



PROSOCO, Inc.

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





Submitted Information

For: cc:	Michael Trotta Steve Dean John Bourne
Subject:	Dutch Quality Stone, Inc. Mt. Eaton, OH
Date:	

Project: 0510-12 PTP

Samples Submitted: 8 types of manufactured stone in various sizes, shapes, and colors

Sample	Color	Size
"Autumn Blend Limestone"	Orange/Brown/Tan	Various
"Brown Stackstone"	Orange/Brown/Red/Green	Various
"Cypress Weather Ledge"	Brown/Tan/Orange	Various
"Michigan River Rock"	Gray/Brown/Red/Green	Various
"Michigan Split Granite"	Gray/Red/Green/Tan/Black	Various
"Pennsylvania Dry Stack"	Tan/Orange/White	Various
"Prestige Ledgestone"	White/Gray/Tan	Various
"Top Rock"	Tan/Red/Gray/Green	Various

Submitted by: Michael Trotta





Purpose of Testing

Eight types of manufactured stone were submitted to PROSOCO, Inc.'s Testing Laboratory 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 and color/sheen enhancement products suitable for manufactured stone were evaluated.

New Construction Cleaning – Sure Klean[®] Manufactured Stone Cleaner and Enviro Klean[®] Safety Klean were tested at various dilutions to determine the optimum cleaner/cure time combination for complete removal of laboratory applied Type M or 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 either Type M or 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 M mortar after 3, 7, and 14 days of curing and 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:

<u>Surface Finish Removal</u> 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.

<u>Substrate Deterioration</u> 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.

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

<u>Staining</u> 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 Blok-Guard[®] & Graffiti Control, Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control II, Sure Klean[®] Weather Seal Siloxane PD, and Stand Off[®] SLX100 Water & Oil Repellent 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 and Sheen Enhancement – Sure Klean[®] Paver Enhancer and Stand Off[®] Gloss 'N Guard WB were evaluated for their ability to provide color and sheen enhancement to the submitted samples.





PROSOCO, Inc.

Products Evaluated

New Construction Cleaning Products Evaluated

Sample	Product	Dilution
All Submitted	Sure Klean [®] Manufactured Stone Cleaner	1:2, 1:3
Manufactured Stone	Enviro Klean [®] Safety Klean	1:2, 1:3

Protective Water 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
	Sure Klean [®] Weather Seal Siloxane PD	Concentrate
	Stand Off [®] SLX100 Water & Oil Repellent	Concentrate

Graffiti Repellent Products Evaluated

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

Graffiti Removal Products Evaluated

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

Color and Sheen Enhancement Products Evaluated

Sample	Product	Dilution
All Submitted	Sure Klean [®] Paver Enhancer	Concentrate
Manufactured Stone	Stand Off [®] Gloss 'N Guard WB	Concentrate





New Construction Cleaning

These cleaning trials were conducted to determine the optimal cleaning/cure time combination to most efficiently remove Type M and Type N mortar from the submitted samples while limiting surface alterations to the decorative finish.

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

Enviro Klean[®] **Safety Klean** – An effective, safe, alternative to acidic compounds for cleaning brick, tile and concrete surfaces. Safety Klean rids new masonry construction of excess mortar, dirt and other common job site soiling. It's ideal for projects where traditional acidic cleaners are not allowed. Non-fuming Safety Klean contains no hydrochloric or other traditional inorganic acids and is safe for use on and around most metal surfaces. Always test. Additionally, it is up to 70 percent more effective than citric and glycolic acids and 50 percent more effective than phosphoric acid.

Test Method – New Construction Cleaning

Dilution ratios refer to mixtures of concentrated cleaner : fresh water. Chemical 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.	
	Manufactured Stone Cleaner	3-5 minutes
	Safety Klean	3-5 minutes
1	Pressure rinse thoroughly *	

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; Type M Mortar

<u>% removal</u>

"Autumn B	lend Limeston	e"		
Product	Dilution	3 day	7 day	14 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	99%	98%	98%
Sure Klean [®] Manufactured Stone Cleaner	1:3	95%	95%	95%
Enviro Klean [®] Safety Klean	1:2	98%	95%	90%
Enviro Klean [®] Safety Klean	1:3	90%	90%	90%
	Stackstone"			•
Product	Dilution	3 day	7 day	14 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	95%	90%	90%
Sure Klean [®] Manufactured Stone Cleaner	1:3	95%	90%	90%
Enviro Klean [®] Safety Klean	1:2	95%	95%	90%
Enviro Klean [®] Safety Klean	1:3	90%	90%	90%
	Neather Ledge			
Product	Dilution	3 day	7 day	14 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	90%	90%	90%
Sure Klean [®] Manufactured Stone Cleaner	1:3	85%	85%	80%
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%
Enviro Klean [®] Safety Klean	1:3	100%	80%	75%
	n River Rock"		0070	1070
Product	Dilution	3 day	7 day	14 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	90%	90%	90%
Sure Klean [®] Manufactured Stone Cleaner	1:2	90%	90%	90%
Enviro Klean [®] Safety Klean	1:2	80%	80%	80%
Enviro Klean [®] Safety Klean	1:2	80%	80%	80%
	Split Granite		0070	0070
Product	Dilution	3 day	7 day	14 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	90%	90%	90%
Sure Klean [®] Manufactured Stone Cleaner	1:3	90%	90%	90%
Enviro Klean [®] Safety Klean	1:2	80%	80%	80%
Enviro Klean [®] Safety Klean	1:3	80%	80%	80%
	ania Dry Stack		0070	0070
Product	Dilution		7 dov	14 dov
Sure Klean [®] Manufactured Stone Cleaner	1:2	<u>3 day</u> 95%	7 day 95%	14 day 95%
Sure Klean [®] Manufactured Stone Cleaner	1:2	<u>95%</u> 95%	90%	90%
Enviro Klean [®] Safety Klean	1:2	90%	90%	90%
Enviro Klean [®] Safety Klean	1:3	90%	90%	90%
			90 %	90 %
	Eledgestone"		7	44 1
Product	Dilution	3 day	7 day	14 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	100%	100%	100%
Sure Klean [®] Manufactured Stone Cleaner	1:3	100%	100%	100%
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%
Enviro Klean [®] Safety Klean	1:3	100%	100%	100%
	p Rock"			
Product	Dilution	3 day	7 day	14 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	100%	100%	90%
Sure Klean [®] Manufactured Stone Cleaner	1:3	95%	90%	90%
Enviro Klean [®] Safety Klean	1:2	100%	100%	90%
Enviro Klean [®] Safety Klean	1:3	90%	90%	90%





Test Results – New Construction Cleaning; Type N Mortar

<u>% removal</u>

"Autumn Bl	end Limeston	e"		
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%
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%
Enviro Klean [®] Safety Klean	1:3	100%	100%	100%
"Brown	Stackstone"			•
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	100%	95%	95%
Sure Klean [®] Manufactured Stone Cleaner	1:3	100%	95%	95%
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%
Enviro Klean [®] Safety Klean	1:3	100%	100%	95%
	Veather Ledge	e"		
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	95%	90%	90%
Sure Klean [®] Manufactured Stone Cleaner	1:3	95%	90%	70%
Enviro Klean [®] Safety Klean	1:2	100%	95%	85%
Enviro Klean [®] Safety Klean	1:3	100%	95%	85%
	n River Rock"			
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%
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%
Enviro Klean [®] Safety Klean	1:3	100%	100%	100%
	Split Granite'			
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%
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%
Enviro Klean [®] Safety Klean	1:3	100%	100%	100%
	ania Dry Stack			
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	100%	90%	90%
Sure Klean [®] Manufactured Stone Cleaner	1:3	100%	90%	80%
Enviro Klean [®] Safety Klean	1:2	100%	98%	90%
Enviro Klean [®] Safety Klean	1:3	100%	98%	70%
	Ledgestone"			
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	100%	100%	100%
Sure Klean [®] Manufactured Stone Cleaner	1:2	100%	100%	100%
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%
	p Rock"	10070		
Product	Dilution	7 day	14 day	21 day
Sure Klean [®] Manufactured Stone Cleaner	1:2	100%	14 day 100%	100%
Sure Klean [®] Manufactured Stone Cleaner	1:3	100%	95%	95%
Enviro Klean [®] Safety Klean	1:2	100%	100%	100%
	1.4			100/0





PROSOCO, Inc.

<u>Test Results</u> – Limiting Surface Alterations

Substrate: Manufactured Stone		Pigment Color:	"Autumn Blend	Limestone"	
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	0	0	0	0
Manufactured Stone Cleaner	1:3	0	0	0	0
Safety Klean	1:2	1	0	0	0
Safety Klean	1:3	1	0	0	0
Substrate: Manufactured Stone		Pigment Color:	"Brown Stacksto	one"	
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	0	0	0	0
Manufactured Stone Cleaner	1:3	0	0	0	0
Safety Klean	1:2	1	0	0	0
Safety Klean	1:3	1	0	0	0
Substrate: Manufactured Stone		Pigment Color:	"Cypress Weath	ner Ledge"	
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	0	0	0	0
Manufactured Stone Cleaner	1:3	0	0	0	0
Safety Klean	1:2	1	0	0	0
Safety Klean	1:3	1	0	0	0
Substrate: Manufactured Stone		Pigment Color: "Michigan River Rock"			
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	1	0	0	0
Manufactured Stone Cleaner	1:3	1	0	0	0
Safety Klean	1:2	3	0	0	0
Safety Klean	1:3	3	0	0	0
Substrate: Manufactured Stone		Pigment Color:	"Michigan Split	Granite"	
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	1	0	0	0
Manufactured Stone Cleaner	1:3	1	0	0	0
Safety Klean	1:2	3	0	0	0
Safety Klean	1:3	3	0	0	0
Substrate: Manufactured Stone	Pigment Color:	"Pennsylvania [Dry Stack"		
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	0	0	0	0
Manufactured Stone Cleaner	1:3	0	0	0	0
Safety Klean	1:2	2	0	0	0
Safety Klean	1:3	2	0	0	0

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

0 – no change

3 – heavy

- 1 slight 2 – moderate
- 4 excessive





PROSOCO, Inc.

Test Results – Limiting Surface Alterations

Substrate: Manufactured Stone		Pigment Color:	"Prestige Ledge	estone"	
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	0	0	0	0
Manufactured Stone Cleaner	1:3	0	0	0	0
Safety Klean	1:2	1	0	0	0
Safety Klean	1:3	1	0	0	0
Cubetrate. Manufactured Ctore			"Tan Daal"		
Substrate: Manufactured Stone		Pigment Color:	"Top Rock"		
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
	Dilution 1:2	Surface Finish	Substrate		Staining 0
Product		Surface Finish	Substrate		
Product Manufactured Stone Cleaner	1:2	Surface Finish Removal 0	Substrate Deterioration 0	Change 0	0

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

- 0 no change
- 3 heavy 4 – excessive

- 1 slight
- 2 moderate





Photographs – New Construction Cleaning; Type M Mortar

"Autumn Blend Limestone"; 3 Day Cleaning



"Autumn Blend Limestone"; 7 Day Cleaning



"Autumn Blend Limestone"; 14 Day Cleaning







Photographs – New Construction Cleaning; Type N Mortar

"Autumn Blend Limestone"; 7 Day Cleaning



"Autumn Blend Limestone"; 14 Day Cleaning



"Autumn Blend Limestone"; 21 Day Cleaning







Photographs – Limiting Surface Alterations

"Autumn Blend Limestone" Limiting Surface Alterations







Conclusions – New Construction Cleaning

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

Sure Klean[®] Manufactured Stone Cleaner removed slight amounts of the pigmented finish from the surface of the submitted "Michigan Split Granite" and "Michigan River Rock" samples. It is recommended that job-site testing be performed in an inconspicuous area before attempting overall cleaning to determine if the change in surface finish is acceptable.

*NOTE: Both dilutions of Enviro Klean[®] Safety Klean tested removed slight to heavy amounts of the pigmented finish from the surface of all of the submitted samples. Based on this evaluation and the evaluation for mortar removal, Enviro Klean[®] Safety Klean is not recommended for new construction cleaning on the submitted samples.

It is recommended that Sure Klean[®] Manufactured Stone Cleaner always be used in the lowest possible concentration. It should be rinsed with the lowest pressure of water as practical to minimize removal of the decorative finish. Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 3 days of construction for Type M mortar and 7 days of construction for Type N mortar.

<u>Recommendations</u> – New Construction Cleaning

Recommendations for cleaning for the manufactured stone submitted by Dutch Quality Stone, Inc., Mt. Eaton, OH are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar while limiting surface alterations.

Sample	New Construction Cleaning (Type M mortar, 14 day cleaning)	New Construction Cleaning (Type N mortar, 21 day cleaning)
"Autumn Blend Limestone" "Michigan River Rock" "Michigan Split Granite"	Sure Klean [®] Manufactured Stone Cleaner (1:3)	Sure Klean [®] Manufactured Stone Cleaner (1:3)
"Pennsylvania Dry Stack"	Sure Klean [®] Manufactured Stone Cleaner (1:3)	Sure Klean [®] Manufactured Stone Cleaner (1:2)
"Cypress Weather Ledge"	Sure Klean [®] Manufactured Stone Cleaner (1:2)	Sure Klean [®] Manufactured Stone Cleaner (1:2)
"Prestige Ledgestone"	Sure Klean [®] Manufactured Stone Cleaner (1:2)	Sure Klean [®] Manufactured Stone Cleaner (1:3)
"Brown Stackstone" "Top Rock"	Sure Klean [®] Manufactured Stone Cleaner (1:3)	Sure Klean [®] Manufactured Stone Cleaner (1:2) OR (1:3)

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 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.

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.



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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: Vertical 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 vertical 5.0-milliliter head pressures. Filled to 5 milliliters, a water absorption tube produces a 98 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.

 $\underline{\mathbf{A}}$ = "Average" correlates to less than or equal to 50% of the maximum untreated absorption.

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

EXAMPLE: If RILEM tubes applied to an untreated sample result in loss of 5 ml of water or more, then:

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

5.0 mL × 20% = 1.0 mL

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

5.0 mL × 50% = **2.5 mL**

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

5.0 mL × 50% = **2.5 mL**





Test Results - Protective Water Repellents

Water Absorption Tube Test: Vertical RILEM II.4, 5.0 milliliters, 20 minutes

<u>AA</u> = Above Average

<u>A</u> = Average

BA = Below Average

"Autumn Blend Limestone"	Results in mL loss	Ranking
Untreated Control	-0.7	
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	-0.0	<u>AA</u>
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	-0.0	<u>AA</u>
Sure Klean [®] Weather Seal Siloxane PD	-0.0	<u>AA</u>
Stand Off [®] SLX100 Water & Oil Repellent	-0.0	<u>AA</u>
"Brown Stackstone"	Results in mL loss	Ranking
Untreated Control	-0.6	
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	-0.0	<u>AA</u>
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	-0.0	<u>AA</u>
Sure Klean [®] Weather Seal Siloxane PD	-0.0	<u>AA</u>
Stand Off [®] SLX100 Water & Oil Repellent	-0.0	AA
"Cypress Weather Ledge"	Results in mL loss	Ranking
Untreated Control	-1.3	
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	-0.0	<u>AA</u>
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	-0.0	<u>AA</u>
Sure Klean [®] Weather Seal Siloxane PD	-0.0	<u>AA</u>
Stand Off [®] SLX100 Water & Oil Repellent	-0.0	<u>AA</u>
"Michigan River Rock"	Results in mL loss	Ranking
Untreated Control	-1.1	
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	-0.0	<u>AA</u>
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	-0.0	<u>AA</u> <u>AA</u>
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	-0.0	AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD	-0.0 -0.0	<u>AA</u> <u>AA</u>
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD Stand Off [®] SLX100 Water & Oil Repellent	-0.0 -0.0 -0.0	<u>AA</u> <u>AA</u> <u>AA</u>
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD Stand Off [®] SLX100 Water & Oil Repellent "Michigan Split Granite" Untreated Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	-0.0 -0.0 -0.0 Results in mL loss	<u>AA</u> <u>AA</u> <u>AA</u> Ranking
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD Stand Off [®] SLX100 Water & Oil Repellent " Michigan Split Granite " Untreated Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	-0.0 -0.0 -0.0 Results in mL loss -1.0	AA AA AA Ranking
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD Stand Off [®] SLX100 Water & Oil Repellent "Michigan Split Granite" Untreated Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	-0.0 -0.0 -0.0 Results in mL loss -1.0 -0.0	AA AA AA Ranking AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD Stand Off [®] SLX100 Water & Oil Repellent " Michigan Split Granite " Untreated Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	-0.0 -0.0 -0.0 Results in mL loss -1.0 -0.0 -0.0	AA AA AA Ranking AA AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD Stand Off [®] SLX100 Water & Oil Repellent " Michigan Split Granite " Untreated Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	-0.0 -0.0 -0.0 Results in mL loss -1.0 -0.0 -0.0 -0.0	AA AA AA Ranking AA AA AA AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD Stand Off [®] SLX100 Water & Oil Repellent " Michigan Split Granite " Untreated Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD Stand Off [®] SLX100 Water & Oil Repellent " Pennsylvania Dry Stack " Untreated Control	-0.0 -0.0 -0.0 Results in mL loss -1.0 -0.0 -0.0 -0.0 -0.0	AA AA AA Ranking AA AA AA AA AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD Stand Off [®] SLX100 Water & Oil Repellent " Michigan Split Granite " Untreated Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD Stand Off [®] SLX100 Water & Oil Repellent " Pennsylvania Dry Stack "	-0.0 -0.0 -0.0 Results in mL loss -1.0 -0.0 -0.0 -0.0 -0.0 Results in mL loss	AA AA AA Ranking AA AA AA AA AA AA Ranking
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD Stand Off [®] SLX100 Water & Oil Repellent " Michigan Split Granite " Untreated Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD Stand Off [®] SLX100 Water & Oil Repellent " Pennsylvania Dry Stack " Untreated Control	-0.0 -0.0 -0.0 Results in mL loss -1.0 -0.0 -0.0 -0.0 -0.0 Results in mL loss -0.8	AA AA AA Ranking AA AA AA AA AA AA AA AA AA AA AA AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD Stand Off [®] SLX100 Water & Oil Repellent "Michigan Split Granite" Untreated Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II Sure Klean [®] Weather Seal Siloxane PD Stand Off [®] SLX100 Water & Oil Repellent "Pennsylvania Dry Stack" Untreated Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	-0.0 -0.0 -0.0 Results in mL loss -1.0 -0.0 -0.0 -0.0 -0.0 Results in mL loss -0.8 -0.8 -0.0	AA AA Ranking AA AA AA AA AA Ranking AA





Test Results - Protective Water Repellents

Water Absorption Tube Test: Vertical RILEM II.4, 5.0 milliliters, 20 minutes

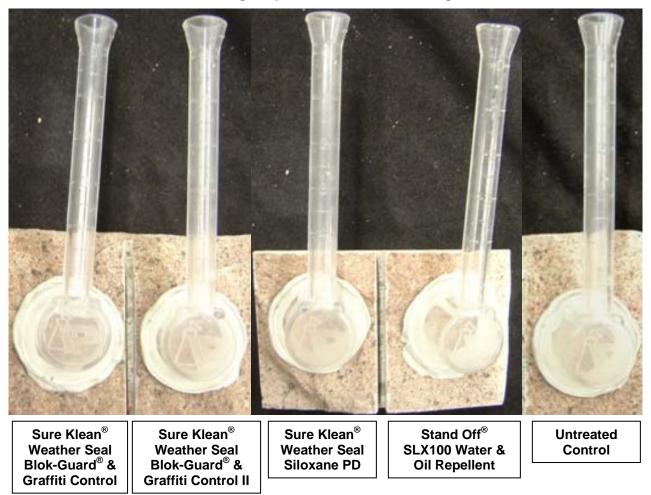
$\underline{AA} = Above Average \qquad \underline{A} = Average$	<u>BA</u> = Below Av	/erage
"Prestige Ledgestone"	Results in mL loss	Ranking
Untreated Control	-0.9	
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	-0.0	AA
Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II	-0.0	<u>AA</u>
Sure Klean [®] Weather Seal Siloxane PD	-0.0	AA
Stand Off [®] SLX100 Water & Oil Repellent	-0.0	AA
"Top Rock"	Results in mL loss	Ranking
"Top Rock" Untreated Control	Results in mL loss -0.2	Ranking
-		Ranking <u>AA</u>
Untreated Control	-0.2	
Untreated Control Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control	-0.2 -0.0	 <u>AA</u>





Photographs - Protective Water Repellents

"Michigan Split Granite"; RILEM Testing







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, Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control and Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control II provided a slight 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 submitted samples.

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

Recommendations for water repellent treatments for the manufactured stone submitted by Dutch Quality Stone, Inc., Mt. Eaton, OH 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	Water Repellents
All Submitted Manufactured Stone	Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control OR Sure Klean [®] Weather Seal Blok-Guard [®] & Graffiti Control II OR Sure Klean [®] Weather Seal Siloxane PD OR Stand Off [®] SLX100 Water & Oil Repellent

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, 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.

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)



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

	"Au	tumn Blend Lim	estone"		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	90%	80%	90%	85%
Graffiti Wipe	20%	10%	80%	80%	48%
Blok-Guard [®] & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	85%	90%	98%	100%	93%
Graffiti Wipe	100%	100%	100%	98%	100%
Blok-Guard [®] & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	90%	95%	94%
Graffiti Wipe	100%	100%	90%	95%	96%
		"Brown Stackst	one"		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	95%	80%	80%	84%
Graffiti Wipe	40%	20%	70%	80%	53%
Blok-Guard [®] & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	85%	100%	100%	100%	96%
Graffiti Wipe	100%	100%	100%	100%	100%
Blok-Guard [®] & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	100%	98%	95%	97%
Graffiti Wipe	100%	100%	98%	98%	99%
	"C	ypress Weather	Ledge"		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	75%	95%	90%	80%	85%
Graffiti Wipe	10%	50%	90%	80%	58%
Blok-Guard [®] & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	95%	98%	95%	95%
Graffiti Wipe	100%	100%	100%	100%	100%
Blok-Guard [®] & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	95%	98%	100%	96%
Graffiti Wipe	100%	100%	100%	100%	100%
	"	Michigan River I	Rock"		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	80%	80%	70%	81%
Graffiti Wipe	80%	10%	80%	70%	60%
Blok-Guard [®] & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	95%	98%	90%	95%
Graffiti Wipe	100%	100%	100%	100%	100%
Blok-Guard [®] & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	100%	98%	90%	96%
Graffiti Wipe	100%	100%	98%	90%	97%

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Test Results - Graffiti Control

	"N	lichigan Split G	ranite"		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	95%	90%	90%	89%
Graffiti Wipe	50%	80%	80%	80%	73%
Blok-Guard [®] & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	95%	100%	95%	96%
Graffiti Wipe	100%	100%	100%	100%	100%
Blok-Guard [®] & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	98%	98%	97%
Graffiti Wipe	100%	100%	98%	98%	99%
	"Pe	ennsylvania Dry	Stack"		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	80%	100%	93%
Graffiti Wipe	20%	10%	80%	90%	50%
Blok-Guard [®] & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	100%	100%	98%
Graffiti Wipe	100%	100%	100%	100%	100%
Blok-Guard [®] & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	100%	100%	98%
Graffiti Wipe	100%	100%	100%	100%	100%
	"	Prestige Ledges	stone"		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	90%	80%	80%	83%
Graffiti Wipe	10%	10%	30%	30%	20%
Blok-Guard [®] & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	90%	98%	98%	94%
Graffiti Wipe	100%	100%	98%	98%	99%
Blok-Guard [®] & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	98%	95%	95%	95%
Graffiti Wipe	100%	98%	95%	95%	97%
		"Top Rock"			
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	85%	100%	70%	100%	89%
Graffiti Wipe	30%	40%	70%	100%	60%
Blok-Guard [®] & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	100%	100%	100%	100%	100%
Graffiti Wipe	100%	100%	100%	100%	100%
Blok-Guard [®] & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	100%	100%	100%	99%
Graffiti Wipe	100%	100%	100%	100%	100%





Photographs – Graffiti Control

"Brown Stackstone"; Before Graffiti Removal



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

Untreated Control

"Brown Stackstone"; After Graffiti Removal







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 Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control and Sure Klean[®] Weather Seal Blok-Guard[®] & Graffiti Control II provided a slight color enhancement to the submitted samples.

Recommendations – Graffiti Control

Recommendations for graffiti control treatment for each type of manufactured stone submitted by Dutch Quality Stone, Inc., Mt. Eaton, OH 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 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[®] Paver Enhancer – A solvent-based blend of high-quality siloxanes modified to provide excellent water repellency and color enhancement to interlocking concrete, fired clay, porous tile and many types of natural stone surfaces. Paver Enhancer penetrates and reacts with the surface to form a chemical bond, providing long-term durability, alkali resistance and superior breatheability.

Stand Off[®] **Gloss 'N Guard WB** – A highly durable protective coating for tile, pavers, terrazzo and other polished and unpolished masonry. Gloss 'N Guard WB dries to a satin-gloss finish which enhances the natural beauty of treated surfaces. The water-borne acrylic formula complies with all known AIM VOC regulations nationwide.

Sample Preparation – Color and Sheen Enhancement

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

Test Method – Color and Sheen Enhancement

Sure Klean[®] Paver Enhancer and Stand Off[®] Gloss 'N Guard WB were applied by brush in accordance with the current PROSOCO, Inc. Product Data Sheet application instructions. After 24 hours, a visual evaluation was made comparing the untreated surface to the treated surfaces.





Test Results – Color and Sheen Enhancement

"Autumn Blend Limestone"				
Treatment	Color Enhancement	Sheen Enhancement		
Sure Klean [®] Paver Enhancer	1	0		
Stand Off [®] Gloss 'N Guard WB	1	3		
"Brown	Stackstone"			
Treatment	Color Enhancement	Sheen Enhancement		
Sure Klean [®] Paver Enhancer	3	0		
Stand Off [®] Gloss 'N Guard WB	1	3		
"Cypress V	Veather Ledge"			
Treatment	Color Enhancement	Sheen Enhancement		
Sure Klean [®] Paver Enhancer	2	0		
Stand Off [®] Gloss 'N Guard WB	1	3		
"Michiga	n River Rock"			
Treatment	Color Enhancement	Sheen Enhancement		
Sure Klean [®] Paver Enhancer	2	0		
Stand Off [®] Gloss 'N Guard WB	2	3		
"Michigan	Split Granite"			
Treatment	Color Enhancement	Sheen Enhancement		
Sure Klean [®] Paver Enhancer	1	0		
Stand Off [®] Gloss 'N Guard WB	2	3		
"Pennsylva	ania Dry Stack"			
Treatment	Color Enhancement	Sheen Enhancement		
Sure Klean [®] Paver Enhancer	2	0		
Stand Off [®] Gloss 'N Guard WB	2	3		
"Prestige Ledgestone"				
Treatment	Color Enhancement	Sheen Enhancement		
Sure Klean [®] Paver Enhancer	2	0		
Stand Off [®] Gloss 'N Guard WB	2	3		
"То	p Rock"			
Treatment	Color Enhancement	Sheen Enhancement		
Sure Klean [®] Paver Enhancer	3	0		
Stand Off [®] Gloss 'N Guard WB	1	3		

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





Photographs – Color and Sheen Enhancement

"Brown Stackstone"; Color Enhancement Products Applied





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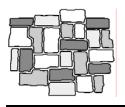
Recommendations – Color and Sheen Enhancement

Recommendations for color and sheen enhancement for the manufactured stone submitted by Dutch Quality Stone, Inc., Mt. Eaton, OH are provided in the chart below. Recommendations are based on the treatment that proved most effective in providing color and/or sheen enhancement to the submitted samples.

Sample	Color Enhancement	Sheen Enhancement
"Autumn Blend Limestone" "Michigan River Rock" "Pennsylvania Dry Stack" "Prestige Ledgestone"	Sure Klean [®] Paver Enhancer OR Stand Off [®] Gloss 'N Guard WB	Stand Off [®] Gloss 'N Guard WB
"Brown Stackstone" "Cypress Weather Ledge" "Top Rock"	Sure Klean [®] Paver Enhancer	Stand Off [®] Gloss 'N Guard WB
"Michigan Split Granite"	Stand Off [®] Gloss 'N Guard WB	Stand Off [®] Gloss 'N Guard WB

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

Christopher A. Moore Project Testing Laboratory Technician CAM



Laboratory Report

Pallet Tag Program Evaluation

Dutch Quality Stone, Inc. Mt. Eaton, OH

Project No. 0510-12 PTP

Prepared For:

Dutch Quality Stone, Inc. 18012 Dover Rd. Mt. Eaton, OH 44659

Prepared By:

PROSOCO, Inc. January 2006