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ATTACHMENTS

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





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FOR: Ted Sullivan, Anchor Block

cc: Joe Talecki John Bourne

SUBJECT: Anchor Block

Brick, NJ

DATE: June 23, 2004

PROJECT: 0403-15 PTP

SAMPLES SUBMITTED: (9) types pf concrete pavers

Concrete pavers	Color	Number	Size			
"Brownstone Tumbled"	Brown	4	9½ x 6½ x 2¼ AND 6½ x 6½ x 2¼			
"Buff"	Tan	3				
"Charcoal"	Gray	5				
"Flash Brown"	Brown	5				
"Liberty Blend"	Red	5	6½ x 6½ x 2¼			
"Light Gray"	Light Gray	5	U/2 A U/2 A Z/4			
"Moss"	Green	3				
"Sable"	Gray	5				
"Sable Tumbled"	Gray	5				

Submitted by: Joe Talecki





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PURPOSE OF TESTING:

Nine types of concrete pavers were submitted to PROSOCO, Inc.'s Testing Laboratory with a request to determine if application of the products evaluated would produce any surface alteration during new construction cleaning operations. Additionally, the effectiveness of water repellents, graffiti repellents, and stain repellents suitable for concrete pavers were evaluated.

A. New Construction Cleaning – Sure Klean[®] Custom Masonry Cleaner was evaluated at various dilutions for removal of laboratory applied mortar.

To simulate new construction soiling, samples 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 sample and filled with a wet mixture of Ash Grove[®] Type S cementitious mortar. The wet, mortar-filled cylinder is allowed to remain in contact with the sample for 10 minutes before removal.

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® Type S mortar staining after 3 days, 7 days, and 14 days of curing.

B. Color Uniformity Testing* - Sure Klean[®] Custom Masonry Cleaner was evaluated at various dilutions to determine the optimal concentration of cleaner that leaves the external surface looking most like the natural through-body color of the sample. Color uniformity was evaluated by comparing aggregate exposure and surface pigment alternation/removal of each cleaned surface compared to the natural through-body color of the cast stone.

<u>Aggregate Exposure</u> is the visual examination comparing aggregate exposure of the interior, through-body section of the cast stone to surfaces cleaned with selected product(s) at given dilutions.

<u>Surface Pigment Alteration/Removal*</u> is the visual examination comparing the pigmentation of the interior, through-body section of the cast stone to surfaces cleaned with selected product(s) at given dilutions.

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

- 0 **Worst** match to through-body
- 3 **Good** match to through-body
- 1 **Poor** match to through-body
- 4 **Best** match to through-body
- 2 **Fair** match to through-body
- **C. Water Repellency** Consolideck[®] Saltguard WB and Sure Klean[®] Weather Seal Siloxane WB Concentrate were evaluated for their ability to provide water repellency to the submitted samples.
- **D.** Stain Repellency Stand Off[®] SLX100 Water & Oil Repellent was evaluated for its ability to control staining on the submitted samples.





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PRODUCTS EVALUATED

CLEANING AND LIMITING SURFACE ALTERATIONS PRODUCTS EVALUATED

SAMPLE	PRODUCT	DILUTION*
All Submitted Concrete Pavers	Sure Klean [®] Custom Masonry Cleaner	1:2, 1:4, 1:6

WATER REPELLENCY PRODUCTS EVALUATED

SAMPLE	Product	Dilution
All Submitted Concrete	Consolideck [®] Saltguard [®] WB	Concentrate
Pavers except "Buff" and "Moss"	Sure Klean [®] Weather Seal Siloxane WB Concentrate	1:9, 1:14

STAIN REPELLENCY PRODUCTS EVALUATED

SAMPLE	Product	Dilution
All Submitted Concrete Pavers except "Buff" and "Moss"	Stand Off [®] SLX100 Water & Oil Repellent	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 from the submitted concrete pavers.

Ash Grove[®] Type S cementitious mortar was prepared in compliance with the manufacturers instructions, applied to the concrete pavers and allowed to cure for 3, 7 and 14 days prior to removal with high pressure water rinse using pressure rinsing equipment and chemical assist. The removal of gray Ash Grove[®] Type S cementitious masonry cement mortar after 3, 7 and 14 days of curing was visually evaluated.

Sure Klean® Custom Masonry Cleaner – A general purpose, concentrated acidic cleaner for most custom masonry and colored concrete. Removes concrete splashes, excess mortar, mud, heavy efflorescence and surface soiling, leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 2-6 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.
- 4. 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

"Brownstone Tumbled"

	3 day	<u>7 day</u>	<u>14 day</u>
Custom Masonry Cleaner (1:2)	95%	95%	100%
Custom Masonry Cleaner (1:4)	95%	100%	100%
Custom Masonry Cleaner (1:6)	95%	100%	90%

"Buff"

	<u>3 day</u>	<u>7 day</u>	<u>14 day</u>
Custom Masonry Cleaner (1:2)	100%	100%	100%
Custom Masonry Cleaner (1:4)	100%	100%	100%
Custom Masonry Cleaner (1:6)	100%	100%	100%

"Charcoal"

	<u>3 day</u>	<u>7 day</u>	<u>14 day</u>
Custom Masonry Cleaner (1:2)	90%	95%	90%
Custom Masonry Cleaner (1:4)	90%	95%	90%
Custom Masonry Cleaner (1:6)	95%	95%	80%

"Flashed Brown"

	3 day	<u>7 day</u>	<u>14 day</u>
Custom Masonry Cleaner (1:2)	100%	100%	95%
Custom Masonry Cleaner (1:4)	100%	100%	90%
Custom Masonry Cleaner (1:6)	100%	95%	85%

"Liberty Blend"

	<u>3 day</u>	<u>7 day</u>	<u>14 day</u>
Custom Masonry Cleaner (1:2)	100%	98%	90%
Custom Masonry Cleaner (1:4)	100%	98%	95%
Custom Masonry Cleaner (1:6)	100%	100%	100%





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TEST RESULTS – New Construction Cleaning

% Removal

"Light Gray"

	<u>3 day</u>	<u>7 day</u>	<u>14 day</u>
Custom Masonry Cleaner (1:2)	95%	95%	95%
Custom Masonry Cleaner (1:4)	95%	95%	95%
Custom Masonry Cleaner (1:6)	100%	100%	100%

"Moss"

	<u>3 day</u>	<u>7 day</u>	<u>14 day</u>
Custom Masonry Cleaner (1:2)	100%	100%	100%
Custom Masonry Cleaner (1:4)	100%	100%	100%
Custom Masonry Cleaner (1:6)	100%	100%	100%

"Sable"

	<u>3 day</u>	<u>7 day</u>	<u>14 day</u>
Custom Masonry Cleaner (1:2)	98%	100%	95%
Custom Masonry Cleaner (1:4)	98%	100%	98%
Custom Masonry Cleaner (1:6)	98%	100%	90%

"Sable Tumbled"

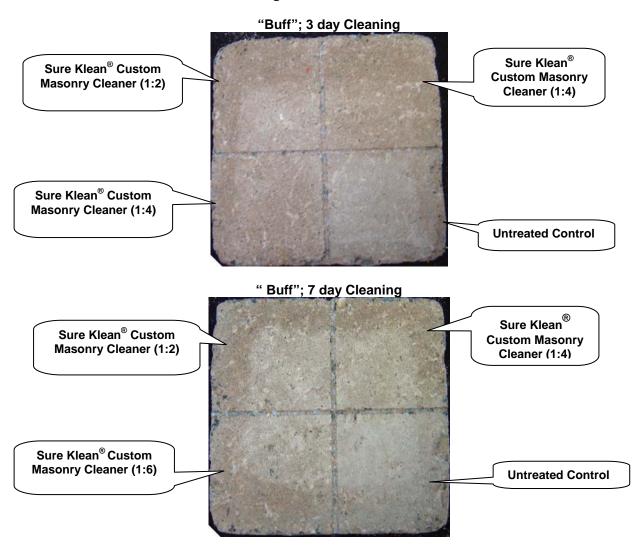
	3 day	7 day	<u>14 day</u>
Custom Masonry Cleaner (1:2)	100%	100%	100%
Custom Masonry Cleaner (1:4)	100%	100%	100%
Custom Masonry Cleaner (1:6)	100%	100%	95%





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PHOTOGRAPHS- New Construction Cleaning

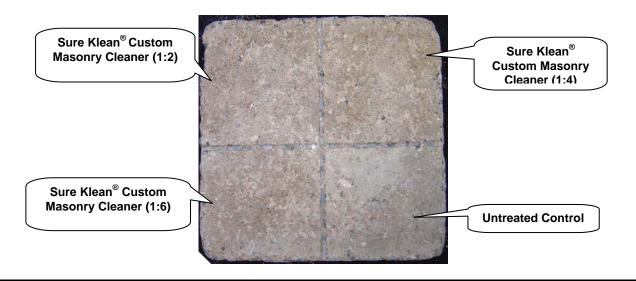


"Buff"; 14 day Cleaning





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CONCLUSIONS - New Construction Cleaning

Based on the test results, Sure Klean[®] Custom Masonry Cleaner in all dilutions performed well in removing excess mortar smears on the submitted concrete pavers. The cleaners performed well in removing the mortar soils even after allowing the mortar to remain on the surface of the concrete pavers for 14 days under ideal curing conditions.

It is also recommended that the selected cleaners always be used in the lowest possible concentration, typically a 1:6 dilution for Sure Klean[®] Custom Masonry Cleaner. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential adverse affect on the concrete pavers, clean within 3 days of construction.

RECOMMENDATIONS - New Construction Cleaning

Recommendations for cleaning for the concrete pavers submitted by Anchor Block, Brick, NJ, are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar.

Sample	New Construction Cleaning (Type S mortar, 14 day cleaning)
"Brownstone Tumbled", "Charcoal", and "Flash Brown" Concrete Pavers	Sure Klean [®] Custom Masonry Cleaner (1:4)
All Other Submitted Concrete Pavers	Sure Klean [®] Custom Masonry Cleaner (1:6)

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.

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





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SECTION B – COLOR UNIFORMITY:

DESCRIPTION OF PRODUCTS EVALUATED – Color Uniformity:

Sure Klean® Custom Masonry Cleaner – A general purpose, concentrated acidic cleaner for most custom masonry and colored concrete. Removes concrete splashes, excess mortar, mud, heavy efflorescence and surface soiling, leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 2-6 parts water. Apply by brush or low-pressure spray.

TEST METHOD – Color Uniformity Testing:

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

- 1. Pre-wet the surface with water.
- 2. Apply each cleaner at the appropriate dilutions.
- 4. Reapply the products and moderately agitate with a brush.
- 5. Pressure rinse thoroughly.*
- 6. Allow the sample to dry for at least 18 hours and visually examine.
- 7. Break the sample in half and compare the through-body surfaces to the cleaned surfaces for the best match.

^{*}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 – Color Uniformity

Substrate: Concrete Paver	Pigment Co	lor: "Brownstone Tumbled	"		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal		
Custom Masonry Cleaner	1:2	4	4		
Custom Masonry Cleaner	1:4	4	4		
Custom Masonry Cleaner	1:6	4	4		
Substrate: Concrete Paver	Pigment Co	lor: "Buff"			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal		
Custom Masonry Cleaner	1:2	4	4		
Custom Masonry Cleaner	1:4	4	4		
Custom Masonry Cleaner	1:6	4	4		
Substrate: Concrete Paver					
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal		
Custom Masonry Cleaner	1:2	4	4		
Custom Masonry Cleaner	1:4	4	4		
Custom Masonry Cleaner	1:6	4	4		
Substrate: Concrete Paver	Pigment Co	Pigment Color: "Flash Brown"			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal		
Custom Masonry Cleaner	1:2	4	4		
Custom Masonry Cleaner	1:4	4	4		
Custom Masonry Cleaner	1:6	4	4		
Substrate: Concrete Paver	Pigment Co	lor: "Liberty Blend"			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal		
Custom Masonry Cleaner	1:2	3	3		
Custom Masonry Cleaner	1:4	4	4		
Custom Masonry Cleaner	1:6	4	4		

Scale used for reporting results of both categories

0 – **Worst** match to through-body

3 – **Good** match to through-body

1 – **Poor** match to through-body

4 - **Best** match to through-body

2 – **Fair** match to through-body





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TEST RESULTS – Color Uniformity

Substrate: Concrete Paver	Pigment Co	lor: "Light Gray"		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Custom Masonry Cleaner	1:2	4	4	
Custom Masonry Cleaner	1:4	4	4	
Custom Masonry Cleaner	1:6	4	4	
Substrate: Concrete Paver	Pigment Co	lor: "Moss"	•	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Custom Masonry Cleaner	1:2	4	4	
Custom Masonry Cleaner	1:4	4	4	
Custom Masonry Cleaner	1:6	4	4	
Substrate: Concrete Paver	Pigment Co	lor: "Sable"	•	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Custom Masonry Cleaner	1:2	4	4	
Custom Masonry Cleaner	1:4	4	4	
Custom Masonry Cleaner	1:6	4	4	
Substrate: Concrete Paver	Pigment Co	lor: "Sable Tumbled"		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Custom Masonry Cleaner	1:2	4	4	
Custom Masonry Cleaner	1:4	4	4	
Custom Masonry Cleaner	1:6	4	4	

Scale used for reporting results of both categories

0 – **Worst** match to through-body

3 – **Good** match to through-body

1 – **Poor** match to through-body

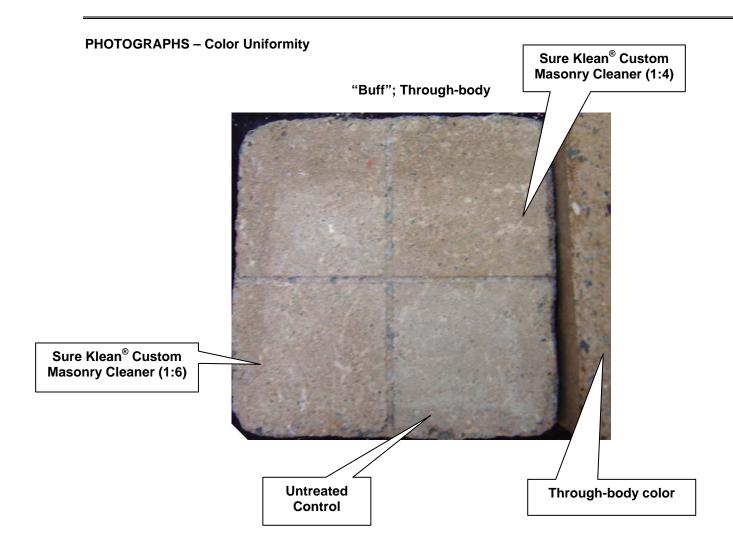
4 - Best match to through-body

2 – **Fair** match to through-body





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CONCLUSIONS: COLOR UNIFORMITY:

All dilutions of Sure Klean[®] Custom Masonry Cleaner tested affected the substrate in a similar manner. Higher concentrations of cleaner removed moderate to heavy concentrations of pigmented matrix, exposing small and large aggregate. Lower concentrations of cleaner removed slight to moderate concentrations of pigmented matrix, exposing small and large aggregate. All dilutions enhanced the natural appearance of the integrally colored CMU.

RECOMMENDATIONS - COLOR UNIFORMITY

Recommendations for color uniformity for each type of concrete paver submitted by Anchor Block, Brick, NJ are provided in the chart below. Recommendations are based on the optimum dilution that provides the best color uniformity.

Sample	Color Uniformity
"Brownstone Tumbled", "Charcoal", and "Flash Brown" Concrete Pavers	Sure Klean [®] Custom Masonry Cleaner (1:4)
All Other Submitted Concrete Pavers	Sure Klean [®] Custom Masonry Cleaner (1:6)

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. Pressure rinsing equipment providing at least 400 psi at 4-6 gpm delivered though a 15-40 degree fan spray often produces best cleaning 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 cleaning product and procedures for a particular project. See product literature for additional application and product information.





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SECTION C - WATER REPELLENCY

The testing described below evaluates the suitability of water repellent treatments. The surface treatments evaluated were selected for their suitability for application based on the following selection criteria:

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

DESCRIPTIONS OF PRODUCTS EVALUATED - Water Repellency

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

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.

SAMPLE PREPARATION - Water Repellency

The submitted samples were scored, allowed to dry, and to reabsorb atmospheric humidity for 24 hours prior to treatment. The treatment method consisted of a wet-on-wet brush application. All treatments were allowed to cure at least 72 hours prior to testing.

TEST METHODS - Water Repellency

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. See Technical Services TECH Note RILEM Tube Test Procedures.





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TEST RESULTS - Water Repellency

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

	RESULTS
"Brownstone T	umbled"
Untreated Control	< 40 mph
Saltguard [®] WB	< 40 mph
Siloxane WB 1:9	60 mph
Siloxane WB 1:14	< 40 mph
"Charco	al"
Untreated Control	< 40 mph
Saltguard [®] WB	53 mph
Siloxane WB 1:9	60 mph
Siloxane WB 1:14	60 mph
"Flash Bro	own"
Untreated Control	53 mph
Saltguard [®] WB	< 40 mph
Siloxane WB 1:9	60 mph
Siloxane WB 1:14	60 mph
"Liberty Bl	end"
Untreated Control	< 40 mph
Saltguard [®] WB	58 mph
Siloxane WB 1:9	60 mph
Siloxane WB 1:14	60 mph
"Light Gr	ay"
Untreated Control	< 40 mph
Saltguard [®] WB	56 mph
Siloxane WB 1:9	60 mph
Siloxane WB 1:14	60 mph





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TEST RESULTS - Water Repellency

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

	RESULTS
"Sable"	
Untreated Control	50 mph
Saltguard [®] WB	60 mph
Siloxane WB 1:9	60 mph
Siloxane WB 1:14	60 mph
"Sable Tumbled"	,
Untreated Control	< 40 mph
Saltguard [®] WB	58 mph
Siloxane WB 1:9	57 mph
Siloxane WB 1:14	53 mph

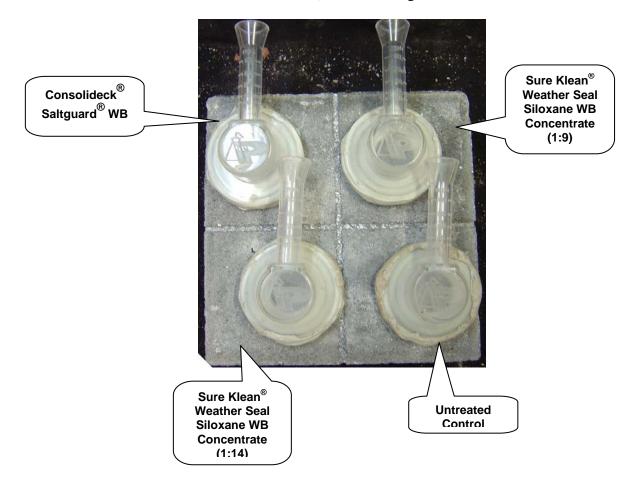




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PHOTOGRAPHS - Water Repellency

"Sable"; RILEM testing







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CONCLUSIONS - Water Repellency

Based upon laboratory evaluations, most of the PROSOCO, Inc. products tested provided above average water repellency to each of the submitted samples.

RECOMMENDATIONS – WATER REPELLENCY

Recommendations for water repellency treatment for each type of concrete pavers submitted by Anchor Block, Brick, NJ, are provided in the chart below. Recommendations are based on the treatment that proved most effective and can provide water repellency on all types submitted.

Block Type	Water Repellents
"Flash Brown" Concrete Paver	Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:9) or (1:14)
"Brownstone Tumbled" Concrete Paver	Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:9)
All Other Submitted Concrete Paver	Consolideck [®] Saltguard WB OR Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:9), (1:14)

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

DESCRIPTION OF PRODUCTS EVALUATED

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

Products Evaluated for Stain Protection:

Kitchen Products Evaluated:

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.

Temperature:

Coca Cola	ambient (~70°F)
Ketchup	ambient (~70°F)
Mustard	ambient (~70°F)
Red wine	ambient (~70°F)
Balsamic Vinegar	ambient (~70°F)
Soy Sauce	ambient (~70°F)
Olive Oil	ambient (~70°F)
Wesson Oil	ambient (~250°F)
Coffee	ambient (~120°F)

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°



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



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



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



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



Stain Removal Evaluation

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





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TEST RESULTS – Surface Beading

	"Brownstone Tumbled"											
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee			
Untreated Control	3	-	-	3	3	3	3	3	3			
SLX 100	2	-	-	2	2	2	2	2	2			
	"Charcoal"											
	Coco-Cola Ketchup Mustard Red Wine Balsamic Soy Sauce Olive Oil Wesson Oil Hot Coffe											
Untreated Control	3	-	-	3	3	3	3	3	3			
SLX 100	2	-	-	2	2	2	2	2	2			
				"Flash	Brown"							
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee			
Untreated Control	3	-	-	3	3	3	3	3	3			
SLX 100	2	-	-	2	2	2	2	2	2			
				"Libert	y Blend"							
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee			
Untreated Control	3	-	-	3	3	3	3	3	3			
SLX 100	2	-	=	2	2	2	2	2	2			
				"Ligh	t Gray"							
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee			
Untreated Control	3	-	-	3	3	3	3	3	3			
SLX 100	2	-	=	2	2	2	2	2	2			
				"Sa	able"							
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee			
Untreated Control	3	-	-	3	3	3	3	3	3			
SLX 100	2	-	-	2	2	2	2	2	2			
				"Sable	Tumbled"							
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee			
Untreated Control	3	-	-	3	3	3	3	3	3			
SLX 100	2	-	-	2	2	2	2	2	2			





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TEST RESULTS - STAINING REMOVAL

% Removal

"Brownstone Tumbled"

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

Stand Off® SLX 100 Water & Oil Repellent

	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	95%	100%	100%	90%	50%	50%	100%
4 hour	100%	100%	100%	100%	100%	100%	80%	80%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%

"Charcoal"

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

Stand Off® SLX 100 Water & Oil Repellent

	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	90%	90%	90%	90%	90%	70%	70%	100%
4 hour	100%	95%	95%	100%	100%	100%	80%	80%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%

"Flash Brown"

	Untreated	Intreated Control												
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee					
24 hr	100%	100%	100%	90%	90%	90%	50%	50%	100%					
4 hour	100%	100%	100%	90%	90%	90%	60%	60%	100%					
1 hour	100%	100%	100%	100%	100%	100%	70%	70%	100%					
10 min.	100%	100%	100%	100%	100%	100%	80%	80%	100%					

Stand Off® SLX 100 Water & Oil Repellent

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





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TEST RESULTS - STAINING REMOVAL

100%

100%

1 hour 10 min. 90%

100%

90%

100%

100%

100%

% Removal

100%

100%

"Liberty Blend"

	Untreated	d Control							
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	90%	90%	90%	90%	90%	90%	<1%	<1%	100%
4 hour	95%	90%	90%	90%	90%	90%	<1%	<1%	100%
1 hour	100%	90%	90%	90%	90%	90%	<1%	<1%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Stand Of	f [®] SLX 100 W	ater & Oil Re	pellent					
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	90%	90%	100%	100%	100%	90%	90%	100%
4 hour	100%	90%	90%	100%	100%	100%	90%	90%	100%

100% "Light Gray"

100%

100%

100%

90%

90%

90%

90%

	Untreated	d Control							
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	90%	100%	100%	100%	100%	50%	50%	100%
4 hour	100%	95%	100%	100%	100%	100%	60%	60%	100%
1 hour	100%	100%	100%	100%	100%	100%	70%	70%	100%
10 min.	100%	100%	100%	100%	100%	100%	80%	80%	100%

Stand Off® SLX 100 Water & Oil Repellent

	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	90%	100%	100%	100%	80%	100%	100%
4 hour	100%	100%	95%	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%

"Sable"

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

Stand Off® SLX 100 Water & Oil Repellent

	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	90%	100%	100%	100%	90%	50%	50%	100%
4 hour	100%	95%	100%	100%	100%	100%	60%	60%	100%
1 hour	100%	100%	100%	100%	100%	100%	70%	70%	100%
10 min.	100%	100%	100%	100%	100%	100%	80%	80%	100%





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TEST RESULTS – STAINING REMOVAL

% Removal

"Sable Tumbled"

	Untreated	d Control							
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	80%	70%	70%	90%	90%	90%	<1%	<1%	100%
4 hour	90%	80%	80%	90%	100%	100%	<1%	<1%	100%
1 hour	100%	100%	100%	100%	100%	100%	<1%	<1%	100%
10 min.	100%	100%	100%	100%	100%	100%	<1%	<1%	100%

Stand Off® SLX 100 Water & Oil Repellent

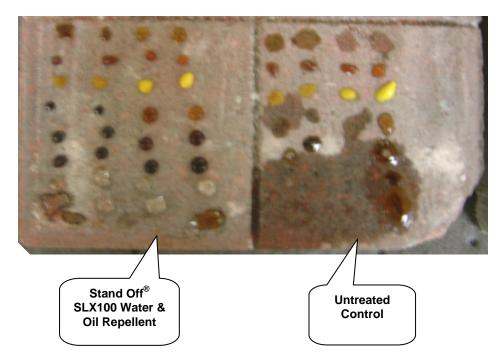
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	90%	90%	90%	100%	100%	100%	80%	80%	90%
4 hour	90%	90%	90%	100%	100%	100%	80%	80%	90%
1 hour	90%	90%	90%	100%	100%	100%	90%	90%	90%
10 min.	100%	100%	100%	100%	100%	100%	90%	90%	100%



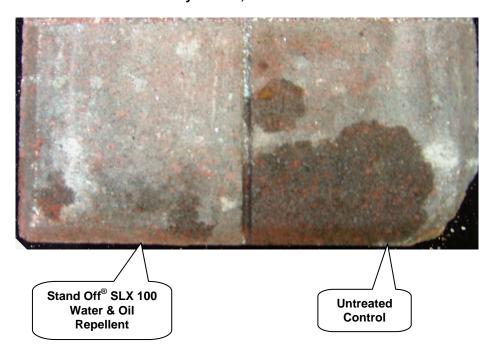
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PHOTOGRAPHS - Stain Repellency

"Liberty Blend"; Stains Applied



"Liberty Blend"; Stains Removed







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CONCLUSIONS - Stain Repellency

Based upon laboratory evaluations, Stand Off[®] SLX100 Water & Oil Repellent exhibited good surface beading characteristics and was effective in repelling the staining agents on the concrete paver samples.

RECOMMENDATIONS – Stain Repellency

Recommendations for stain resistance treatment for each type of concrete paver submitted by Anchor Block, Brick, NJ, 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 Tested Concrete Pavers	Stand Off [®] SLX100 Water & Oil Repellent	Enviro Klean [®] 2010 All Surface Cleaner (1:10)

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

Nathan R. Colaner Technical Analyst

flat R Colm

NRC/csm



Laboratory Report

Pallet Tag Program Evaluation

Anchor Block Brick, NJ

Project No. 0403-15 PTP

Prepared For:

Ted Sullivan Anchor Block 975 Burnt Tavern Road Brick, NJ 08724

Prepared By:



PROSOCO, Inc. June 2004