mortar-filled cylinder is allowed to remain in contact with the tile for 10 minutes before removal.

Soiled tiles are allowed to dry before test cleaning.

Heavy deposits of mortar are removed with dry scraping after 24 hours. Prepared cleaning solutions are then evaluated for their effectiveness in removing residual Ash Grove<sup>®</sup> Type N mortar staining after 7 days, 14 days, and 21 days of curing.

**B. Surface Alteration Testing** – Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner and Sure Klean<sup>®</sup> Vana Trol<sup>®</sup> were tested at various dilutions to determine if a cleaning program implemented to remove excess mortar and related new construction soiling would otherwise alter the appearance of cleaned surfaces. Surface Alteration was evaluated visually based upon perceived discoloration or erosion/etching of the masonry unit.

Aggregate Exposure is the visual examination of the tile comparing aggregate exposure of the untreated control surface to surfaces cleaned with selected product(s) at given dilutions.

Surface Pigment Alteration/Removal is the visual examination of the tile comparing the surface pigmentation of the untreated control to surfaces cleaned with selected product(s) at given dilutions.

Matrix Erosion is the visual examination comparing the untreated control surface to surfaces cleaned with selected products at given dilutions looking for any potential erosion/digestion of the cementitious matrix of the tile.

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

The following is the scale used for reporting results of all categories:

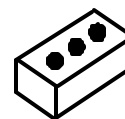
0 – no change	3 – heavy
1 – slight	4 – excessive
2 – moderate	

**C. Water Repellent Evaluation** – Sure Klean<sup>®</sup> Weather Seal Siloxane PD, Sure Klean<sup>®</sup> Weather Seal Siloxane WB Concentrate, Stand Off<sup>®</sup> Stone, Tile & Masonry Protector (STMP), and Stand Off<sup>®</sup> Limestone & Marble Protector (LMP) were evaluated on the submitted samples for their ability to provide water repellency.

**D. Stain Repellent Evaluation** – Stand Off<sup>®</sup> Stone, Tile & Masonry Protector (STMP), Stand Off<sup>®</sup> Limestone & Marble Protector (LMP), and Stand Off<sup>®</sup> Gloss 'N Guard were evaluated on the submitted samples for their ability to provide stain repellency.



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**PROSOCO, Inc.**

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**E. CLEANING PRODUCTS**

SAMPLE	Sure Klean® Burnished Custom Masonry Cleaner	Sure Klean® Vana Trol®
All submitted tiles	1:2	1:6
	1:3	1:8

**SURFACE ALTERATION PRODUCTS EVALUATED**

SAMPLE	Sure Klean® Burnished Custom Masonry Cleaner	Sure Klean® Vana Trol®
All submitted tiles	1:2	1:6
	1:3	1:8

**WATER REPELLENT PRODUCTS EVALUATED**

SAMPLE	TREATMENT	DILUTION
All submitted tiles	Sure Klean® Weather Seal Siloxane PD	Concentrate
	Sure Klean® Weather Seal Siloxane WB Concentrate	1:9
	Stand Off® Stone, Tile & Masonry Protector (STMP)	Concentrate
	Stand Off® Limestone & Marble Protector (LMP)	Concentrate

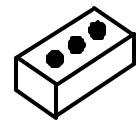
**STAIN REPELLENT PRODUCTS EVALUATED**

SAMPLE	TREATMENT
All submitted tiles	Stand Off® Stone, Tile & Masonry Protector (STMP)
	Stand Off® Limestone & Marble Protector (LMP)
	Stand Off® Gloss 'N Guard

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<sup>®</sup> Type N mortar from the submitted tiles.

Ash Grove<sup>®</sup> Type N cementitious mortar was prepared in compliance with the manufacturers instructions, applied to the tile and allowed to cure for 7, 14, and 21 days prior to removal with high pressure water rinse using pressure rinsing equipment and chemical assist. The removal of gray Ash Grove<sup>®</sup> Type N cementitious masonry cement mortar after 7, 14, and 21 days of curing was visually evaluated.

**Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner** – A general purpose, nonetching acidic cleaner for custom masonry and colored concrete. Removes rust, mud, oil, atmospheric dirt, and other stains without altering the surface texture. Liquid concentrate for dilution with 2-3 parts water. Apply by brush or low-pressure spray.

**Sure Klean<sup>®</sup> Vana Trol<sup>®</sup>** – 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 4-25 parts water. Apply by brush or low-pressure spray.

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

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

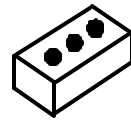
1. Prewet the surface with water.
2. Apply the cleaner.
3. Allow the appropriate dwell time, as specified.
 

Burnished Custom Masonry Cleaner .....	5 minutes
Vana Trol <sup>®</sup> .....	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

	<b>“Tan”</b>		
	<u>7 day</u>	<u>14 day</u>	<u>21 day</u>
Burnished Custom Masonry Cleaner (1:2)	98%	98%	90%
Burnished Custom Masonry Cleaner (1:3)	90%	87%	85%
Vana Trol® (1:6)	100%	99%	95%
Vana Trol® (1:8)	97%	97%	95%
	<b>“White”</b>		
	<u>7 day</u>	<u>14 day</u>	<u>21 day</u>
Burnished Custom Masonry Cleaner (1:2)	100%	100%	95%
Burnished Custom Masonry Cleaner (1:3)	98%	98%	97%
Vana Trol® (1:6)	100%	100%	100%
Vana Trol® (1:8)	100%	100%	100%
	<b>“Buff”</b>		
	<u>7 day</u>	<u>14 day</u>	<u>21 day</u>
Burnished Custom Masonry Cleaner (1:2)	100%	98%	95%
Burnished Custom Masonry Cleaner (1:3)	95%	95%	90%
SK Vana Trol® (1:6)	100%	100%	98%
SK Vana Trol® (1:8)	99%	98%	98%

## CONCLUSIONS – New Construction Cleaning

Based on the test results, both cleaners and all dilutions performed well in removing excess mortar smears on the submitted tiles. The cleaners performed well in removing the mortar soils even after allowing the mortar to remain on the surface of the tiles for 21 days under ideal curing conditions. Sure Klean® Vana Trol® performed slightly better than Sure Klean® Burnished Custom Masonry Cleaner in terms of total mortar removal.

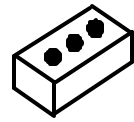
It is also recommended that the selected cleaners always be used in the lowest possible concentration, typically a 1:3 dilution for Sure Klean® Burnished Custom Masonry Cleaner and 1:8 dilution for Sure Klean® Vana Trol®. They should be rinsed with the lowest pressure of water as practical, garden hose strength preferred. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential adverse affect on the tiles, clean within 7 days of construction.

## RECOMMENDATIONS – New Construction Cleaning

Sample	Sure Klean® Burnished Custom Masonry Cleaner	Sure Klean® Vana Trol®
All submitted tiles	1:3	1:8



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## SECTION B – SURFACE ALTERATIONS

### DESCRIPTION OF PRODUCTS EVALUATED – Surface Alterations

**Sure Klean® Burnished Custom Masonry Cleaner** – A general purpose, nonetching acidic cleaner for custom masonry and colored concrete. Removes rust, mud, oil, atmospheric dirt, and other stains without altering the surface texture. Liquid concentrate for dilution with 2-3 parts water. Apply by brush or low-pressure spray.

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

### TEST METHOD – Surface Alterations

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

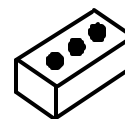
1. Prewet the surface with water.
2. Apply the cleaner.
3. Allow the appropriate dwell time, as specified.
 

Burnished Custom Masonry Cleaner .....	5 minutes
Vana Trol® .....	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 – Surface Alterations**

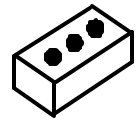
<b>Substrate:</b> Smooth cast stone tile		<b>Pigment Color:</b> “Tan”			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	Matrix Erosion	Staining
Burnished Custom Masonry Cleaner	1:2	0	0	0	0
Burnished Custom Masonry Cleaner	1:3	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0
<b>Substrate:</b> Smooth cast stone tile		<b>Pigment Color:</b> “White”			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	Matrix Erosion	Staining
Burnished Custom Masonry Cleaner	1:2	0	0	0	0
Burnished Custom Masonry Cleaner	1:3	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0
<b>Substrate:</b> Smooth cast stone tile		<b>Pigment Color:</b> “Buff”			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	Matrix Erosion	Staining
Burnished Custom Masonry Cleaner	1:2	0	1	0	0
Burnished Custom Masonry Cleaner	1:3	0	1	0	0
Vana Trol®	1:6	0	1	0	0
Vana Trol®	1:8	0	1	0	0

Scale used for reporting results of all categories	
0 – no change	3 – heavy
1 – slight	4 – excessive
2 – moderate	





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## CONCLUSIONS – Surface Alterations

These tests show that only slight surface alterations were caused by either of the cleaners to the “buff” colored cast stone tiles. There were no visible surface alterations on either the “tan” or “white” colored cast stone tiles.

It is recommended that the selected cleaners always be used in the lowest possible concentration, typically a 1:3 dilution for Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner and a 1:8 dilution for Sure Klean<sup>®</sup> Vana Trol<sup>®</sup>. They should be rinsed with the lowest pressure of water as practical, garden hose strength preferred. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential adverse affect on the tiles, clean within 7 days of construction.

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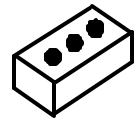
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## RECOMMENDATIONS – Surface Alterations

Based on these evaluations, both dilutions of Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner and Sure Klean<sup>®</sup> Vana Trol<sup>®</sup> tested can be recommended for job-site testing. They both are effective in removing excess mortar and job dirt from the cast stone tiles submitted by Stone Legends, Dallas, TX. The most appropriate cleaner and dilution should be determined on the specific job site, and will be dependent primarily on the nature and severity of soiling present at that location.



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PROSOCO, Inc.

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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**

**Sure Klean® Weather Seal Siloxane PD** – A low odor, alkaline stable, water-based blend of silanes and oligomeric alkoxy siloxanes. Weather Seal Siloxane PD is supplied pre-diluted and is designed for use on concrete and clay masonry surfaces. Weather Seal Siloxane PD penetrates more deeply than conventional water or solvent-based water repellents.

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

**Stand Off® Stone, Tile & Masonry Protector** – A penetrating oil and stain repellent. This easy-to-use, low-VOC, low-odor protective treatment improves the stain resistance and simplifies maintenance cleaning or interior and exterior stone, quarry tile, concrete and masonry surfaces. Surfaces treated with STMP resist staining from oil, food and waterborne matter while retaining their natural color, texture, and breathability.

**Stand Off® 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 sandstone, granite and slate, and many other types of masonry surfaces. Stand Off® 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.

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### **SAMPLE PREPARATION – Protective Water Repellents**

The submitted tiles were cut; oven dried and allowed to reabsorb atmospheric humidity for 24 hours prior to treatment. The treatment method for Siloxane PD and Siloxane WB Concentrate consisted of a wet-on-wet brush application and were allowed to cure for 14 days prior to testing. STMP and LMP were treated with a single saturating brush application and were allowed to cure 72 hours prior to testing.

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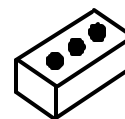
### **TEST METHODS – Protective Water Repellents**

#### **Water Absorption Tube Test: RILEM II.4, 60 mph, 20 Minutes**

The water absorption tube test simulating wind driven rain conditions was performed. This test simulates 60 mile per hour wind driven rain conditions for a period of 20 minutes.



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**PROSOCO, Inc.**

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## TEST RESULTS – Protective Water Repellents

**Water Absorption Tube Test: RILEM II.4, 60 mph, 20 Minutes**

	RESULTS
<b>“Tan” Cast stone tile</b>	
Untreated Control	<40 mph
Siloxane PD	60 mph
Siloxane WB (1:9)	60 mph
STMP	60 mph
LMP	60 mph
<b>“White” Cast stone tile</b>	
Untreated Control	59 mph
Siloxane PD	60 mph
Siloxane WB (1:9)	60 mph
STMP	60 mph
LMP	60 mph
<b>“Buff” Cast stone tile</b>	
Untreated Control	57 mph
Siloxane PD	60 mph
Siloxane WB (1:9)	60 mph
STMP	60 mph
LMP	60 mph

## CONCLUSIONS – Protective Water Repellents

Based upon laboratory evaluations, all of the applied treatments provided excellent water repellency to all of the submitted cast stone tiles. Stand Off<sup>®</sup> Stone, Tile & Masonry Protector and Stand Off<sup>®</sup> Limestone & Marble Protector provided water repellency and also the added benefit of stain resistance.

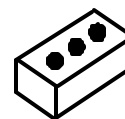
## RECOMMENDATIONS – Protective Water Repellents

Based on test results, all of the treatments can be recommended for job-site testing on all of the cast stone tiles, submitted by Stone Legends, Dallas, TX. For added stain repellency, Stand Off<sup>®</sup> Stone, Tile & Masonry Protector and Stand Off<sup>®</sup> Limestone & Marble Protector are recommended.

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 – PROTECTIVE STAIN REPELLENTS

The testing described below evaluates the suitability of stain protection treatments.

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

1. Ease of application
2. Color change
3. Removal of staining substances

## DESCRIPTIONS OF PRODUCTS EVALUATED – Protective Stain Repellents

**Stand Off<sup>®</sup> Stone, Tile & Masonry Protector** – A penetrating oil and stain repellent. This 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. Surfaces treated with STMP resist staining from oil, food and waterborne matter while retaining their natural color, texture, and breathability.

**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 sandstone, granite and slate, and many other types of masonry surfaces. Stand Off<sup>®</sup> 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.

**Stand Off<sup>®</sup> Gloss 'N Guard** - A highly durable, VOC-compliant, 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.

### Products Evaluated for Stain Removal:

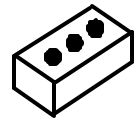
**Stand Off<sup>®</sup> All Surface Cleaner** – Dilution: 1 part concentrate : 10 parts water

### Food and Oil Products Evaluated:

Coca-Cola <sup>®</sup>	(~70°F)
Red Wine	(~70°F)
Balsamic Vinegar	(~70°F)
Mustard	(~70°F)
Hot Coffee	(~120°F)
Vegetable Oil	(~250°F)



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## SAMPLE PREPARATION – Protective Stain Repellents

The submitted tiles were cleaned, allowed to dry, and to reabsorb atmospheric humidity for 24 hours prior to treatment. Stand Off<sup>®</sup> Gloss 'N Guard was applied in a single thin coat. The other treatment methods consisted of a single saturating brush application. All treatments were allowed to cure at least 72 hours prior to testing.

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## TEST METHODS – Protective Stain Repellents

### Surface Beading Evaluation

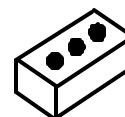
The food and oil products were applied to the test areas. The beading properties of the oils and liquids were visually evaluated within two minutes after application. The results are reported as a rating based on the angle of contact between the base of the droplet and the substrate. A rating of "1 or 2" indicates the smallest angle of contact (<90°) which correlates to "above average" repellency. A rating of "3 or 4" indicates "average" repellency. A rating of "5 or greater" indicates that the oil quickly absorbed into the substrate and correlates to "below average" repellency.

### Stain Resistance

The soiling agents were allowed to dwell on the treated and untreated substrate for times of 24 hours, 7 hours, 4 hours, and 1 hour. The test areas were then cleaned with Stand Off<sup>®</sup> 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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**PROSOCO, Inc.**

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**TEST RESULTS – Surface Beading**

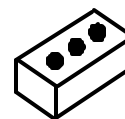
“Tan”					
Coca-Cola®	Red Wine	Balsamic Vinegar	Mustard	Coffee	Vegetable Oil
Untreated Control					
5	5	5	N/A	5	5
STMP					
1	2	2	N/A	4	3
LMP					
1	1	1	N/A	4	3
Gloss ‘N Guard					
3	4	4	N/A	4	5
“White”					
Coca-Cola®	Red Wine	Balsamic Vinegar	Mustard	Coffee	Vegetable Oil
Untreated Control					
5	5	5	N/A	5	5
STMP					
1	2	2	N/A	4	3
LMP					
1	2	2	N/A	4	3
Gloss ‘N Guard					
3	4	4	N/A	4	5
“Buff”					
Coca-Cola®	Red Wine	Balsamic Vinegar	Mustard	Coffee	Vegetable Oil
Untreated Control					
5	5	5	N/A	5	5
STMP					
1	2	2	N/A	4	3
LMP					
1	2	1	N/A	3	3
Gloss ‘N Guard					
3	4	4	N/A	4	5

N/A – This substance is not a free-flowing liquid

Rating System:    1 & 2    Above Average  
                           3 & 4    Average  
                               5        Below Average



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**TEST RESULTS – Stain Resistance**

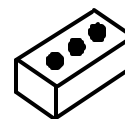
“Tan”						
	Coca-Cola®	Red Wine	Balsamic Vinegar	Mustard	Coffee	Vegetable Oil
<b>Untreated Control</b>						
24hr	98%	100%	85%*	90%*	98%	75%
7hr	98%	100%	85%*	98%*	98%	75%
4hr	98%	90%	85%*	98%*	98%	75%
1hr	98%	100%	85%*	98%*	98%	75%
<b>STMP</b>						
24hr	100%	90%	100%*	90%*	100%	100%
7hr	100%	90%	100%*	90%*	100%	100%
4hr	100%	90%	100%*	90%*	100%	100%
1hr	100%	98%	100%*	98%*	100%	100%
<b>LMP</b>						
24hr	100%	90%	100%*	95%*	100%	50%
7hr	100%	90%	100%*	98%*	100%	50%
4hr	100%	90%	100%*	98%*	100%	50%
1hr	100%	100%	100%*	100%*	100%	70%
<b>Gloss ‘N Guard</b>						
24hr	100%	98%	100%	100%	100%	99%
7hr	100%	98%	100%	100%	100%	99%
4hr	100%	98%	100%	100%	100%	99%
1hr	100%	100%	100%	100%	100%	99%

% Removal of stain following maintenance cleaning.

\* Indicates etching of surface treatment due to the acidic nature of the staining agent.



# PALLET CARD PROGRAM LABORATORY REPORT



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**TEST RESULTS – Stain Resistance Continued**

<b>“White”</b>						
	Coca-Cola®	Red Wine	Balsamic Vinegar	Mustard	Coffee	Vegetable Oil
<b>Untreated Control</b>						
24hr	95%	95%	75%*	75%*	95%	80%
7hr	95%	95%	75%*	90%*	95%	80%
4hr	95%	95%	75%*	90%*	95%	80%
1hr	95%	95%	75%*	90%*	95%	80%
<b>STMP</b>						
24hr	100%	90%	100%*	90%*	87%	98%
7hr	100%	90%	100%*	90%*	87%	98%
4hr	100%	90%	100%*	90%*	98%	98%
1hr	100%	98%	100%*	98%*	100%	98%
<b>LMP</b>						
24hr	100%	90%	100%*	98%*	100%	50%
7hr	100%	90%	100%*	98%*	100%	50%
4hr	100%	90%	100%*	98%*	100%	50%
1hr	100%	100%	100%*	100%*	100%	70%
<b>Gloss 'N Guard</b>						
24hr	100%	98%	100%	98%	100%	99%
7hr	100%	99%	100%	100%	100%	99%
4hr	100%	100%	100%	100%	100%	99%
1hr	100%	100%	100%	100%	100%	99%

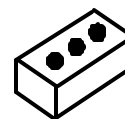
% Removal of stain following maintenance cleaning.

\* Indicates etching of surface treatment due to the acidic nature of the staining agent.





# PALLET CARD PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

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**TEST RESULTS – Stain Resistance Continued**

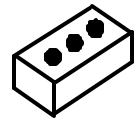
“Buff”						
	Coca-Cola®	Red Wine	Balsamic Vinegar	Mustard	Coffee	Vegetable Oil
<b>Untreated Control</b>						
24hr	100%	100%	85%*	98%*	98%	75%
7hr	100%	100%	85%*	100%*	98%	75%
4hr	100%	100%	85%*	100%*	98%	75%
1hr	100%	90%	90%*	100%*	98%	75%
<b>STMP</b>						
24hr	100%	90%	100%*	75%*	98%	98%
7hr	100%	90%	100%*	90%*	98%	98%
4hr	100%	90%	100%*	90%*	99%	98%
1hr	100%	100%	100%*	90%*	100%	98%
<b>LMP</b>						
24hr	100%	87%	100%*	90%*	98%	0%
7hr	100%	87%	100%*	98%*	98%	0%
4hr	100%	87%	100%*	100%*	99%	0%
1hr	100%	100%	100%*	100%*	100%	0%
<b>Gloss 'N Guard</b>						
24hr	100%	100%	100%	100%	100%	100%
7hr	100%	100%	100%	100%	100%	100%
4hr	100%	100%	100%	100%	100%	100%
1hr	100%	100%	100%	100%	100%	100%

% Removal of stain following maintenance cleaning.

\* Indicates etching of surface treatment due to the acidic nature of the staining agent.



# PALLET CARD PROGRAM LABORATORY REPORT



PROSOCO, Inc.

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## CONCLUSION – Protective Stain Repellents

Based on laboratory evaluations, Stand Off<sup>®</sup> Stone, Tile & Masonry Protector and Stand Off<sup>®</sup> Gloss 'N Guard performed the best at protecting the tiles from the staining agents. Based on beading characteristics, Stand Off<sup>®</sup> STMP and Stand Off<sup>®</sup> Limestone & Marble Protector performed the best overall, but Stand Off<sup>®</sup> LMP allowed the vegetable oil to penetrate and stain the tiles. Although Stand Off<sup>®</sup> Gloss 'N Guard did not provide the best beading characteristics, it was the best at protecting the tiles from staining as well as slightly enhancing their natural appearance and also leaving a slight gloss.

**NOTE:** See Attachment #1 "PHOTO A"

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## RECOMMENDATION – Protective Stain Repellents

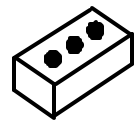
Based on test results, Stand Off<sup>®</sup> Stone, Tile & Masonry Protector and Stand Off<sup>®</sup> Gloss 'N Guard can be recommended for use on all of the cast stone tiles submitted by Stone Legends, Dallas, TX. For the best beading characteristics, Stand Off<sup>®</sup> STMP is recommended. For slight color enhancement and slight gloss, Stand Off<sup>®</sup> Gloss 'N Guard 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 stain repellent and procedures for a particular project.

See product literature for additional application and product information.

Jason L. Anderson  
Materials Testing Technician

JLA/



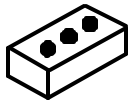
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Attachment #1

PHOTO A – “Tan” after staining





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***Laboratory Report***

**Pallet Card Evaluation**

**Stone Legends  
Dallas, TX**

***Project No. 0110-03 PC***

***Prepared For:***

**Josh Carter  
Stone Legends  
301 Pleasant Dr.  
Dallas, TX 75217**

***Prepared By:***



***PROSOCO, Inc.  
October 2001***