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#### Attachments

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

## **Submitted Information**

For:	Tom Lane John Bourne
Subject:	Navastone Cambridge, Ontario, Canada
Date:	November 8, 2006
Project:	0610-15 PTP

Samples Submitted: 7 types of concrete pavers

Sample Color	Sample Type	Color	Size
"Shale Black"	"Piazza"	Black	11¾" x 11¾" x 1
"Limestone White"	"Piazza"	White	11¾" x 11¾" x 1
"Cappuccino"	"Tuscanni"	Brown/Orange	11¾" x 11¾" x 1
"Sorrento"	"Tuscanni"	Brown/Tan	11¾" x 11¾" x 1
"Tundra Brown"	"Piazza"	Brown	11¾" x 11¾" x 1
"Terra Cotta"	"Piazza"	Red	11¾" x 11¾" x 1
"Roccia Blu"	"Tuscanni"	Blue/Gray	11¾" x 11¾" x 1

Submitted by: Tom Lane

## Introduction

Architectural Materials Testing (AMT) Laboratories is a Boyer Industries company that provides laboratory testing and consulting services for the construction industry. Laboratory testing includes evaluating chemical cleaning products and protective treatments for a variety of new and existing architectural materials.

This report includes descriptions of the PROSOCO, Inc. products and test methods that were used. Following test results and conclusions, the report provides recommendations for the most effective products and procedures.

## Purpose of Testing

Seven types of concrete pavers were submitted to AMT Laboratories by PROSOCO, Inc. with a request to determine the optimal concentration of cleaner for removal of laboratory applied mortar while leaving the external surface looking most like the natural through-body color of the concrete paver during new construction cleaning operations. Additionally, the effectiveness of water repellents, stain repellents and color/sheen enhancement products suitable for concrete pavers was evaluated.

New Construction Cleaning – Paver Kare<sup>®</sup> Cleaner/Brightener and Sure Klean<sup>®</sup> Custom Masonry Cleaner were evaluated at various dilutions to determine the optimal concentration of cleaner for removal of laboratory applied mortar while leaving the external surface looking most like the natural through-body color of the concrete paver during new construction cleaning operations.

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 sample and filled with a wet mixture of either Type S or Type N mortar. The wet, mortar-filled cylinder was allowed to remain in contact with the samples for 10 minutes before removal.

Heavy deposits of mortar were removed with dry scraping after 24 hours. Prepared cleaning solutions were then evaluated for their effectiveness in removing residual Type S mortar staining after 3, 7 and 14 days and Type N mortar staining after 7, 14, and 21 days.

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 concrete paver.

Aggregate Exposure is the visual examination comparing aggregate exposure of the interior, through-body section of concrete paver to surfaces cleaned with selected product(s) at given dilutions.

Surface Pigment Alteration/Removal is the visual examination comparing the pigmentation of the interior, through-body section of the concrete paver 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
- 1 **Poor** match to through-body
- 3 Good match to through-body 4 – **Best** match to through-body
- 2 **Fair** match to through-body
- Protective Water Repellents Consolideck<sup>®</sup> Saltguard WB and Paver Kare<sup>®</sup> Paver Enhancer were evaluated for their ability to provide water repellency to the submitted samples.

Stain Repellency – Stand Off<sup>®</sup> SLX100 Water & Oil Repellent and Stand Off<sup>®</sup> Stone and Tile & Masonry Protector (STMP) were evaluated for their ability to repel stains from the submitted samples.

Color and Sheen Enhancement – Paver Kare<sup>®</sup> Paver Enhancer and Paver Kare<sup>®</sup> Deep Sheen WB were evaluated for their ability to provide color and sheen enhancement to the submitted samples.

## New Construction Cleaning Products Evaluated

Sample	Product	Dilution
All Submitted Concrete	Paver Kare <sup>®</sup> Cleaner/Brightener	(1:2), (1:3)
Pavers	Sure Klean <sup>®</sup> Custom Masonry Cleaner	(1:6)

## **Protective Water Repellent Products Evaluated**

Sample	Product	Dilution
	Consolideck <sup>®</sup> Saltguard WB	Concentrate
All Submitted Concrete Pavers	Paver Kare <sup>®</sup> Paver Enhancer	Concentrate
	Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	Concentrate

## Stain Repellency Products Evaluated

Sample	Product	Dilution
All Submitted Concrete	Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	Concentrate
Pavers	Stand Off <sup>®</sup> Stone, Tile & Masonry Protector (STMP)	Concentrate

## Color and Sheen Enhancement Products Evaluated

Sample	Product	Dilution
	Paver Kare <sup>®</sup> Paver Enhancer	Concentrate
All Submitted Concrete	Paver Kare <sup>®</sup> Deep Sheen	Concentrate
Pavers	Paver Kare <sup>®</sup> Deep Sheen WB	Concentrate
	Stand Off <sup>®</sup> Gloss 'N Guard	Concentrate

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

## **New Construction Cleaning**

These cleaning trials were conducted to determine the optimal cleaning/cure time combination to most efficiently remove Type S and Type N mortar from the submitted samples while leaving the external surface looking most like the natural through-body color of the concrete paver during new construction cleaning operations.

Type S and Type N cementitious mortar were prepared in compliance with the manufacturers' instructions, applied to the concrete pavers and allowed to cure. Mortar removal was accomplished using chemical assistance and a high-pressure water rinse with pressure rinsing equipment. The removal of Type S and Type N cementitious mortar was visually evaluated after 3, 7 and 14 days and 7, 14, and 21 days of curing, respectively.

#### Description of Products Evaluated – New Construction Cleaning

**Paver Kare<sup>®</sup> Cleaner/Brightener** – Removes common construction and atmospheric staining from custom masonry and other architectural concrete surfaces. This general-purpose, non-etching, acidic cleaner removes rust, mud, oil, atmospheric dirt, mortar smears and other stains without altering the surface texture. Cleaner/Brightener adds depth to colors and brightens white matrices and exposed aggregate.

**Sure Klean**<sup>®</sup> **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

Chemical cleaners were evaluated using the following procedure:

- 1. Pre-wet the surface with water.
- 2. Apply at the appropriate dilutions.
- 3. Allow appropriate dwell time, as specified.

appropriate agree mile, as operated	
Paver Kare <sup>®</sup> Cleaner/Brightener	3-5 minutes
Sure Klean <sup>®</sup> Custom Masonry Cleaner	3 minutes

- 4. Reapply the product and moderately agitate with a brush.
- 5. Pressure rinse thoroughly.\*
- 6. Break the sample in half and compare the through-body surfaces to the cleaned surfaces for the best match.

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

"Shale Black" Concrete Paver				
Product	Dilution	3 day	7 day	14 day
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	100%	100%	100%
"Limestone Wh	ite" Concrete	Paver		
Product	Dilution	3 day	7 day	14 day
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	100%	100%	100%
"Cappuccino	" Concrete Pa	ver		
Product	Dilution	3 day	7 day	14 day
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	100%	100%	100%
"Sorrento"	<b>Concrete Pave</b>	er		
Product	Dilution	3 day	7 day	14 day
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	100%	100%	100%
"Tundra Brow	n" Concrete Pa	aver		
Product	Dilution	3 day	7 day	14 day
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	100%	100%	100%
"Terra Cotta	" Concrete Pay	/er		
Product	Dilution	3 day	7 day	14 day
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	100%	100%	100%
	" Concrete Pav	ver		
Product	Dilution	3 day	7 day	14 day
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	100%	100%	100%

## Cleaning Effectiveness (% Type S Mortar Removal)

"Shale Black" Concrete Paver				
Product	Dilution	3 day	7 day	14 day
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	100%	100%	100%
"Limestone White	" Concrete	Paver		
Product	Dilution	3 day	7 day	14 day
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	100%	100%	100%
"Cappuccino" (	Concrete Pa	ver	• •	
Product	Dilution	3 day	7 day	14 day
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	100%	100%	100%
"Sorrento" Co	oncrete Pave	er		
Product	Dilution	3 day	7 day	14 day
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	100%	100%	100%
"Tundra Brown"	Concrete P	aver		
Product	Dilution	3 day	7 day	14 day
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	100%	100%	100%
"Terra Cotta" C		ver	-	-
Product	Dilution	3 day	7 day	14 day
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	100%	100%	100%
"Roccia Blu" C	concrete Pay			
Product	Dilution	3 day	7 day	14 day
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	100%	100%	100%

## Cleaning Effectiveness (% Type N Mortar Removal)

## Test Results - Color Uniformity

Cubetrete: Concrete Dever	Diamont	Color: "Cholo Blook"	
Substrate: Concrete Paver	Pigment	Color: "Shale Black"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	1	2
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	1	3
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	2	1
Substrate: Concrete Paver	Pigment	Color: "Limestone Whi	ite"
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	1	4
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	1	4
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	3	4
Substrate: Concrete Paver	Pigment	Color: "Cappuccino"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	1	4
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	1	4
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	2	3
Substrate: Concrete Paver	Pigment	Color: "Sorrento"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	1	4
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	1	4
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	2	3
Substrate: Concrete Paver	Pigment	Color: "Tundra Brown"	1
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	1	3
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	1	4
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	3	3
Substrate: Concrete Paver	Pigment	Color: "Terra Cotta"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	1	4
Paver Kare <sup>®</sup> Cleaner/Brightener	1:3	1	4
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	3	2
Substrate: Concrete Paver	Pigment	Color: "Roccia Blu"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Paver Kare <sup>®</sup> Cleaner/Brightener	1:2	1	4
	1:3	1	4
Paver Kare <sup>®</sup> Cleaner/Brightener Sure Klean <sup>®</sup> Custom Masonry Cleaner	1.5	2	3

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

Cleaner/Brightener (1:2)

Type S Mortar

## "Sorrento" Concrete Paver; 3 Day Cleaning



"Sorrento" Concrete Paver; 7 Day Cleaning

Masonry Cleaner (1:6)

Cleaner/Brightener (1:3)



## "Sorrento" Concrete Paver; 14 Day Cleaning

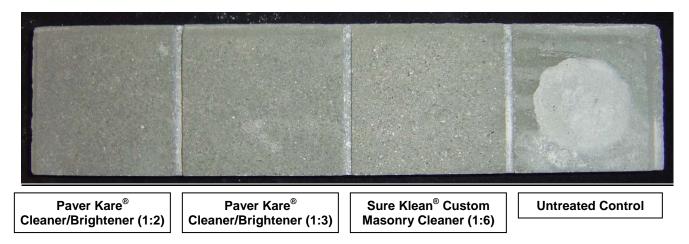


## Type N Mortar

## "Roccia Blu" Concrete Paver; 7 Day Cleaning



## "Roccia Blu" Concrete Paver; 14 Day Cleaning



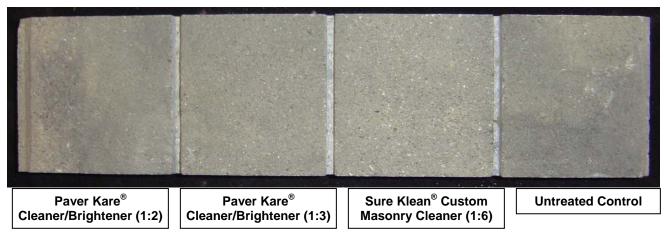




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## Photographs – Color Uniformity

"Sorrento" Concrete Paver



"Roccia Blu" Concrete Paver



## <u>Conclusions</u> – New Construction Cleaning

Based on the test results, all of the PROSOCO, Inc. products tested performed well in removing excess Type S and Type N mortar from the submitted samples even after allowing the mortar to remain on the surface of the samples for 14 and 21 days, respectively.

Use higher concentrations and surface agitation to maximize aggregate exposure. Use low concentration and surface agitation to minimize aggregate exposure.

## **Recommendations** – New Construction Cleaning

Recommendations for cleaning for the concrete pavers submitted by Navastone, Cambridge, ON are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar while providing the best match for color uniformity when compared to the through-body color of the concrete pavers.

Sample	New Construction Cleaning (Type S mortar, 14 day cleaning)
All Submitted Concrete Pavers	Paver Kare <sup>®</sup> Cleaner/Brightener (1:2) OR (1:3) OR Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)

Sample	New Construction Cleaning (Type N mortar, 21 day cleaning)			
All Submitted Concrete Pavers	Paver Kare <sup>®</sup> Cleaner/Brightener (1:2) OR (1:3) OR Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)			

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.

## **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

## Description of Products Evaluated – Protective Water Repellents

**Consolideck**<sup>®</sup> **Saltguard**<sup>®</sup> **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<sup>®</sup> WB penetrates more deeply than conventional water- or solvent-based water repellents. Low odor and alkaline stable, Saltguard<sup>®</sup> WB is ideal for field or in-plant application to concrete and most masonry surfaces. Saltguard<sup>®</sup> WB protects horizontal and vertical surfaces from moisture intrusion and chemical attack of chloride salts.

**Paver Kare<sup>®</sup> 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**<sup>®</sup> **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.

## Sample Preparation – Protective Water Repellents

The submitted pavers were scored and allowed to dry for 24 hours prior to treatment. Both products were applied by brush in accordance with the application instructions in the current PROSOCO, Inc. Product Data Sheets and allowed to cure for at least 14 days.

## 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. See Technical Services TECH Note RILEM Tube Test Procedures.

## Test Results - Protective Water Repellents

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

## RESULTS

"Shale Black"	
Untreated Control	56 mph
Consolideck <sup>®</sup> Saltguard <sup>®</sup> WB	59 mph
Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	59 mph
Paver Kare <sup>®</sup> Paver Enhancer	59 mph
"Limestone White"	
Untreated Control	55 mph
Consolideck <sup>®</sup> Saltguard <sup>®</sup> WB	57 mph
Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	56 mph
Paver Kare <sup>®</sup> Paver Enhancer	59 mph
"Cappuccino"	
Untreated Control	60 mph
Consolideck <sup>®</sup> Saltguard <sup>®</sup> WB	60 mph
Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	59 mph
Paver Kare <sup>®</sup> Paver Enhancer	60 mph
"Sorrento"	
Untreated Control	59 mph
Consolideck <sup>®</sup> Saltguard <sup>®</sup> WB	60 mph
Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	60 mph
Paver Kare <sup>®</sup> Paver Enhancer	58 mph
"Tundra Brown"	
Untreated Control	60 mph
Consolideck <sup>®</sup> Saltguard <sup>®</sup> WB	59 mph
Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	60 mph
Paver Kare <sup>®</sup> Paver Enhancer	59 mph
"Terra Cotta"	
Untreated Control	59 mph
Consolideck <sup>®</sup> Saltguard <sup>®</sup> WB	60 mph
Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	60 mph
Paver Kare <sup>®</sup> Paver Enhancer	60 mph
"Roccia Blu"	
Untreated Control	57 mph
Consolideck <sup>®</sup> Saltguard <sup>®</sup> WB	60 mph
Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	60 mph
Paver Kare <sup>®</sup> Paver Enhancer	60 mph

#### Photographs - Protective Water Repellents



#### "Cappuccino" Concrete Paver; 60 mph RILEM II.4, 20 Minutes

#### <u>Conclusions</u> – Protective Water Repellents

Based upon laboratory evaluations, all of the evaluated treatments exhibited excellent water repellency on each of the submitted samples. Paver Kare<sup>®</sup> Paver Enhancer exhibited a moderate to significant color enhancement to the submitted pavers. Consolideck<sup>®</sup> Saltguard<sup>®</sup> WB and Stand Off<sup>®</sup> SLX100 Water & Oil Repellent did not alter the appearance of the samples in any way.

#### <u>Recommendations</u> – Protective Water Repellents

Recommendations for water repellency treatment for the concrete pavers submitted by Navastone, Cambridge, ON are provided in the chart below. Recommendations are based on the treatment that proved most effective at providing water repellency on all types submitted.

Sample	Protective Water Repellents			
All Submitted Concrete Pavers	*Paver Kare <sup>®</sup> Paver Enhancer OR Consolideck <sup>®</sup> Saltguard <sup>®</sup> WB OR Stand Off <sup>®</sup> SLX100 Water & Oil Repellent			

\*NOTE: Paver Kare<sup>®</sup> Paver Enhancer is manufactured and marketed in compliance with USEPA AIM VOC regulations (40 CFR 59.403). This product may not be suitable for sale in states and districts with more restrictive AIM VOC regulations.

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.

## Stain Repellency

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

#### **Description of Products Evaluated – Stain Repellency**

#### Stain Repellent Treatments

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

**Stand Off**<sup>®</sup> **Stone, Tile & Masonry Protector (STMP)** – A penetrating oil and stain repellent that is an 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.

#### Maintenance Cleaner

**Enviro Klean<sup>®</sup> 2010 All Surface Cleaner** – A "next-generation" product for cleaning and degreasing light-toheavily soiled stone, tile, masonry and much more. Powerful enough for industrial use, flexible enough for jobs around the home, space-saving EK 2010 replaces a host of individual cleaning agents. It is suitable for homeuse on windows, bathroom tub and tile, counter tops and more when diluted with water. It's concentrated enough for the toughest industrial cleaning jobs on concrete, metal and many other plant and warehouse surfaces. EK 2010 also removes Paver Kare<sup>®</sup> Weather Seal Siloxane PD overspray from windows.

#### Staining Agents Evaluated

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

#### Sample Preparation - Stain Repellency

Samples were cleaned with Enviro Klean<sup>®</sup> 2010 All Surface Cleaner diluted with 10 parts water, allowed to dry and absorb atmospheric moisture for 24 hours prior to treatment. Both products were applied by brush in accordance with the instructions in the current PROSOCO, Inc. Product Data Sheets and allowed to cure for at least 72 hours.

## Test Method – Stain Repellency

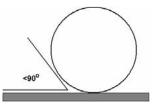
## Surface Beading Evaluation

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°) 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.

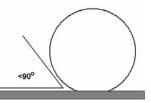
## Note: Non-free flowing staining agents such as ketchup and mustard are applied in a globular fashion and therefore are not evaluated for their beading properties.

## 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<sup>®</sup> 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.

## Test Results – Surface Beading

				Shale Bla	ack"				
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	3			3	3	3	5	5	3
SLX100				1	1	1	1	1	1
STMP	1			2	3	2	2	2	1
			"Li	mestone	White"				
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	4			4	4	4	5	5	3
SLX100	1			1	1	1	1	1	1
STMP	1			1	2	2	1	1	1
	B.		"	'Cappucc	ino"				
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	3			4	4	3	5	5	4
SLX100	1			1	1	1	1	1	1
STMP	2			2	1	1	1	1	1
				"Sorrent	0"				
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	3	-		4	4	4	5	5	3
SLX100	1	-		1	1	1	1	1	1
STMP	2			2	1	1	1	1	1
			"7	Γundra Br	own"				
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	3			3	3	3	5	5	3
SLX100	1			1	1	1	1	1	1
STMP	2			2	2	1	2	2	1
			I	"Terra Co	tta"				
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	3			4	4	3	5	5	3
SLX100	1			1	1	1	1	1	1
STMP	2			3	2	2	1	1	2
				"Roccia E	Blu"				
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	3			4	4	3	5	5	3
SLX100	1			1	1	1	1	1	1
STMP	1			2	1	1	1	1	1

				"(	Shale Blac	k"			
	Untreated	Control				N			
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%*	90%*	50%*	100%*	100%*	100%	50%	50%	100%
4 hour	100%*	100%*	100%*	100%*	100%*	100%	50%	50%	100%
1 hour	100%*	100%*	100%*	100%*	100%*	100%	50%	50%	100%
10 min.	100%*	100%*	100%*	100%*	100%*	100%	50%	50%	100%
	Stand Off <sup>®</sup>	SLX100 W	ater & Oil R	epellent					
	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%*	90%*	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 (	STMP)				
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%*	100%*	85%*	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%
				"Lin	estone W	hite"			
	Untreated	Control							
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	98%	80%	70%*	70%*	70%*	80%	<1%	<1%	100%
4 hour	100%	100%	100%*	70%*	70%*	80%	<1%	<1%	100%
1 hour	100%	100%	100%*	70%*	70%*	80%	<1%	<1%	100%
10 min.	100%	100%	100%*	90%*	90%*	80%	<1%	<1%	100%
	Stand Off <sup>®</sup>	<sup>®</sup> SLX100 Wa	ater & Oil R	epellent					
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	70%	70%*	80%*	100%*	100%	90%	90%	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 (	STMP)				
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	80%	100%*	70%*	100%*	100%	100%	95%	100%
4 hour	100%	100%	100%*	80%*	100%*	100%	100%	100%	100%
1 hour	100%	100%	100%*	80%*	100%*	100%	100%	100%	100%

\*Indicates etching occurred due to the acidic nature of the staining agents.

100%\*

100%

100%

10 min.

100%

100%

100%

100%\*

100%

100%\*

				"(	Cappuccin	0"				
	Untreated	Untreated Control								
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee	
24 hr	100%	100%	100%*	100%*	100%*	100%	<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 <sup>®</sup>	°SLX100 W	ater & Oil R	epellent						
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee	
24 hr	100%	80%	80%	100%	100%	100%	100%	100%	95%	
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 (	STMP)					
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee	
24 hr	100%	100%	100%*	80%	100%	100%	100%	80%	100%	
4 hour	100%	100%	100%*	90%	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%	
				I	"Sorrento"	,				
	Untreated	Control								
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee	
24 hr	100%*	100%	100%*	100%	100%*	100%*	<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 <sup>®</sup>	<sup>9</sup> SLX100 W	ater & Oil R	epellent						
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee	
24 hr	100%*	50%	70%*	100%	100%	100%	100%	100%	95%	
4 hour	100%*	100%	70%*	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 (	STMP)					
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee	
24 hr	100%*	50%	70%*	100%	100%	100%	100%	100%	99%	
4 hour	100%*	100%	90%*	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%	

		"Tundra Brown"								
	Untreated	Control								
_	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee	
24 hr	100%	60%*	70%*	70%*	100%	100%	<1%	<1%	100%	
4 hour	100%	100%*	70%*	70%*	100%	100%	<1%	<1%	100%	
1 hour	100%	100%*	100%*	90%*	100%	100%	<1%	<1%	100%	
10 min.	100%	100%*	100%*	100%*	100%	100%	<1%	<1%	100%	
	Stand Off <sup>®</sup>	<sup>°</sup> SLX100 Wa	ater & Oil R	epellent						
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee	
24 hr	100%	40%*	70%*	100%*	100%	100%	100%	50%	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 (	STMP)					
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee	
24 hr	100%	90%*	95%*	100%*	100%	100%	100%	50%	70%	
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%	
				"	Terra Cotta	a"				
	Untreated	Control								
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee	
24 hr	100%	80%*	80%*	30%*	50%	100%	<1%	<1%	70%	
4 hour	100%	100%*	100%*	30%*	80%	100%	<1%	<1%	80%	
1 hour	100%	100%*	100%*	30%*	100%	100%	50%	50%	100%	
10 min.	100%	100%*	100%*	50%*	100%	100%	50%	50%	100%	
	Stand Off <sup>®</sup>	<sup>°</sup> SLX100 Wa	ater & Oil R	epellent						
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee	
24 hr	100%	100%*	100%*	100%*	90%	100%	80%	80%	100%	
4 hour	100%	100%*	100%*	100%*	90%	100%	100%	100%	100%	
1 hour	100%	100%*	100%*	100%*	95%	100%	100%	100%	100%	
10 min.	100%	100%*	100%*	100%*	100%	100%	100%	100%	100%	
	Stand Off <sup>®</sup>	Stone, Tile	& Masonry	Protector (	STMP)					
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee	
24 hr	100%	70%*	100%*	70%*	100%	100%	100%	100%	100%	
4 hour	100%	100%*	100%*	80%*	100%	100%	100%	100%	100%	
1 hour	100%	100%*	100%*	90%*	100%	100%	100%	100%	100%	
10 min.	100%	100%*	100%*	100%*	100%	100%	100%	100%	100%	

	"Roccia Blu"								
	Untreated	Untreated Control							
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	60%	90%*	70%*	90%*	100%	<1%	<1%	60%
4 hour	100%	100%	100%*	70%*	100%*	100%	<1%	<1%	60%
1 hour	100%	100%	100%*	100%*	100%*	100%	<1%	<1%	100%
10 min.	100%	100%	100%*	100%*	100%*	100%	50%	50%	100%
	Stand Off <sup>®</sup>	°SLX100 W	ater & Oil Ro	epellent					
_	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	90%	100%	100%	100%	75%	75%	90%
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 (	STMP)				
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	80%*	100%*	100%*	100%	90%	90%	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%

#### Photographs – Stain Repellency

## "Tundra Brown" Concrete Paver; Stains Applied



& Oil Repellent

Stand Off<sup>®</sup> Stone, Tile & Masonry Protector (STMP)

**Untreated Control** 

## "Tundra Brown" Concrete Paver; Stains Removed



Stand Off<sup>®</sup> SLX100 Water & **Oil Repellent** 

Stand Off<sup>®</sup> Stone, Tile & Masonry Protector (STMP)

**Untreated Control** 

## Conclusions – Stain Repellency

Based upon laboratory evaluations, both of the treatments evaluated improved the surface beading of the samples. In addition, both of the treatments evaluated were effective in repelling the staining agents, especially the oils, from the submitted samples.

#### Recommendations – Stain Repellency

Recommendations for stain resistance treatment for the concrete pavers submitted by Navastone, Cambridge, ON are provided in the chart below. Recommendations are based on the treatments that proved most effective for providing stain repellency on the submitted samples.

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

The ability of a stain repellent treatment to prevent staining is affected by a variety of factors. Therefore, onsite 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 stain repellent product and procedures for a particular project. See product literature for additional application and product information.

## Color and Sheen Enhancement

This evaluation compares the effectiveness of the evaluated products in providing color and sheen enhancement to the submitted samples.

#### Description of Products Evaluated - Color and Sheen Enhancement

**Sure Klean<sup>®</sup> 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**<sup>®</sup> **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.

**Paver Kare<sup>®</sup> Deep Sheen** – The perfect treatment for pavers, inside or out. This durable protective treatment weather- and stain-proofs new or newly cleaned pavers, giving them a premium, vibrant gloss and shine. Not just for concrete, Deep Sheen adds luster and brings out the real beauty of clay and stone pavers, too. Highly tested Deep Sheen will not "yellow," blush or dull-out.

**Paver Kare<sup>®</sup> Deep Sheen WB** – The perfect treatment for concrete, clay or stone pavers, inside or out. This durable, water-borne protective treatment weather- and stain-proofs new or newly cleaned pavers, giving them a premium, vibrant gloss and shine. This water-borne treatment complies with all known AIM VOC regulations nationwide. Deep Sheen WB's glossy finish guards pavers against etching and staining from acidic and alkaline contaminants, including food, drinks, cleaning chemicals and more. Fast-drying, non-blushing and non-yellowing, Deep Sheen WB is ideal for paver installations of any size – new or old.

#### Sample Preparation – Color and Sheen Enhancement

Samples were cleaned with Enviro Klean<sup>®</sup> 2010 All Surface Cleaner diluted with 10 parts water and allowed to dry for 24 hours prior to treatment.

#### Test Method – Color and Sheen Enhancement

All products were applied by brush in accordance with the application instructions in the current PROSOCO, Inc. Product Data Sheets. After 24 hours, a visual evaluation was conducted to determine the level of color and sheen enhancement the treatments provided as compared to the untreated control.

## **Test Results – Color and Sheen Enhancement**

	"Shale Black"						
Treatment	Color Enhancement	Sheen Enhancement					
Paver Kare <sup>®</sup> Paver Enhancer	3	0					
Stand Off <sup>®</sup> Gloss 'N Guard	3	2					
Paver Kare <sup>®</sup> Deep Sheen	3	3					
Paver Kare <sup>®</sup> Deep Sheen WB	3	3					
	nestone White"						
Treatment	Color Enhancement	Sheen Enhancement					
Paver Kare <sup>®</sup> Paver Enhancer	2	0					
Stand Off <sup>®</sup> Gloss 'N Guard	2	1					
Paver Kare <sup>®</sup> Deep Sheen	3	3					
Paver Kare <sup>®</sup> Deep Sheen WB	1	3					
	Cappuccino"						
Treatment	Color Enhancement	Sheen Enhancement					
Paver Kare <sup>®</sup> Paver Enhancer	2	0					
Stand Off <sup>®</sup> Gloss 'N Guard	3	2					
Paver Kare <sup>®</sup> Deep Sheen	3	3					
Paver Kare <sup>®</sup> Deep Sheen WB	2	3					
"Sorrento"							
Treatment	Color Enhancement	Sheen Enhancement					
Paver Kare <sup>®</sup> Paver Enhancer	2	0					
Stand Off <sup>®</sup> Gloss 'N Guard	3	2					
Paver Kare <sup>®</sup> Deep Sheen	3	3					
Paver Kare <sup>®</sup> Deep Sheen WB	2	3					
"1	undra Brown"						
Treatment	Color Enhancement	Sheen Enhancement					
Paver Kare <sup>®</sup> Paver Enhancer	2	0					
Stand Off <sup>®</sup> Gloss 'N Guard	3	1					
Paver Kare <sup>®</sup> Deep Sheen	3	3					
Paver Kare <sup>®</sup> Deep Sheen WB	1	3					
	'Terra Cotta"						
Treatment	Color Enhancement	Sheen Enhancement					
Paver Kare <sup>®</sup> Paver Enhancer	2	0					
Stand Off <sup>®</sup> Gloss 'N Guard	3	1					
Paver Kare <sup>®</sup> Deep Sheen	3	3					
Paver Kare <sup>®</sup> Deep Sheen WB	2	3					
	'Roccia Blu"						
Treatment	Color Enhancement	Sheen Enhancement					
Paver Kare <sup>®</sup> Paver Enhancer	1	0					
Stand Off <sup>®</sup> Gloss 'N Guard	2	2					
Paver Kare <sup>®</sup> Deep Sheen	3	3					
Paver Kare <sup>®</sup> Deep Sheen WB	1	3					

Scale: 0 - No Enhancement; Dull

- 1 Slight Enhancement
- 2 Moderate Enhancement
- 3 Significant Enhancement

## Photographs – Color and Sheen Enhancement

## "Terra Cotta" Concrete Paver; Treatment Applied



Paver Kare <sup>®</sup>	Stand Off <sup>®</sup>	Paver Kare <sup>®</sup>	Paver Kare <sup>®</sup>	Untreated
Paver	Gloss 'N Guard	Deep Sheen	Deep Sheen WB	Control
Enhancer				

#### **Recommendations** – Color and Sheen Enhancement

Recommendations for color and sheen enhancement for the concrete pavers submitted by Navastone, Cambridge, ON are provided in the chart below. Recommendations are based on the treatment that proved most effective in providing color and sheen enhancement to the submitted samples.

Sample	Color Enhancement	Sheen Enhancement
"Shale Black" "Cappuccino" "Sorrento"	*Paver Kare <sup>®</sup> Paver Enhancer OR *Stand Off <sup>®</sup> Gloss 'N Guard OR *Paver Kare <sup>®</sup> Deep Sheen OR Paver Kare <sup>®</sup> Deep Sheen WB	*Stand Off <sup>®</sup> Gloss 'N Guard OR *Paver Kare <sup>®</sup> Deep Sheen OR Paver Kare <sup>®</sup> Deep Sheen WB
"Limestone White" "Tundra Brown"	*Paver Kare <sup>®</sup> Paver Enhancer OR *Stand Off <sup>®</sup> Gloss 'N Guard OR *Paver Kare <sup>®</sup> Deep Sheen	*Paver Kare <sup>®</sup> Deep Sheen OR Paver Kare <sup>®</sup> Deep Sheen WB
"Terra Cotta"	*Paver Kare <sup>®</sup> Paver Enhancer OR *Stand Off <sup>®</sup> Gloss 'N Guard OR *Paver Kare <sup>®</sup> Deep Sheen OR Paver Kare <sup>®</sup> Deep Sheen WB	*Paver Kare <sup>®</sup> Deep Sheen OR Paver Kare <sup>®</sup> Deep Sheen WB
"Roccia Blu"	*Stand Off <sup>®</sup> Gloss 'N Guard OR *Paver Kare <sup>®</sup> Deep Sheen	*Stand Off <sup>®</sup> Gloss 'N Guard OR *Paver Kare <sup>®</sup> Deep Sheen OR Paver Kare <sup>®</sup> Deep Sheen WB

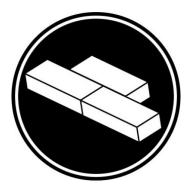
\*NOTE: Paver Kare<sup>®</sup> Paver Enhancer, Stand Off<sup>®</sup> Gloss 'N Guard, and Paver Kare<sup>®</sup> Deep Sheen are manufactured and marketed in compliance with USEPA AIM VOC regulations (40 CFR 59.403). These products may not be suitable for sale in states and districts with more restrictive AIM VOC regulations.

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.

John Lancaster Project Testing Laboratory Technician



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