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 Product Data literature for all products evaluated



PALLET TAG PROGRAM

Laboratory Report

Submitted Information

For: Gary Hardwick
cc: Matt Henderson, Paul Tessier

Subject: Stone Concepts
Lenexa, KS

Date: February 7, 2007

Project: 0612-10 PTP

Samples Submitted: 6 types of manufactured stone in various sizes, shapes, and colors

Sample	Color	Size
"Canyon Haze"	Brown, Beige	Various
"Blue Heron"	Reddish Brown	Various
"Rustic"	Tan, Brown	Various
"Chipped Slate"	Gray	Various
"Woodland"	Brown, Orange	Various
"Cream"	Buff	Various

Submitted by: Matt Henderson

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

Six types of manufactured stone were submitted to AMT Laboratories by PROSOCO, Inc. with a request to determine if application of the products evaluated will produce any surface alterations during new construction cleaning operations. Additionally, the effectiveness of water repellents, graffiti control products, color enhancement and stain repellency products suitable for manufactured stone were evaluated.

New Construction Cleaning – Sure Klean[®] Manufactured Stone Cleaner was tested at various dilutions to determine the optimum cleaner/cure time combination for complete removal of laboratory applied Type N mortar from the submitted manufactured stone while limiting surface alterations to the decorative finish. The surface alteration evaluation was visually determined based upon perceived discoloration or erosion/etching of the samples.

To simulate new construction soiling, the 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 the samples and filled with a wet mixture of Type N cementitious 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 N mortar after 7, 14, and 21 days of curing. A visual examination was also made to determine if the tested cleaners caused any surface alterations to the submitted samples based on the following:

Surface Finish Removal is the visual examination of the sample comparing the surface finish of the untreated control surface to the surface finish cleaned with selected product(s) at given dilutions.

Substrate Deterioration is the visual examination of the sample comparing the surface of the untreated control to surfaces cleaned with selected product(s) at given dilutions looking for any potential erosion/digestion of the sample.

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

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

Protective Water Repellents – Sure Klean[®] Weather Seal Siloxane PD, Stand Off[®] SLX100 Water & Oil Repellent, Paver Kare[®] Paver Enhancer, Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control and Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control II were evaluated for their ability to provide water repellency to the submitted samples.

Graffiti Control – Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control and Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control II were evaluated for their ability to repel graffiti from the submitted samples. Sure Klean[®] Fast Acting Stripper and Defacer Eraser[®] Graffiti Wipe were evaluated for their ability to remove graffiti from the submitted samples.

Color Enhancement – Paver Kare[®] Paver Enhancer was evaluated for its ability to provide color and sheen enhancement to the submitted samples.

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

Products Evaluated**New Construction Cleaning Products Evaluated**

Sample	Product	Dilution
All Submitted Manufactured Stone	Sure Klean® Manufactured Stone Cleaner	(1:2), (1:3)

Protective Water Repellent Products Evaluated

Sample	Product	Dilution
All Submitted Manufactured Stone	Sure Klean® Weather Seal Siloxane PD	Concentrate
	Stand Off® SLX100 Water & Oil Repellent	Concentrate
	Paver Kare® Paver Enhancer	Concentrate
	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Concentrate
	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Concentrate

Graffiti Repellent Products Evaluated

Sample	Product	Dilution
All Submitted Manufactured Stone	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Concentrate
	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Concentrate

Color Enhancement Products Evaluated

Sample	Product	Dilution
All Submitted Manufactured Stone	Paver Kare® Paver Enhancer	Concentrate

Graffiti Removal Products Evaluated

Sample	Product	Dilution
All Submitted Manufactured Stone	Sure Klean® Fast Acting Stripper	Concentrate
	Defacer Eraser® Graffiti Wipe	Concentrate

Stain Repellency Products Evaluated

Sample	Product	Dilution
All Submitted Manufactured Stone	Stand Off® SLX100 Water & Oil Repellent	Concentrate
	Stand Off® Stone, Tile & Masonry Protector (STMP)	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 N mortar from the submitted samples while limiting surface alterations to the decorative finish.

Type N cementitious mortar was prepared in compliance with the manufacturer's instructions, applied to the manufactured stone surface and allowed to cure for 7, 14 and 21 days. Mortar removal was accomplished using chemical assistance and a high-pressure water rinse with pressure rinsing equipment. The removal of Type N cementitious mortar was visually evaluated after 7, 14 and 21 days of curing.

Description of Products Evaluated – New Construction Cleaning

Sure Klean® Manufactured Stone Cleaner – 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. Manufactured Stone Cleaner adds depth to colors and brightens white matrices and exposed aggregate.

Test Method – New Construction Cleaning

New construction cleaners were evaluated using the following procedure:

1. Pre-wet the surface with water.
2. Apply the cleaner.
3. Allow the appropriate dwell time, as specified:
 Sure Klean® Manufactured Stone Cleaner 3-5 minutes
4. Pressure rinse thoroughly.*

***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.



Test Results – New Construction Cleaning**Cleaning Effectiveness (% Type N Mortar Removal)**

“Canyon Haze”				
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	98%	100%	100%
Sure Klean [®] Manufactured Stone Cleaner	1:3	98%	100%	100%
“Blue Heron”				
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	100%	100%	100%
Sure Klean [®] Manufactured Stone Cleaner	1:3	100%	100%	100%
“Rustic”				
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	98%	100%	100%
Sure Klean [®] Manufactured Stone Cleaner	1:3	100%	100%	100%
“Chipped Slate”				
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	100%	98%	95%
Sure Klean [®] Manufactured Stone Cleaner	1:3	100%	95%	95%
“Woodland”				
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	98%	98%	98%
Sure Klean [®] Manufactured Stone Cleaner	1:3	100%	98%	95%
“Cream”				
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	100%	100%	100%
Sure Klean [®] Manufactured Stone Cleaner	1:3	100%	100%	100%

Test Results – Limiting Surface Alterations

Substrate: Manufactured Stone		Pigment Color: “Canyon Haze”				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining	
Sure Klean® Manufactured Stone Cleaner	1:2	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:3	0	0	0	0	
Substrate: Manufactured Stone		Pigment Color: “Blue Heron”				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining	
Sure Klean® Manufactured Stone Cleaner	1:2	3	0	3	0	
Sure Klean® Manufactured Stone Cleaner	1:3	2	0	2	0	
Substrate: Manufactured Stone		Pigment Color: “Rustic”				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining	
Sure Klean® Manufactured Stone Cleaner	1:2	2	0	2	0	
Sure Klean® Manufactured Stone Cleaner	1:3	1	0	1	0	
Substrate: Manufactured Stone		Pigment Color: “Chipped Slate”				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining	
Sure Klean® Manufactured Stone Cleaner	1:2	1	0	1	0	
Sure Klean® Manufactured Stone Cleaner	1:3	0	0	0	0	
Substrate: Manufactured Stone		Pigment Color: “Woodland”				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining	
Sure Klean® Manufactured Stone Cleaner	1:2	3	0	3	0	
Sure Klean® Manufactured Stone Cleaner	1:3	2	0	2	0	
Substrate: Manufactured Stone		Pigment Color: “Cream”				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining	
Sure Klean® Manufactured Stone Cleaner	1:2	2	0	2	0	
Sure Klean® Manufactured Stone Cleaner	1:3	1	0	1	0	

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

- | | |
|---------------|---------------|
| 0 – No Change | 3 – Heavy |
| 1 – Slight | 4 – Excessive |
| 2 – Moderate | |

Photographs – New Construction Cleaning

“Canyon Haze”; 7 Day Cleaning



**Sure Klean[®]
Manufactured Stone
Cleaner (1:2)**

**Sure Klean[®]
Manufactured Stone
Cleaner (1:3)**

Untreated Control

“Canyon Haze”; 14 Day Cleaning



**Sure Klean[®]
Manufactured Stone
Cleaner (1:2)**

**Sure Klean[®]
Manufactured Stone
Cleaner (1:3)**

Untreated Control

Photographs – New Construction Cleaning

“Canyon Haze”; 21 Day Cleaning



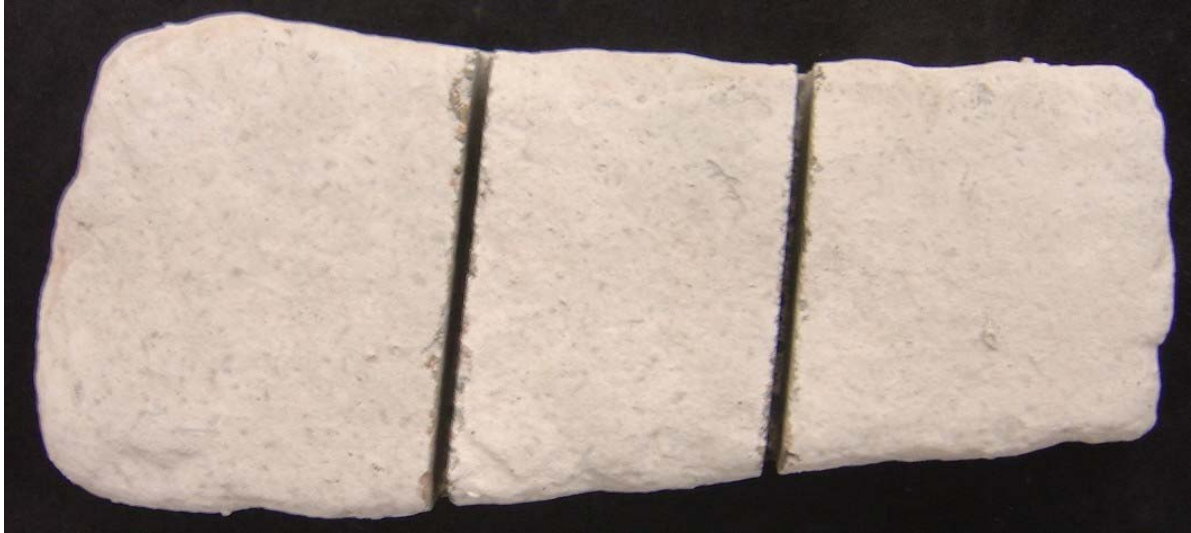
**Sure Klean[®]
Manufactured Stone
Cleaner (1:2)**

**Sure Klean[®]
Manufactured Stone
Cleaner (1:3)**

Untreated Control

Photographs – Limiting Surface Alterations

“Canyon Haze” Limiting Surface Alterations



**Sure Klean[®]
Manufactured Stone
Cleaner (1:2)**

**Sure Klean[®]
Manufactured Stone
Cleaner (1:3)**

Untreated Control

“Cream” Limiting Surface Alterations



**Sure Klean[®]
Manufactured Stone
Cleaner (1:2)**

**Sure Klean[®]
Manufactured Stone
Cleaner (1:3)**

Untreated Control

Conclusions – New Construction Cleaning

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

NOTE: Sure Klean® Manufactured Stone Cleaner diluted with two and/or three parts water removed slight amounts of the pigmented finish from the surface of all of the submitted samples except “Canyon Haze”. It is recommended that job-site testing be performed in an inconspicuous area before attempting overall cleaning to determine if the change in appearance is acceptable.

It is recommended that the selected cleaners always be used in the lowest possible concentration. They should be rinsed with the lowest pressure of water as practical to minimize removal of the decorative finish. Excessive pressure, water volume, and/or repeated application of the recommended products may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction for Type N mortar.

Recommendations – New Construction Cleaning

Recommendations for new construction cleaning for the manufactured stone submitted by Stone Concepts, Lenexa, KS are provided in the charts below. Recommendations are based on the optimum dilution for complete removal of mortar while limiting surface alterations.

Sample	New Construction Cleaning (Type N mortar, 21 day cleaning)
“Canyon Haze”	Sure Klean® Manufactured Stone Cleaner (1:2) OR (1:3)
“Chipped Slate”, “Rustic” and “Cream”	Sure Klean® Manufactured Stone Cleaner (1:3)
“Blue Heron” and “Woodland”	No Suggestions

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

Sure Klean® Weather Seal Siloxane PD – A ready-to-use, water-based silane/siloxane water repellent for concrete, GFRC, and most masonry and stucco surfaces. Siloxane PD penetrates more deeply than conventional water repellents. It helps masonry resist cracking, spalling, staining and other damage related to water intrusion. Low odor and alkaline stable, Siloxane PD is ideal for field and in-plant application.

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.

Paver Kare® 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.

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control – A clear, solvent-based silicone elastomer formulated to weatherproof concrete block and other porous masonry materials. Blok-Guard® & Graffiti Control protects masonry surfaces from repeated graffiti attacks without altering the natural appearance. Blok-Guard® & Graffiti Control penetrates and fills pores to prevent water penetration through exterior walls exposed to normal weathering. Graffiti removal is fast and easy using Defacer Eraser® Graffiti Wipe. Blok-Guard® & Graffiti Control is easy to apply with low-pressure spray, brush or roller.

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II – A clear-drying, water-based silicone emulsion for weatherproofing concrete block and other porous masonry materials. Blok-Guard® & Graffiti Control II also protects masonry surfaces from graffiti attacks without altering the natural appearance. Blok-Guard® & Graffiti Control II protects exterior walls exposed to normal weathering. Graffiti removal from treated surfaces is fast and easy using Defacer Eraser® Graffiti Wipe. Blok-Guard® & Graffiti Control II is easy to apply with low-pressure spray, brush or roller.

Sample Preparation – Protective Water Repellents

The submitted samples were scored and allowed to dry for at least 24 hours prior to treatment. All treatments were applied by brush in accordance with the current PROSOCO, Inc. Product Data Sheet application instructions. All treatments were allowed to cure for at least 72 hours prior to testing.

Test Methods – Protective Water Repellents**Water Absorption Tube Test: Horizontal RILEM II.4, 5.0 milliliters, 20 minutes**

The water absorption tube test simulating wind driven and wind blown rain conditions was performed. Tests were run with horizontal 5.0-milliliter head pressures. Filled to 5.0 milliliters, a water absorption tube produces a 103 mph dynamic wind pressure. See RILEM II.4 Tech Note for additional information.

The ranking system used to evaluate the effectiveness of the products applied to each submitted sample is as follows:

AA = "Above Average" correlates to less than or equal to 20% of the maximum untreated absorption.

A = "Average" correlates to less than or equal to 50% of the maximum untreated absorption.

BA = "Below Average" correlates to greater than 50% of the maximum untreated absorption.

EXAMPLE: If RILEM tubes applied to an untreated sample result in loss of 5.0 mL of water or more, then:

A rating of **AA** *Above Average* water repellent performance would be reported for treatments which result in a loss of no more than:

$$5.0 \text{ mL} \times 20\% = \mathbf{1.0 \text{ mL}}$$

A rating of **A** *Average* water repellent performance would be reported for treatments which result in a loss of no more than:

$$5.0 \text{ mL} \times 50\% = \mathbf{2.5 \text{ mL}}$$

A rating of **BA** *Below Average* water repellent performance would be reported for treatments which result in a loss of more than:

$$5.0 \text{ mL} \times 50\% = \mathbf{2.5 \text{ mL}}$$

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

“Canyon Haze”	Results in mL loss	Ranking
Untreated Control	0.1	--
Sure Klean [®] Weather Seal Siloxane PD	0.0	AA
Stand Off [®] SLX100 Water & Oil Repellent	0.0	AA
Paver Kare [®] Paver Enhancer	0.0	AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	0.0	AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	0.0	AA
“Blue Heron”	Results in mL loss	Ranking
Untreated Control	0.8	--
Sure Klean [®] Weather Seal Siloxane PD	0.0	AA
Stand Off [®] SLX100 Water & Oil Repellent	0.0	AA
Paver Kare [®] Paver Enhancer	0.0	AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	< 0.1	AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	0.0	AA
“Rustic”	Results in mL loss	Ranking
Untreated Control	0.2	--
Sure Klean [®] Weather Seal Siloxane PD	0.0	AA
Stand Off [®] SLX100 Water & Oil Repellent	0.0	AA
Paver Kare [®] Paver Enhancer	0.0	AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	0.0	AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	0.0	AA
“Chipped Slate”	Results in mL loss	Ranking
Untreated Control	1.2	--
Sure Klean [®] Weather Seal Siloxane PD	0.0	AA
Stand Off [®] SLX100 Water & Oil Repellent	0.0	AA
Paver Kare [®] Paver Enhancer	0.0	AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	0.0	AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	< 0.1	AA
“Woodland”	Results in mL loss	Ranking
Untreated Control	0.5	--
Sure Klean [®] Weather Seal Siloxane PD	0.0	AA
Stand Off [®] SLX100 Water & Oil Repellent	0.0	AA
Paver Kare [®] Paver Enhancer	0.0	AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	0.0	AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	0.1	AA
“Cream”	Results in mL loss	Ranking
Untreated Control	0.5	--
Sure Klean [®] Weather Seal Siloxane PD	0.0	AA
Stand Off [®] SLX100 Water & Oil Repellent	0.0	AA
Paver Kare [®] Paver Enhancer	0.0	AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	0.0	AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	0.0	AA

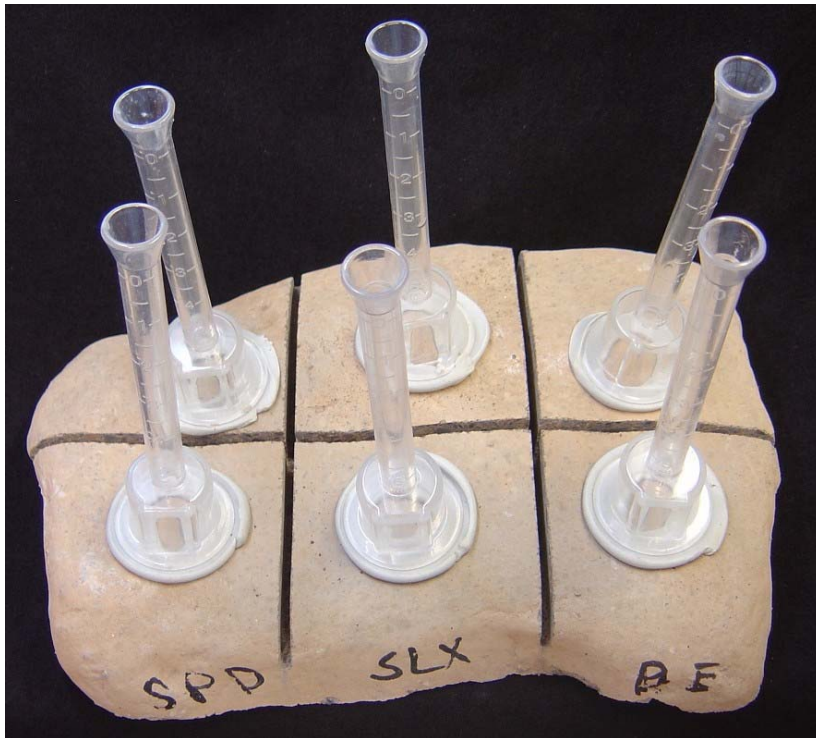
Photographs – Protective Water Repellents

“Canyon Haze”; Horizontal RILEM II.4, 5.0 milliliters, 20 minutes

**Sure Klean®
Weather Seal
Blok-Guard®
& Graffiti
Control**

**Sure Klean®
Weather Seal
Blok-Guard®
& Graffiti
Control II**

**Untreated
Control**



**Sure Klean®
Weather Seal
Siloxane PD**

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

**Paver Kare®
Paver
Enhancer**

Conclusions – Protective Water Repellents

Test results indicate that all of the water repellents tested exhibited above average water repellency on the submitted samples. In addition, Paver Kare® Paver Enhancer, Sure Klean® Weather Seal Blok-Guard® & Graffiti Control and Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II provided a slight to moderate color enhancement to all of the submitted samples. Sure Klean® Weather Seal Siloxane PD and Stand Off® SLX100 Water & Oil Repellent did not alter the appearance of any of the samples.

Recommendations – Protective Water Repellents

Recommendations for water repellent treatments for the manufactured stone submitted by Stone Concepts, Lenexa, KS are provided in the chart below. Recommendations are based on the treatments that proved most effective at providing water repellency on the submitted manufactured stone.

Sample	Protective Water Repellents
All Submitted Manufactured Stone	Sure Klean® Weather Seal Siloxane PD OR Stand Off® SLX100 Water & Oil Repellent OR Paver Kare® Paver Enhancer OR Sure Klean® Weather Seal Blok-Guard® & Graffiti Control OR Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II

The ability of a water repellent treatment to prevent the ingress of water is affected by a variety of factors. Therefore, on-site testing should be carried out for all installations with the recommended systems to ensure job site workmanship yields equivalent results.

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

Graffiti Control

This evaluation compares the effectiveness of graffiti control treatments in preventing staining of enamel spray paint and permanent markers.

Description of Products Evaluated – Graffiti Control

Products Evaluated for Graffiti Repellency

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control – A clear-drying, water-based silicone emulsion for weatherproofing concrete block and other porous masonry materials. Blok-Guard® & Graffiti Control II also protects masonry surfaces from graffiti attacks without altering the natural appearance. Blok-Guard® & Graffiti Control II protects exterior walls exposed to normal weathering. Graffiti removal from treated surfaces is fast and easy using Defacer Eraser® Graffiti Wipe. Blok-Guard® & Graffiti Control II is easy to apply with low-pressure spray, brush or roller.

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II – A clear-drying, water-based silicone emulsion for weatherproofing concrete block and other porous masonry materials. Blok-Guard® & Graffiti Control II also protects masonry surfaces from graffiti attacks without altering the natural appearance. Blok-Guard® & Graffiti Control II protects exterior walls exposed to normal weathering. Graffiti removal from treated surfaces is fast and easy using Defacer Eraser® Graffiti Wipe. Blok-Guard® & Graffiti Control II is easy to apply with low-pressure spray, brush or roller.

Products Evaluated for Graffiti Removal

Defacer Eraser® Graffiti Wipe – An easy-to-use graffiti remover that does not contain methanol, methylene chloride or other “halogenated” solvents prohibited on many projects. Graffiti Wipe removes a variety of graffiti stains from most smooth masonry, wood and metal surfaces.

Sure Klean® Fast Acting Stripper – A thixotropic stripping compound formulated specifically for removal of high strength paints and coatings such as epoxies, polyurethanes, and floor enamels. Additionally, Fast Acting Stripper dissolves most spray paints, marking pens, lacquers and other graffiti.

Graffiti Agents

Interior/Exterior Spray Paint (Red)
Permanent Marker (Green)
Permanent Marker (Red)
Permanent Marker (Black)

Sample Preparation – Graffiti Control

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control and Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II were applied in a wet-on-wet brushing application in accordance with the current PROSOCO, Inc. Product Data Sheet application instructions to sections of the manufactured stone samples. The samples were allowed to cure for at least one day. A visual adverse effects evaluation was made and then the graffiti agents were applied to the substrates.

Spray paint and markers were applied as graffiti agents to all treated surfaces no sooner than one day following application of the treatments. Removal of the graffiti agents was attempted 24 hours after application of the graffiti agents, using Defacer Eraser® Graffiti Wipe and Sure Klean® Fast Acting Stripper.

Test Methods – Graffiti Control

Chemical cleaners were evaluated using the following procedure:

1. Apply the graffiti removal product to a dry surface, soiled with graffiti.
2. Allow appropriate dwell time:

Graffiti Wipe	5 minutes
Fast Acting Stripper.....	20 minutes
3. Pressure rinse thoroughly until water runs clear.*
4. Allow the surface to dry thoroughly and visually examine to determine effectiveness.

***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.

Test Results – Graffiti Control

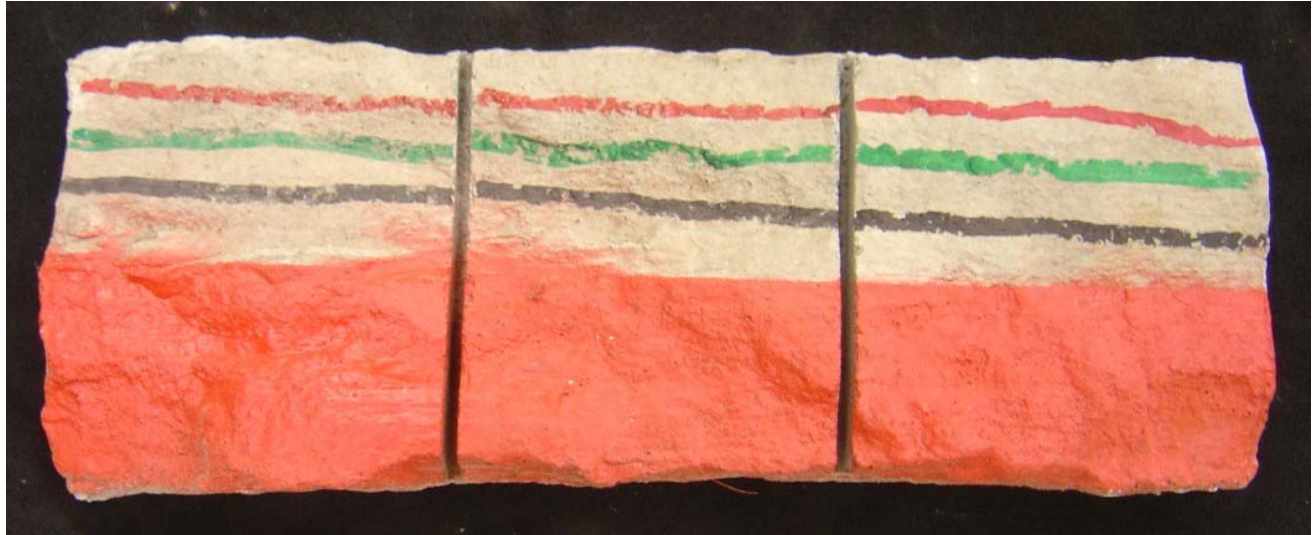
“Canyon Haze”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	60%	90%	50%	80%	70%
Graffiti Wipe	90%	50%	50%	60%	63%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	70%	90%	60%	95%	79%
Graffiti Wipe	90%	50%	50%	80%	68%
Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	60%	90%	60%	95%	76%
Graffiti Wipe	80%	50%	50%	80%	65%
“Blue Heron”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	98%	60%	80%	79%
Graffiti Wipe	90%	50%	60%	60%	65%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	100%	98%	98%	97%
Graffiti Wipe	95%	98%	95%	98%	97%
Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	95%	98%	96%
Graffiti Wipe	95%	98%	90%	95%	95%
“Rustic”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	60%	100%	60%	90%	78%
Graffiti Wipe	80%	40%	60%	60%	60%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	65%	100%	89%
Graffiti Wipe	98%	65%	65%	80%	77%
Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	85%	100%	70%	95%	88%
Graffiti Wipe	90%	50%	65%	75%	70%
“Chipped Slate”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	98%	70%	70%	80%
Graffiti Wipe	95%	40%	60%	60%	64%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	100%	75%	95%	88%
Graffiti Wipe	90%	60%	70%	80%	75%
Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	75%	98%	75%	95%	86%
Graffiti Wipe	95%	60%	70%	80%	76%

Test Results – Graffiti Control

“Woodland”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	70%	95%	89%
Graffiti Wipe	98%	60%	70%	70%	75%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	70%	95%	89%
Graffiti Wipe	98%	70%	70%	80%	80%
Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	70%	95%	89%
Graffiti Wipe	98%	70%	70%	90%	82%
“Cream”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	50%	80%	90%	75%
Graffiti Wipe	95%	95%	80%	80%	88%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	80%	95%	95%	88%
Graffiti Wipe	90%	95%	80%	90%	89%
Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	70%	80%	95%	81%
Graffiti Wipe	95%	95%	80%	95%	91%

Photographs – Graffiti Control

“Blue Heron”; Before Graffiti Removal



**Sure Klean[®] Weather Seal
Blok-Guard[®] & Graffiti Control**

**Sure Klean[®] Weather Seal
Blok-Guard[®] & Graffiti Control II**

Untreated Control

“Blue Heron”; After Graffiti Removal



**Sure Klean[®]
Fast Acting
Stripper**

**Defacer
Eraser[®]
Graffiti Wipe**

**Sure Klean[®]
Fast Acting
Stripper**

**Defacer
Eraser[®]
Graffiti Wipe**

**Sure Klean[®]
Fast Acting
Stripper**

**Defacer
Eraser[®]
Graffiti Wipe**

**Sure Klean[®] Weather Seal
Blok-Guard[®] & Graffiti Control**

**Sure Klean[®] Weather Seal
Blok-Guard[®] & Graffiti Control II**

Untreated Control

Conclusions – Graffiti Control

Based upon laboratory evaluations, graffiti removal was improved when the submitted samples were treated with Sure Klean® Weather Seal Blok-Guard® & Graffiti Control and Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II prior to graffiti application. In addition, both treatments provided a slight to moderate color enhancement to the submitted samples.

Recommendations – Graffiti Control

Recommendations for graffiti control treatment for each type of manufactured stone submitted by Stone Concepts, Lenexa, KS are provided in the chart below. Recommendations are based on the treatment that proved most effective for providing graffiti repellency and the product that was most effective at removing the graffiti on all types submitted.

Sample Type	Graffiti Repellency	Graffiti Removal
All Submitted Manufactured Stone	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control OR Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Sure Klean® Fast Acting Stripper OR Defacer Eraser® Graffiti Wipe

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. Because the severity of graffiti varies from location to location, on-site testing should be conducted to determine the most appropriate graffiti control product and procedure for a particular project.

Color Enhancement

This evaluation compares the effectiveness of Paver Kare® Paver Enhancer in providing color enhancement to the submitted samples.

Description of Product Evaluated – Color Enhancement

Paver Kare® 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.

Sample Preparation – Color Enhancement

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

Test Method – Color Enhancement

Paver Kare® Paver Enhancer was applied in accordance with the current PROSOCO, Inc. Product Data Sheet application instructions. After 24 hours, a visual evaluation was conducted to determine the level of color enhancement the treatment provided as compared to the untreated control.

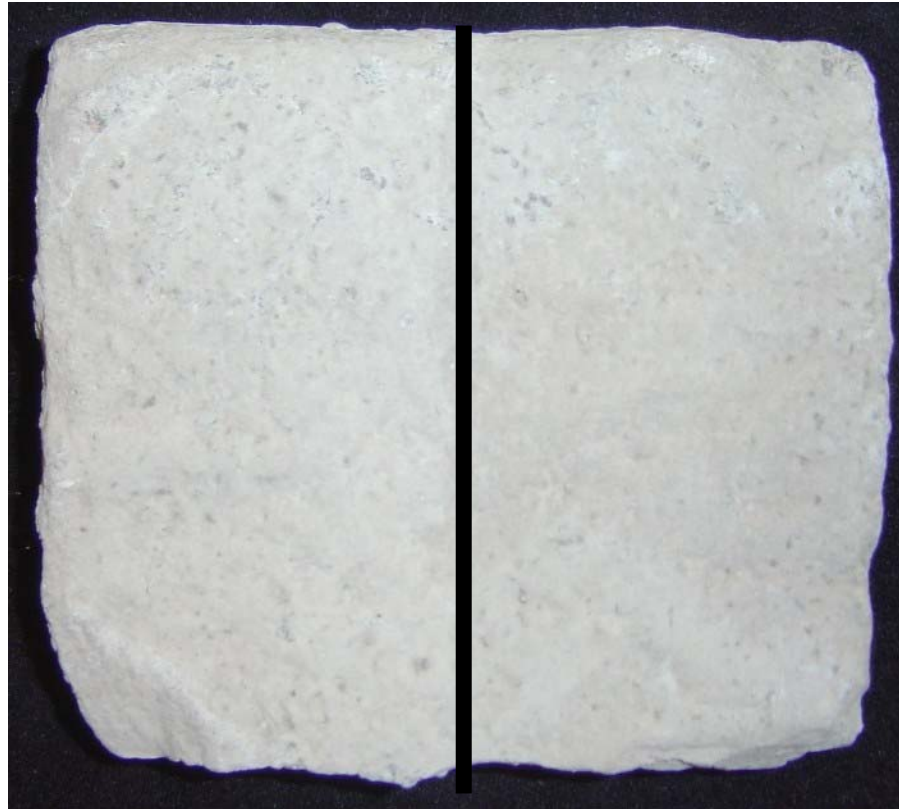
Test Results – Color Enhancement

“Canyon Haze”	
Treatment	Color Enhancement
Paver Kare® Paver Enhancer	1
“Blue Heron”	
Treatment	Color Enhancement
Paver Kare® Paver Enhancer	1
“Rustic”	
Treatment	Color Enhancement
Paver Kare® Paver Enhancer	1
“Chipped Slate”	
Treatment	Color Enhancement
Paver Kare® Paver Enhancer	1
“Woodland”	
Treatment	Color Enhancement
Paver Kare® Paver Enhancer	1
“Cream”	
Treatment	Color Enhancement
Paver Kare® Paver Enhancer	1

Scale: 0 - No Enhancement; Dull
1 - Slight Enhancement
2 - Moderate Enhancement
3 - Significant Enhancement

Photographs – Color Enhancement

“Cream” Color Enhancement



Untreated Control

Paver Kare® Paver Enhancer

Recommendations – Color Enhancement

Recommendations for color enhancement for each type of manufactured stone submitted by Stone Concepts, Lenexa, KS are provided in the chart below. Recommendations are based on how effective Paver Kare® Paver Enhancer was in providing color enhancement to the submitted samples.

Sample	Color Enhancement
All Submitted Manufactured Stone	Paver Kare® Paver Enhancer

Apply Paver Kare® Paver Enhancer 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.

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® 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® 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® 2010 All Surface Cleaner – A “next-generation” product for cleaning and degreasing light-to-heavily 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 home-use 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® Weather Seal Siloxane PD overspray from windows.

Staining Agents Evaluated

<u>Products</u>	<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® 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.

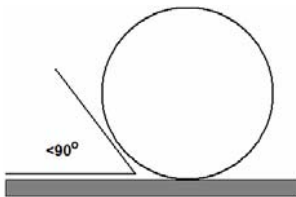
Test Method – Stain Repellency**Surface Beading Evaluation**

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 ($<90^\circ$) 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.

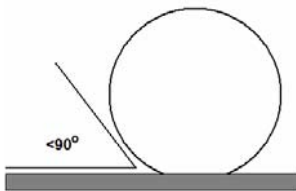
Note: Non-free flowing staining agents such as ketchup and mustard are applied in a globular fashion and therefore are not evaluated for their beading properties.

Rating System (1-5)

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



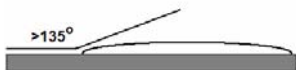
2. Wetting contained to the contact area (slight darkening); angle is less than 90° .



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[®] 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

“Canyon Haze”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	5	–	–	5	5	5	5	5	5
SLX100	1	–	–	1	1	1	1	1	2
STMP	1	–	–	2	2	1	1	2	2
“Blue Heron”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	5	–	–	5	5	5	5	5	5
SLX100	1	–	–	1	1	1	1	1	1
STMP	2	–	–	3	3	2	2	2	2
“Rustic”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	5	–	–	5	5	5	5	5	5
SLX100	1	–	–	1	1	1	1	2	1
STMP	2	–	–	3	3	3	2	2	3
“Chipped Slate”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	5	–	–	5	5	5	5	5	5
SLX100	1	–	–	1	1	1	1	1	2
STMP	2	–	–	3	3	3	2	3	3
“Woodland”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	5	–	–	5	5	5	5	5	5
SLX100	1	–	–	2	1	1	2	2	1
STMP	1	–	–	4	4	3	2	2	3
“Cream”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	5	–	–	5	5	5	5	5	5
SLX100	1	–	–	1	1	1	1	1	1
STMP	2	–	–	3	3	3	2	3	2

Test Results – Stain Repellency

“Canyon Haze”									
Untreated Control									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	60%*	70%*	80%*	80%*	100%	80%	80%	100%
4 hour	100%	100%*	70%*	80%*	100%*	100%	80%	80%	100%
1 hour	100%	100%*	90%*	90%*	100%	100%	80%	80%	100%
10 min.	100%	100%*	100%*	100%*	100%	100%	100%	80%	100%
Stand Off® SLX100 Water & Oil Repellent									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	60%	70%	90%*	100%*	100%	90%	90%	100%
4 hour	100%	100%	100%	100%*	100%*	100%	90%	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® Stone, Tile & Masonry Protector (STMP)									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	60%	70%	100%	100%*	100%	98%	90%	100%
4 hour	100%	100%	100%	100%	100%*	100%	98%	98%	100%
1 hour	100%	100%	100%	100%	100%*	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
“Blue Heron”									
Untreated Control									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	60%	70%	100%	100%	100%	80%	80%	100%
4 hour	100%	100%	70%	100%	100%	100%	80%	80%	100%
1 hour	100%	100%	90%	100%	100%	100%	80%	80%	100%
10 min.	100%	100%	100%	100%	100%	100%	80%	80%	100%
Stand Off® SLX100 Water & Oil Repellent									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	60%	70%	100%	100%	100%	95%	95%	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® Stone, Tile & Masonry Protector (STMP)									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	60%	70%	100%	100%	100%	98%	95%	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%

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

Test Results – Stain Repellency

“Rustic”									
Untreated Control									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	60%*	70%*	100%*	100%*	100%	70%	70%	90%
4 hour	100%	70%*	70%*	100%*	100%*	100%	70%	70%	90%
1 hour	100%	100%*	100%*	100%*	100%*	100%	70%	70%	90%
10 min.	100%	100%*	100%*	100%*	100%*	100%	80%	80%	90%
Stand Off® SLX100 Water & Oil Repellent									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%*	90%*	100%*	100%*	100%	80%	80%	90%
4 hour	100%	100%*	100%*	100%*	100%*	100%	90%	90%	90%
1 hour	100%	100%*	100%*	100%*	100%*	100%	90%	90%	90%
10 min.	100%	100%*	100%*	100%*	100%*	100%	100%	100%	90%
Stand Off® 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%	70%	100%*	100%*	100%	90%	80%	100%
4 hour	100%	100%	90%	100%*	100%*	100%	100%	90%	100%
1 hour	100%	100%	100%	100%*	100%*	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
“Chipped Slate”									
Untreated Control									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	70%*	70%*	90%	90%	95%	80%	80%	90%
4 hour	100%	70%*	70%*	90%	90%	95%	80%	80%	90%
1 hour	100%	100%*	100%*	90%	90%	100%	80%	80%	90%
10 min.	100%	100%*	100%*	90%	90%	100%	80%	80%	90%
Stand Off® SLX100 Water & Oil Repellent									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	70%*	70%*	90%	90%	100%	80%	80%	90%
4 hour	100%	100%*	70%*	100%	100%	100%	100%	100%	90%
1 hour	100%	100%*	100%*	100%	100%	100%	100%	100%	100%
10 min.	100%	100%*	100%*	100%	100%	100%	100%	100%	100%
Stand Off® 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%	70%	100%	90%	100%	95%	80%	100%
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%

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

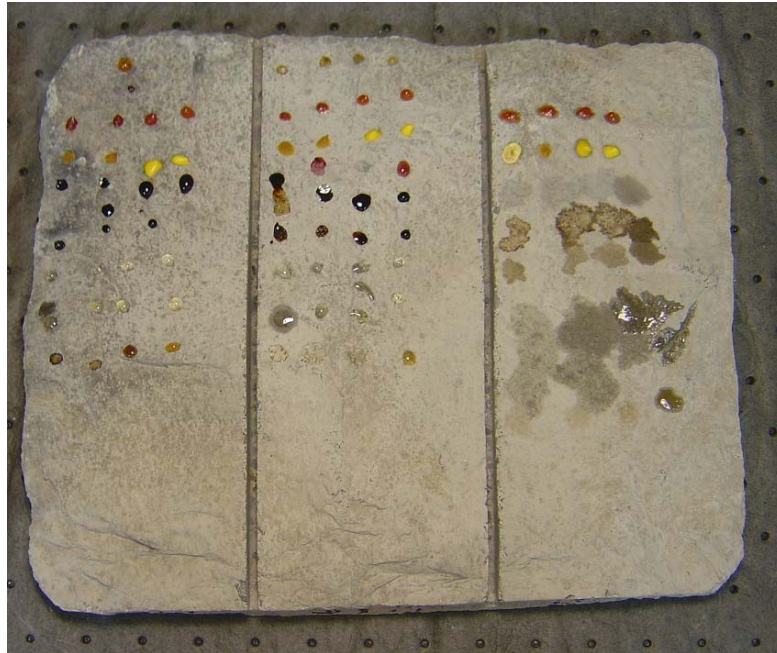
Test Results – Stain Repellency

"Woodland"									
Untreated Control									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	60%*	60%*	90%*	90%*	100%	70%	70%	90%
4 hour	100%	70%*	70%*	90%*	90%*	100%	70%	70%	90%
1 hour	100%	100%*	100%*	90%*	100%*	100%	70%	70%	90%
10 min.	100%	100%*	100%*	100%*	100%*	100%	70%	70%	100%
Stand Off® SLX100 Water & Oil Repellent									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	60%*	70%*	90%*	100%*	100%	80%	80%	90%
4 hour	100%	100%*	100%*	90%*	100%*	100%	90%	90%	95%
1 hour	100%	100%*	100%*	95%*	100%*	100%	100%	100%	100%
10 min.	100%	100%*	100%*	100%*	100%*	100%	100%	100%	100%
Stand Off® Stone, Tile & Masonry Protector (STMP)									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	60%*	70%*	95%*	100%	100%	100%	95%	95%
4 hour	100%	100%*	70%*	100%*	100%	100%	100%	100%	95%
1 hour	100%	100%	100%*	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
"Cream"									
Untreated Control									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	70%*	60%*	90%*	90%*	95%	90%	80%	80%
4 hour	100%	100%*	70%*	90%*	90%*	95%	95%	80%	80%
1 hour	100%	100%*	100%*	90%*	90%*	100%	95%	80%	80%
10 min.	100%	100%*	100%*	100%*	100%*	100%	95%	80%	80%
Stand Off® SLX100 Water & Oil Repellent									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	60%*	60%*	90%*	100%*	100%	100%	90%	100%
4 hour	100%	100%*	100%*	90%*	100%*	100%	100%	95%	100%
1 hour	100%	100%*	100%*	90%*	100%*	100%	100%	100%	100%
10 min.	100%	100%*	100%*	100%*	100%*	100%	100%	100%	100%
Stand Off® 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%	80%	100%	100%	100%	100%	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%

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

Photographs – Stain Repellency

“Chipped Slate”; Stains Applied



Stand Off® SLX100 Water & Oil Repellent

Stand Off® Stone, Tile & Masonry Protector (STMP)

Untreated Control

“Chipped Slate”; Stains Removed



Stand Off® SLX100 Water & Oil Repellent

Stand Off® 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 manufactured stone submitted by Stone Concepts, Lenexa, KS 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 Manufactured Stone	Stand Off® SLX100 Water & Oil Repellent OR Stand Off® Stone, Tile & Masonry Protector (STMP)	Enviro Klean® 2010 All Surface Cleaner (1:10)

The ability of a stain repellent treatment to prevent staining is affected by a variety of factors. Therefore, on-site testing should be carried out for all installations with the recommended systems to ensure job site workmanship yields equivalent results.

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



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