

AMT Laboratories • 3741 Greenway Circle • Lawrence, Kansas 66046 • (888) 376-3600

Pallet Tag Program Laboratory Report Tileco Inc. Kapolei, HI



Project No. 2105-02 PTP

Prepared For:



Prepared By:

J. Ducas Conadoll

J. Lucas Comadoll Project Testing Technician AMT Laboratories

August 2021



Laboratory Report

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FOR: Michelle Wong, Tileco Inc.

cc: Dane Olson, Element Building Solutions, LLC

Jake Boyer, PROSOCO, Inc. Al Morris, PROSOCO, Inc.

SUBJECT: Tileco Inc.

Kapolei, HI

Pallet Tag Evaluation

DATE: August 17, 2021

PROJECT: 2105-02 PTP

SAMPLES SUBMITTED: 26 types of concrete block and 3 types of concrete pavers

Block	Name	Color	Integral Water Repellent	Size
(4) Standard Finish Block	"Adobe Midnite"	Brown	Yes	15.5" x 7.5"
(4) Standard Finish Block	"Basaltlime"	Gray	Yes	15.5" x 7.5"
(4) Standard Finish Block	"Cinderlime"	Brown	Yes	15.5" x 7.5"
(4) Standard Finish Block	"Kailua Sunrise"	Brown	Yes	15.5" x 7.5"
(4) Standard Finish Block	"Limestone"	Buff	No	15.5" x 7.5"
(4) Standard Finish Block	"Mesa Buff Sunrise"	Buff	Yes	15.5" x 7.5"
(4) Standard Finish Block	"Punaluu Eclipse"	Black	Yes	15.5" x 7.5"
(4) Standard Finish Block	"Waimea Sunset"	Red	Yes	15.5" x 7.5"
(4) Split Face Block	"Basaltlime"	Gray	Yes	15.5" x 7.5"
(4) Split Face Block	"Cinderlime"	Brown	Yes	15.5" x 7.5"
(4) Split Face Block	"Espresso Midnite"	Brown	Yes	15.5" x 7.5"
(4) Split Face Block	"Limestone"	Buff	No	15.5" x 7.5"
(4) Split Face Block	"Mesa Buff Sunrise"	Buff	Yes	15.5" x 7.5"
(4) Split Face Block	"Punaluu Eclipse"	Black	Yes	15.5" x 7.5"
(4) Split Face Block	"Waimea Sunset"	Red	Yes	15.5" x 7.5"



SAMPLES SUBMITTED: (cont.)

Block	Name	Color	Integral Water Repellent	Size
(4) Ground Face Block	"Adobe Midnite"	Gray and White	Yes	15.5" x 7.5"
(4) Ground Face Block	"Eclipse"	Gray	Yes	15.5" x 7.5"
(4) Ground Face Block	"Evening"	Gray and Red	Yes	15.5" x 7.5"
(4) Ground Face Block	"Kailua Sunrise"	Brown and White	Yes	15.5" x 7.5"
(4) Ground Face Block	"Mesa Buff Sunrise"	Buff	Yes	15.5" x 7.5"
(4) Ground Face Block	"Midnite"	Gray and White	Yes	15.5" x 7.5"
(4) Ground Face Block	"Morning"	Buff, Gray, and Red	Yes	15.5" x 7.5"
(4) Ground Face Block	"Punaluu Eclipse"	Gray	Yes	15.5" x 7.5"
(4) Ground Face Block	"Sunrise"	Buff	Yes	15.5" x 7.5"
(4) Ground Face Block	"Sunset"	Red and White	Yes	15.5" x 7.5"
(4) Ground Face Block	"Waimea Sunset"	Red and White	Yes	15.5" x 7.5"
(8) Paver	"Gray"	Gray	Yes	15.5" x 7.5"
(8) Paver	"Red"	Red	Yes	7.75" x 3.875"
(8) Paver	"Tan"	Brown	Yes	7.75" x 3.875"
(4) Standard Finish Block	"Basaltlime with red dirt"	Gray	Yes	15.5" x 7.5"
(4) Standard Finish Block	"Mesa Buff Sunrise with red dirt"	Buff	Yes	15.5" x 7.5"
(4) Standard Finish Block	"Waimea Sunset with red dirt"	Red	Yes	15.5" x 7.5"
(4) Ground Face Block	"Evening with red dirt"	Gray and Red	Yes	15.5" x 7.5"
(4) Ground Face Block	"Mesa Buff Sunrise with red dirt"	Buff	Yes	15.5" x 7.5"
(4) Ground Face Block	"Waimea Sunset with red dirt"	Red and White	Yes	15.5" x 7.5"

SUBMITTED BY: Michelle Wong

Tileco Inc. 91-209 Hanua Street Kapolei, HI 96707



PURPOSE OF TEST:

- To determine the most appropriate PROSOCO, Inc. new construction cleaner(s) for the submitted samples.
- To determine the most appropriate PROSOCO, Inc. cleaner to remove the red dirt staining from the submitted samples.
- To evaluate the color and sheen enhancement characteristics of the requested PROSOCO, Inc. treatments on the submitted samples.
- To determine the most appropriate PROSOCO, Inc. water repellent for the submitted samples.
- To determine the effectiveness of appropriate PROSOCO, Inc. products in preventing the
 penetration of, and simplifying the removal of, graffiti staining on the submitted samples (where
 applicable).
- To determine the effectiveness of appropriate PROSOCO, Inc. products in preventing food and oil staining on the submitted samples (where applicable).



PRODUCTS EVALUATED: Concrete Block

New Construction Cleaning (Where Applicable)	Dilution:
Sure Klean® Custom Masonry Cleaner	1:4, 1:6
Sure Klean® Vana Trol®	1:6, 1:8
Sure Klean® Light Duty Concrete Cleaner	1:2, 1:3

Red Dirt Stain Removal (Where Applicable)	Dilution:
Enviro Klean® Klean 'N Release Cleaner	1:10, Conc.
Sure Klean® Light Duty Concrete Cleaner	1:3

Color and Sheen Enhancement/Water Repellency	Dilution:
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control Ultra	N/A*
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	N/A*
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	N/A*
Sure Klean® Weather Seal Siloxane WB Concentrate	1:9

Graffiti Resistance	Dilution:
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control Ultra	N/A*
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	N/A*
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	N/A*

Graffiti Removal	Dilution:
Enviro Klean® SafStrip® 8	N/A*
Sure Klean® Graffiti Remover	N/A*

*NOTE: Per the product data sheet instructions, only use the product in concentrate. Do not dilute.



PRODUCTS EVALUATED: Concrete Pavers

New Construction Cleaning	Dilution:
Sure Klean® Custom Masonry Cleaner	1:4, 1:6
Sure Klean® Light Duty Concrete Cleaner	1:2, 1:3

Color and Sheen Enhancement/Water Repellency	Dilution:
Sure Klean® Weather Seal Siloxane WB Concentrate	1:9
Sure Klean® Weather Seal Gloss 'N Guard	N/A*
Sure Klean® Weather Seal Paver Enhancer	N/A*

Stain Resistance	Dilution:
Sure Klean® Weather Seal Gloss 'N Guard	N/A*

^{*}NOTE: Per the product data sheet instructions, only use the product in concentrate. Do not dilute.



TEST METHODS: New Construction Cleaning

Sure Klean® Custom Masonry Cleaner (CMC), Sure Klean® Vana Trol®, and Sure Klean® Light Duty Concrete Cleaner (LDCC) were evaluated on the submitted samples (where applicable) to determine the optimal concentration of cleaner which leaves the external surface looking most like the natural throughbody color of the CMU or paver.

Color uniformity was evaluated by comparing aggregate exposure and surface pigment alteration/removal of each cleaned surface compared to the natural through-body color of the CMU or paver.

<u>Aggregate Exposure</u> is the visual examination comparing aggregate exposure of the interior, throughbody section of the CMU or paver to surfaces cleaned with selected product(s) at given dilutions.

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

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

- 0 **No change** compared to through-body
- 1 **Slight change** compared to through-body
- 2 **Moderate change** compared to through-body
- 3 **Significant change** compared to through-body

NOTE: When cleaning integrally colored CMUs.

Integrally colored concrete masonry units (CMUs) frequently have high amounts of pigments concentrated on the surface of the cured concrete unit. Variation of surface pigment concentrations from one CMU to the next creates a blotchy appearance in the completed wall. Allowed to remain on the surface of the CMU, the weakly bound pigment will weather and streak, further detracting from the appearance of the completed CMU wall.

In addition to removing excess mortar and construction related soiling, the goal of any cleaning operation undertaken on an integrally colored CMU should include removal of unnaturally high concentrations of surface pigment. By revealing the natural through-body color on the integrally colored unit, the overall color uniformity and weathering resistance of the completed CMU wall is improved.

Cleaning Procedure:

- 1. Pre-wet the surface and apply diluted cleaning solution according to PROSOCO, Inc. Product Guide instructions.

Vana Trol® 5 minutes
Light Duty Concrete Cleaner 5 minutes

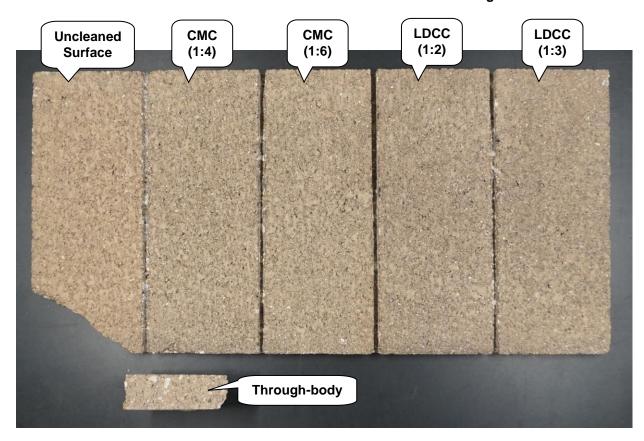
- 3. Reapply cleaning solution; do not let cleaner dry into masonry.
- 4. Rinse thoroughly with plenty of fresh water.*
- 5. Allow the sample to dry for at least 18 hours and visually examine.
- 6. Break the sample and compare the through-body surfaces to the cleaned surfaces for the best match.

^{*}Rinsing Equipment – Masonry washing equipment generating approximately 700-800 psi with a water flow rate of 8 gallons per minute delivered through a 40-degree fan spray tip was used for rinsing.



Name: "Adobe Midnite" Standard Finish Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	1	1
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

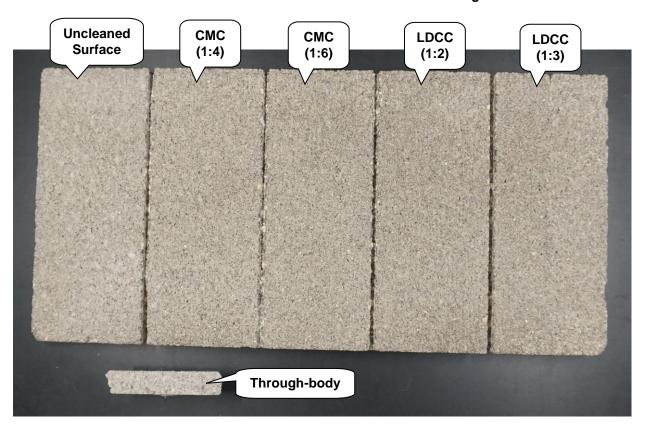
"Adobe Midnite" Standard Finish Block After Cleaning





Name: "Basaltlime" Standard Finish Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	1	1
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

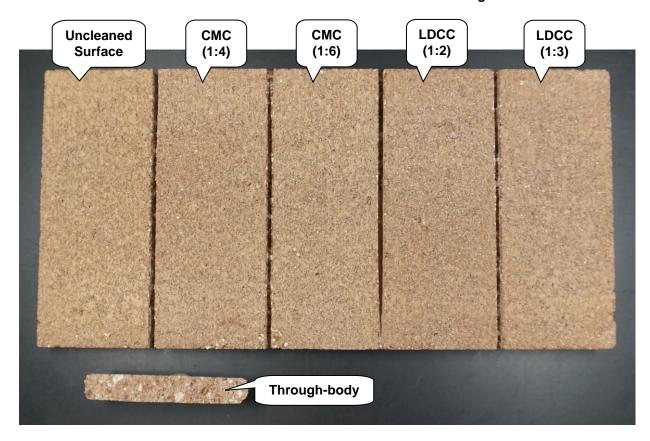
"Basaltlime" Standard Finish Block After Cleaning





Name: "Cinderlime" Standard Finish Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	1	1
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

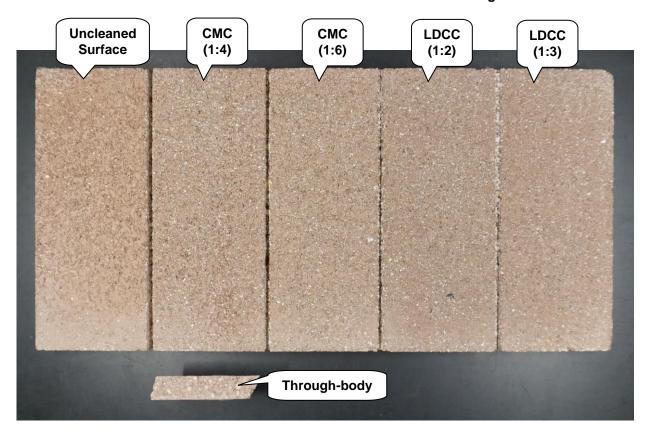
"Cinderlime" Standard Finish Block After Cleaning





Name: "Kailua Sunrise" Standard Finish Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	2	2
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

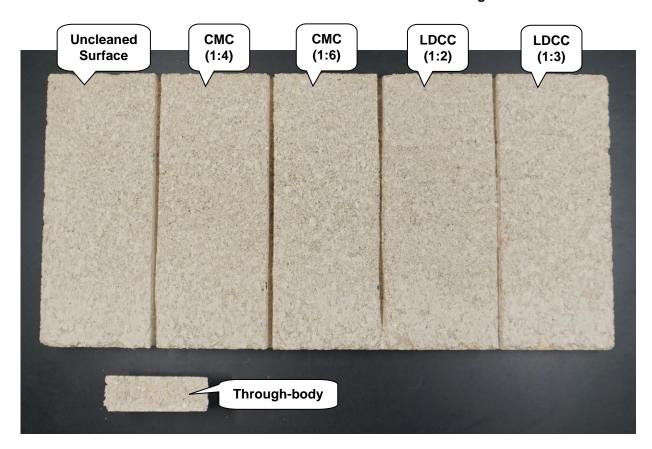
"Kailua Sunrise" Standard Finish Block After Cleaning





Name: "Limestone" Standard Finish Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	1	1
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

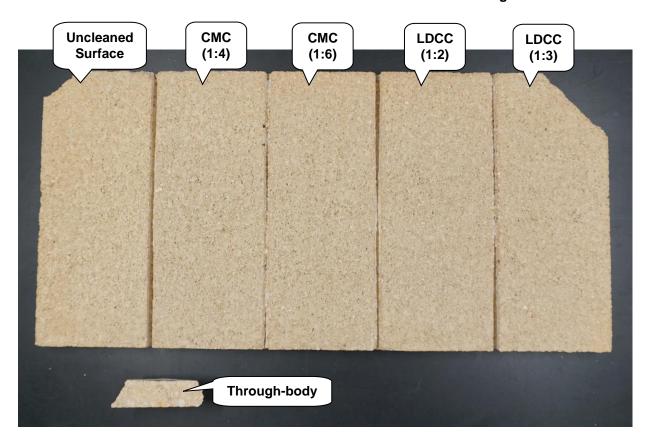
"Limestone" Standard Finish Block After Cleaning





Name: "Mesa Buff Sunrise" Standard Finish Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	1	1
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

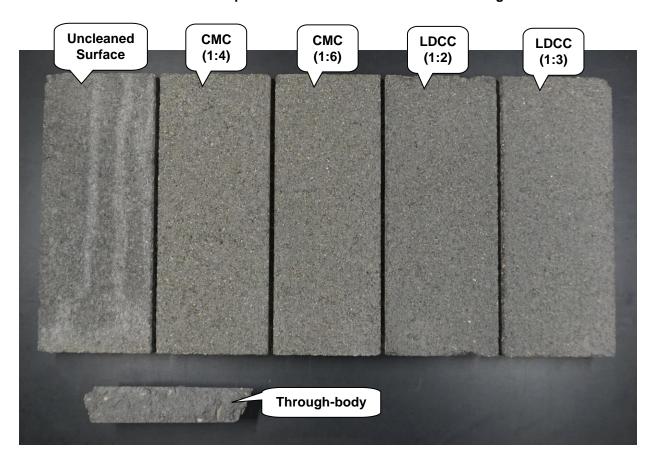
"Mesa Buff Sunrise" Standard Finish Block After Cleaning





Name: "Punaluu Eclipse" Standard Finish Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	2	2
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

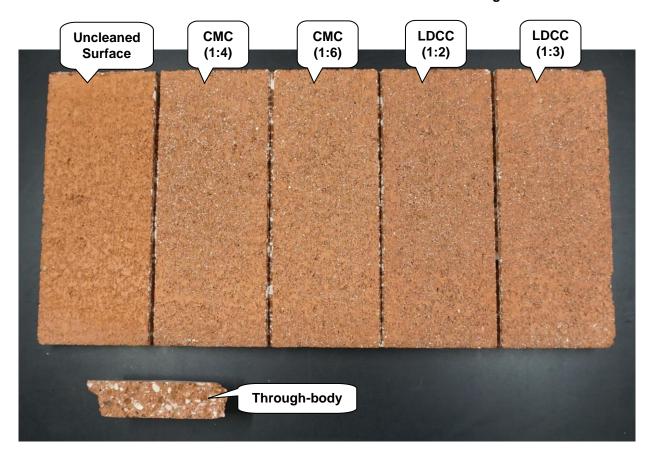
"Punaluu Eclipse" Standard Finish Block After Cleaning





Name: "Waimea Sunset" Standard Finish Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	2	2
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

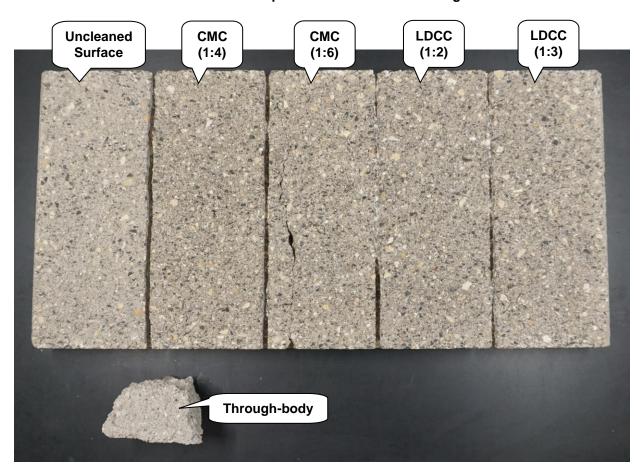
"Waimea Sunset" Standard Finish Block After Cleaning





Name: "Basaltlime" Split Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	2	2
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

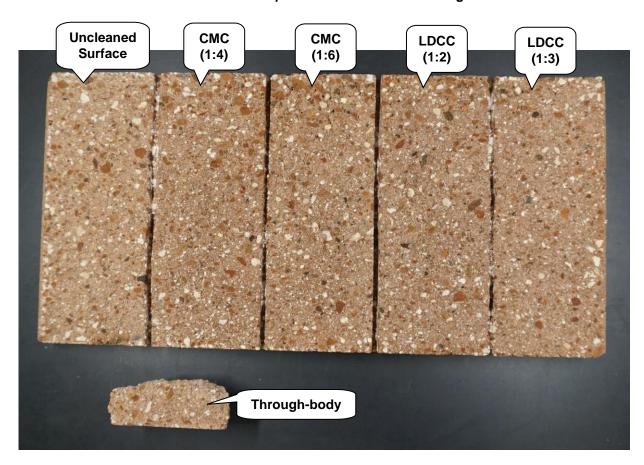
"Basaltlime" Split Face Block After Cleaning





Name: "Cinderlime" Split Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	2	2
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

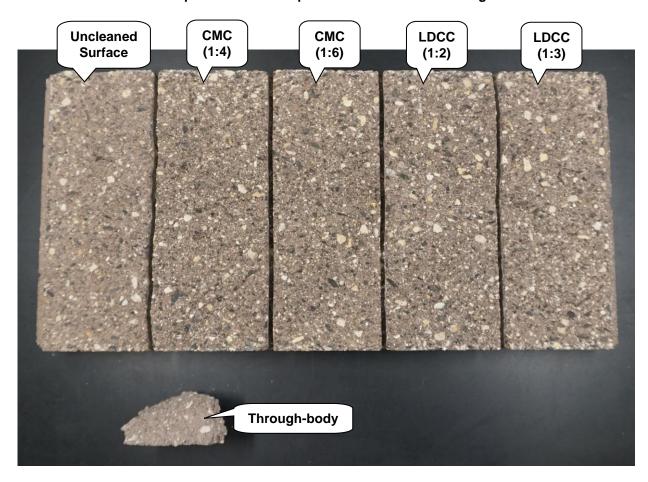
"Cinderlime" Split Face Block After Cleaning





Name: "Espresso Midnite" Split Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	2	2
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

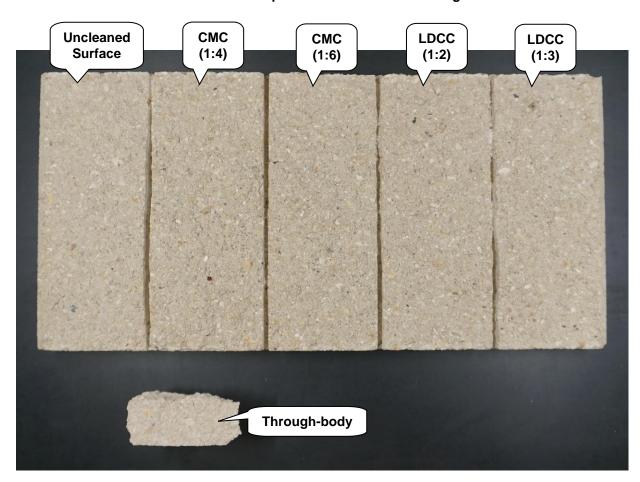
"Espresso Midnite" Split Face Block After Cleaning





Name: "Limestone" Split Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	1	1
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

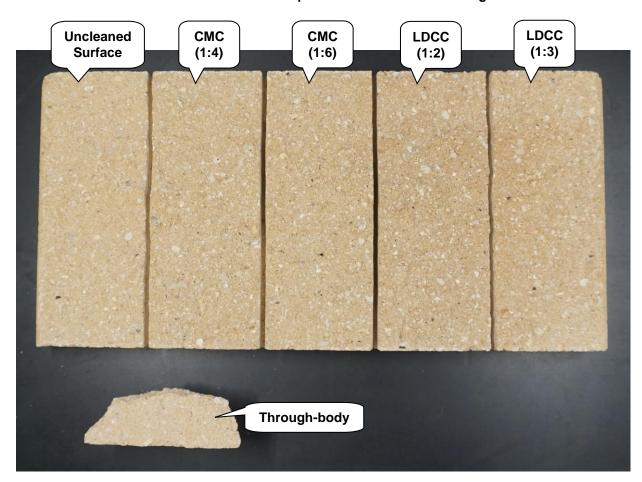
"Limestone" Split Face Block After Cleaning





Name: "Mesa Buff Sunrise" Split Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	1	1
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

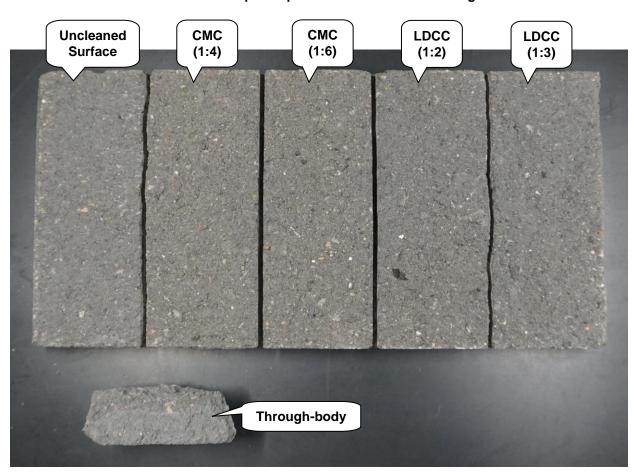
"Mesa Buff Sunrise" Split Face Block After Cleaning





Name: "Punaluu Eclipse" Split Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	2	2
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

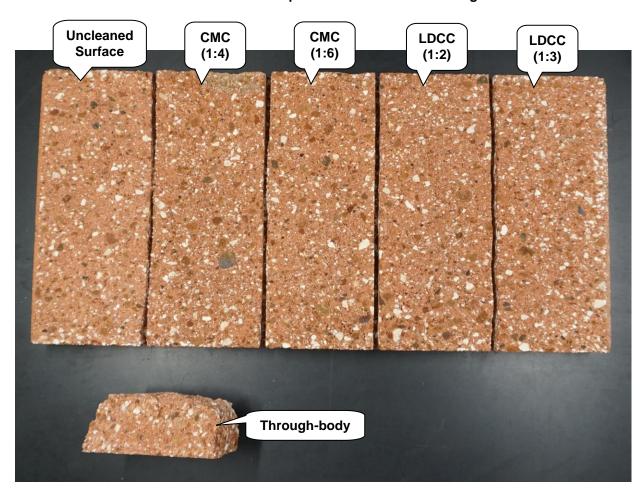
"Punaluu Eclipse" Split Face Block After Cleaning





Name: "Waimea Sunset" Split Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:4	2	2
Custom Masonry Cleaner	1:6	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

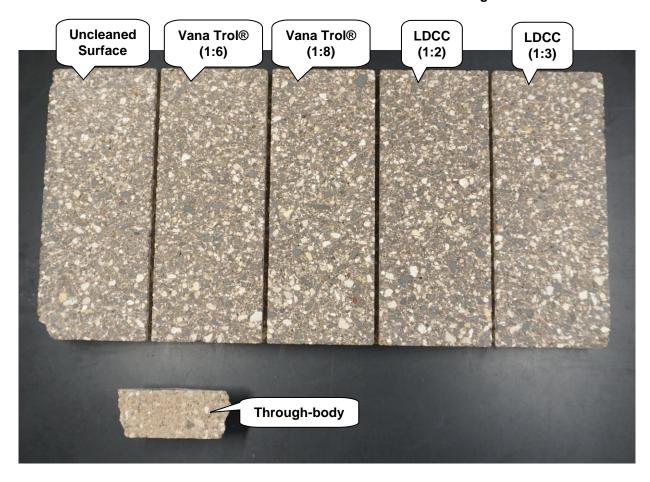
"Waimea Sunset" Split Face Block After Cleaning





Name: "Adobe Midnite" Ground Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Vana Trol®	1:6	1	1
Vana Trol®	1:8	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

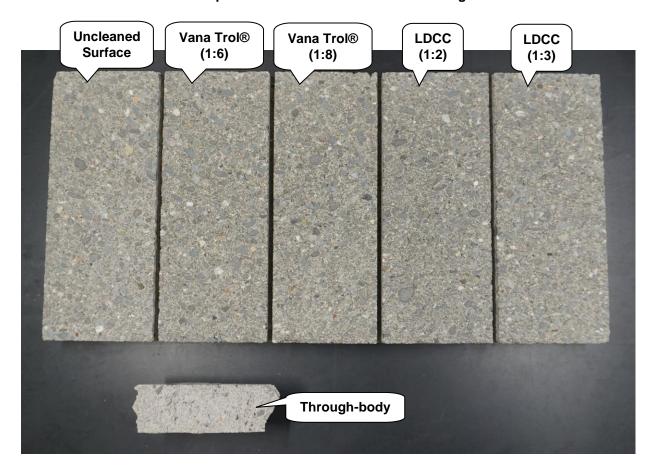
"Adobe Midnite" Ground Face Block After Cleaning





Name: "Eclipse" Ground Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Vana Trol®	1:6	1	1
Vana Trol®	1:8	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

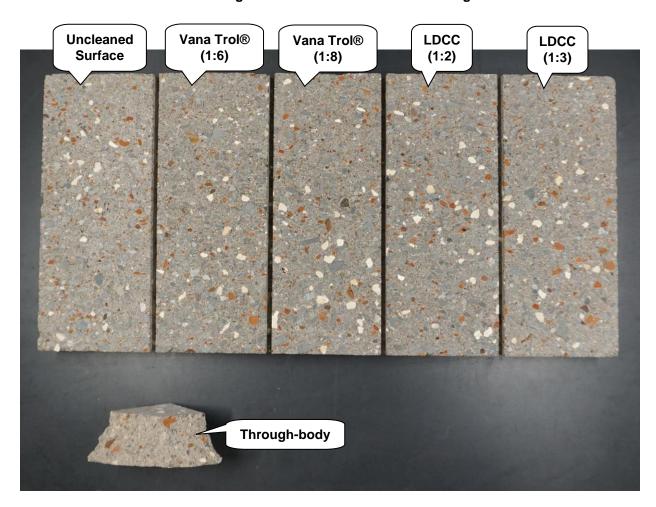
"Eclipse" Ground Face Block After Cleaning





Name: "Evening" Ground Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Vana Trol®	1:6	1	1
Vana Trol®	1:8	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

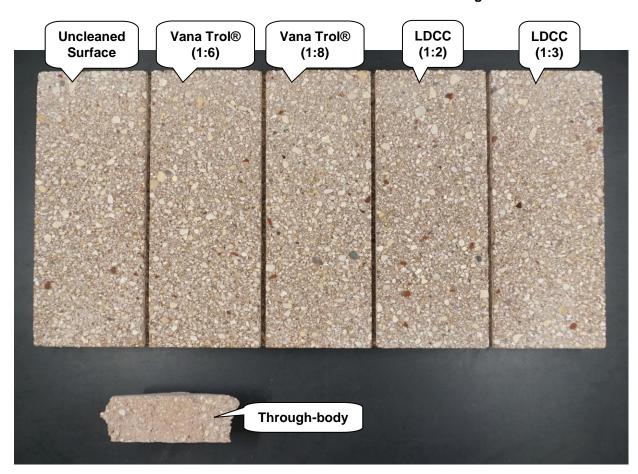
"Evening" Ground Face Block After Cleaning





Name: "Kailua Sunrise" Ground Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Vana Trol®	1:6	1	1
Vana Trol®	1:8	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

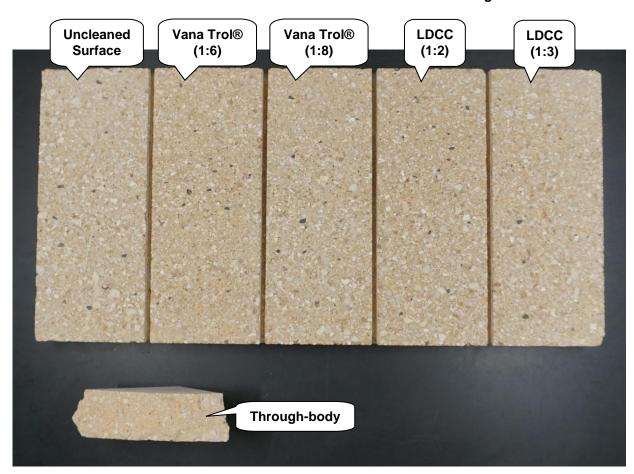
"Kailua Sunrise" Ground Face Block After Cleaning





Name: "Mesa Buff Sunrise" Ground Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Vana Trol®	1:6	1	1
Vana Trol®	1:8	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

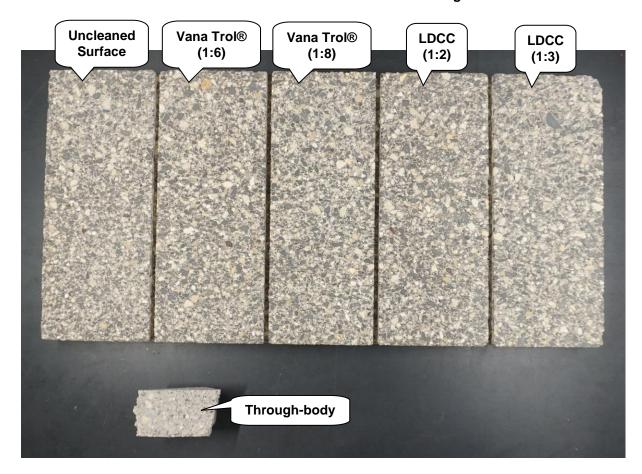
"Mesa Buff Sunrise" Ground Face Block After Cleaning





Name: "Midnite" Ground Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Vana Trol®	1:6	1	1
Vana Trol®	1:8	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

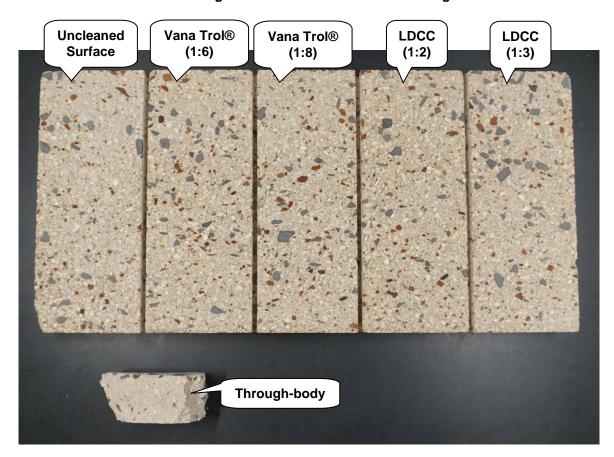
"Midnite" Ground Face Block After Cleaning





Name: "Morning" Ground Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Vana Trol®	1:6	1	1
Vana Trol®	1:8	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

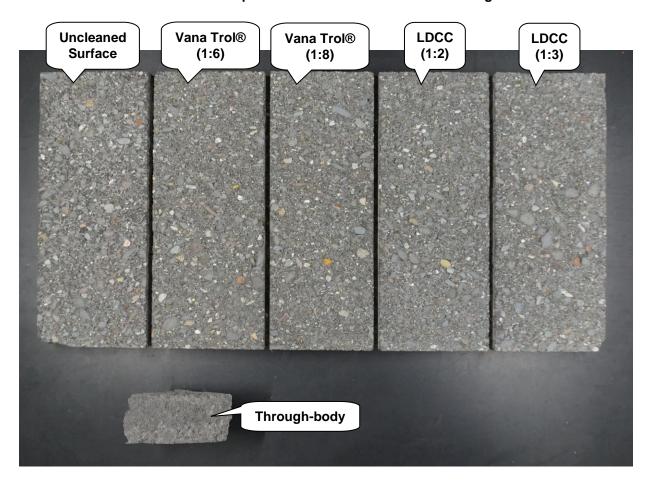
"Morning" Ground Face Block After Cleaning





Name: "Punaluu Eclipse" Ground Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Vana Trol®	1:6	1	1
Vana Trol®	1:8	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

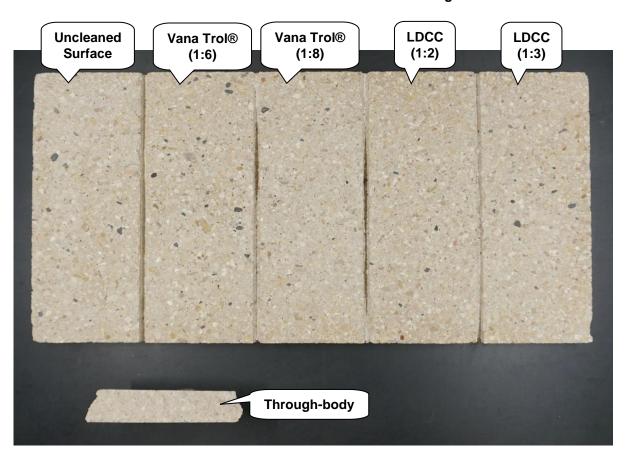
"Punaluu Eclipse" Ground Face Block After Cleaning





Name: "Sunrise" Ground Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Vana Trol®	1:6	1	1
Vana Trol®	1:8	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

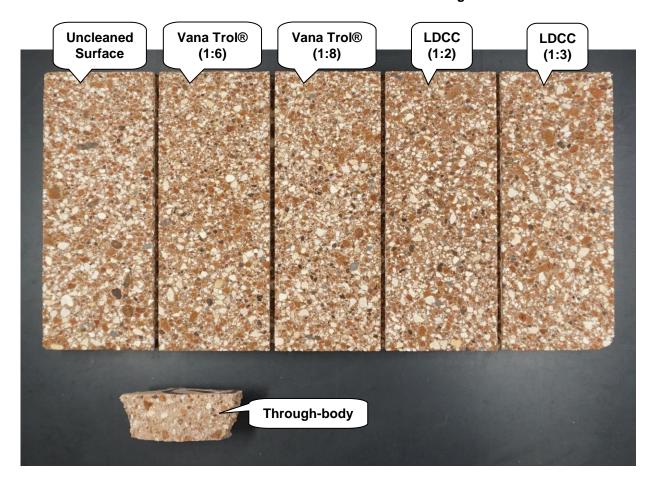
"Sunrise" Ground Face Block After Cleaning





Name: "Sunset" Ground Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Vana Trol®	1:6	1	1
Vana Trol®	1:8	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

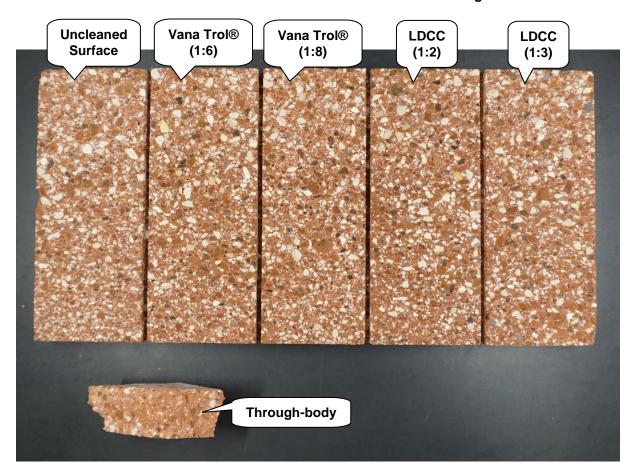
"Sunset" Ground Face Block After Cleaning





Name: "Waimea Sunset" Ground Face Block			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Vana Trol®	1:6	1	1
Vana Trol®	1:8	1	1
Light Duty Concrete Cleaner	1:2	1	1
Light Duty Concrete Cleaner	1:3	1	1

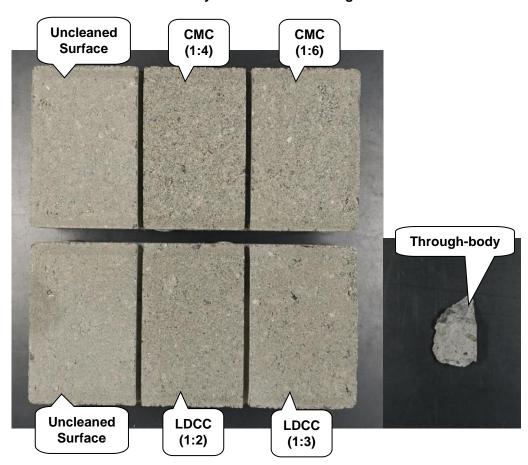
"Waimea Sunset" Ground Face Block After Cleaning





Name: "Gray" Paver				
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Custom Masonry Cleaner	1:4	2	2	
Custom Masonry Cleaner	1:6	2	2	
Light Duty Concrete Cleaner	1:2	1	1	
Light Duty Concrete Cleaner	1:3	1	1	

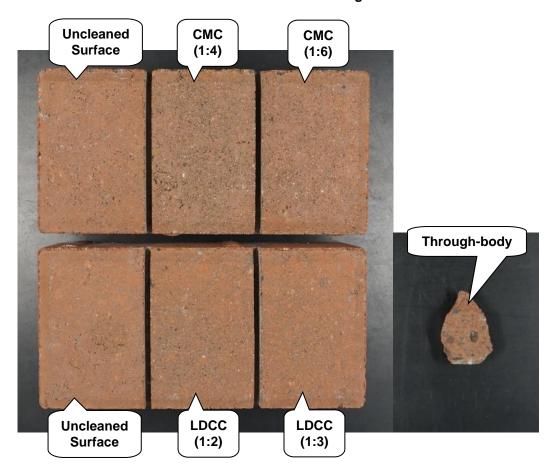
"Gray" Paver After Cleaning





Name: "Red" Paver				
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Custom Masonry Cleaner	1:4	2	2	
Custom Masonry Cleaner	1:6	2	2	
Light Duty Concrete Cleaner	1:2	1	1	
Light Duty Concrete Cleaner	1:3	1	1	

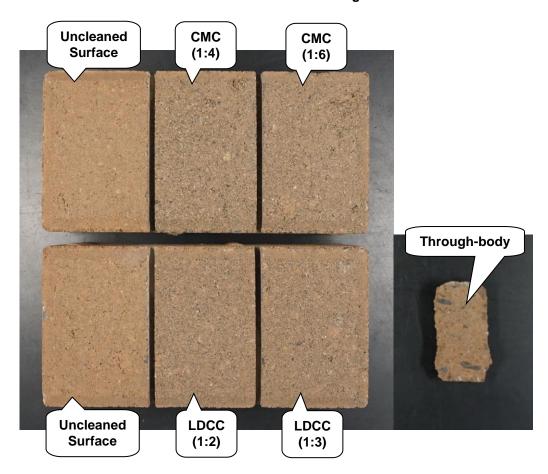
"Red" Paver After Cleaning





Name: "Tan" Paver				
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Custom Masonry Cleaner	1:4	2	2	
Custom Masonry Cleaner	1:6	2	2	
Light Duty Concrete Cleaner	1:2	1	1	
Light Duty Concrete Cleaner	1:3	1	1	

"Tan" Paver After Cleaning





CONCLUSIONS: New Construction Cleaning

In most of the cleaning tests conducted, Sure Klean® Custom Masonry Cleaner, Sure Klean® Vana Trol®, and Sure Klean® Light Duty Concrete Cleaner removed a slight amount of surface pigment, exposing a slight amount of aggregate. However, Sure Klean® Custom Masonry Cleaner removed a moderate amount of surface pigment, exposing a moderate amount of aggregate on some of the submitted concrete block and all of the pavers.

All three cleaners provided an accurate match to the through-body color of the concrete block or concrete paver.

When choosing the most appropriate product for the desired result:

- For excess mortar and heavy efflorescence Test Sure Klean® Custom Masonry Cleaner
- For new masonry surfaces that are subject to vanadium, manganese, and other metallic stains Test Sure Klean® Vana Trol®
- For common construction and atmospheric staining Test Sure Klean® Light Duty Concrete Cleaner

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

It is recommended that the selected cleaners always be used in the lowest possible concentration. Apply all products in accordance with the manufacturer's recommendations provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate cleaning product and procedures for a particular project. See product literature for additional application and product information.



RECOMMENDATIONS: New Construction Cleaning

Recommendations for cleaning for each type of concrete block or concrete paver submitted by Tileco Inc., Kapolei, HI are provided in the chart below. Recommendations are based on the cleaner and dilution that provided the best match to the through-body.

Sample	New Construction Cleaning
All Submitted Standard Finish Block	Sure Klean® Custom Masonry Cleaner (1:4) or (1:6)
All Submitted Split Face Block	Sure Klean® Light Duty Concrete Cleaner (1:2) or (1:3)
All Submitted Ground Face Block	Sure Klean® Vana Trol® (1:6) or (1:8) OR Sure Klean® Light Duty Concrete Cleaner (1:2) or (1:3)
All Submitted Pavers	Sure Klean® Custom Masonry Cleaner (1:4) or (1:6) OR Sure Klean® Light Duty Concrete Cleaner (1:2) or (1:3)

The most appropriate cleaner and dilution should be determined on the specific job-site, and will be dependent primarily on the nature and severity of soiling present at that location.

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



TEST METHODS: Red Dirt Stain Removal - Concrete Block

Enviro Klean® Klean 'N Release Cleaner and Sure Klean® Light Duty Concrete Cleaner were evaluated to determine the optimal concentration of cleaner which removes the red dirt staining from the submitted samples. The samples were visually examined following the cleaning procedure below.

Cleaning Procedure:

- Pre-wet the surface and apply the cleaning solution according to PROSOCO, Inc. Product Data Sheet.
- 3. Reapply cleaning solution; do not let cleaner dry into masonry.
- 4. Rinse thoroughly with plenty of fresh water.*
- 5. Allow the sample to dry for at least 18 hours and visually examine.

^{*}Rinsing Equipment – Masonry washing equipment generating approximately 700-800 psi with a water flow rate of 8 gallons per minute delivered through a 40 degree fan spray tip was used for rinsing.



TEST RESULTS AND PHOTOGRAPHS: Red Dirt Stain Removal - Concrete Block

Name: "Basaltlime with red dirt" Standard Finish Block			
Product Dilution Percent Stain Removal			
Klean 'N Release Cleaner	1:10	90%	
Klean 'N Release Cleaner	Concentrate	100%	
Light Duty Concrete Cleaner	1:3	100%	

Name: "Mesa Buff Sunrise with red dirt" Standard Finish Block			
Product Dilution Percent Stain Removal			
Klean 'N Release Cleaner	1:10	90%	
Klean 'N Release Cleaner	Concentrate	95%	
Light Duty Concrete Cleaner	1:3	100%	

Name: "Waimea Sunset with red dirt" Standard Finish Block			
Product Dilution Percent Stain Remova			
Klean 'N Release Cleaner	1:10	90%	
Klean 'N Release Cleaner	Concentrate	100%	
Light Duty Concrete Cleaner	1:3	100%	

Name: "Evening with red dirt" Ground Face Block			
Product Dilution Percent Stain Removal			
Klean 'N Release Cleaner	1:10	90%	
Klean 'N Release Cleaner	Concentrate	100%	
Light Duty Concrete Cleaner	1:3	100%	

Name: "Mesa Buff Sunrise with red dirt" Ground Face Block			
Product Dilution Percent Stain Remova			
Klean 'N Release Cleaner	1:10	90%	
Klean 'N Release Cleaner	Concentrate	95%	
Light Duty Concrete Cleaner	1:3	100%	

Name: "Waimea Sunset with red dirt" Ground Face Block			
Product Dilution Percent Stain Remove			
Klean 'N Release Cleaner	1:10	95%	
Klean 'N Release Cleaner	Concentrate	100%	
Light Duty Concrete Cleaner	1:3	100%	

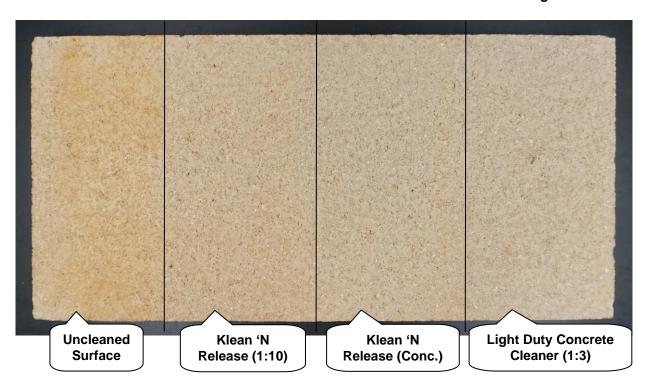


TEST RESULTS AND PHOTOGRAPHS: Red Dirt Stain Removal - Concrete Block (cont.)

"Mesa Buff Sunrise with red dirt" Standard Finish Block Before Cleaning



"Mesa Buff Sunrise with red dirt" Standard Finish Block After Cleaning



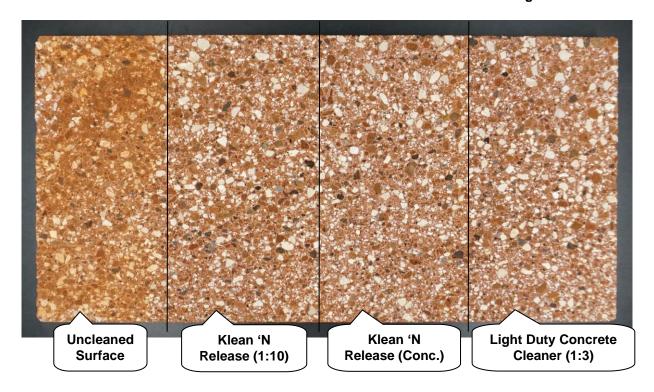


TEST RESULTS AND PHOTOGRAPHS: Red Dirt Stain Removal - Concrete Block (cont.)

"Waimea Sunset with red dirt" Ground Face Block Before Cleaning



"Waimea Sunset with red dirt" Ground Face Block After Cleaning





CONCLUSIONS: Red Dirt Stain Removal - Concrete Block

In the stain removal tests conducted, both concentrations of Enviro Klean® Klean 'N Release Cleaner and Sure Klean® Light Duty Concrete Cleaner diluted with three parts water were very effective in removing the red dirt staining from the submitted samples. Worth noting, Sure Klean® Light Duty Concrete Cleaner removed a slight amount of surface pigment, exposing a slight amount of aggregate as previously noted in the "New Construction Cleaning" section of the report.

It is recommended that the cleaner always be used in the lowest possible concentration. Apply all products in accordance with the manufacturer's recommendations provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate cleaning product and procedures for a particular project. See product literature for additional application and product information.

RECOMMENDATIONS: Red Dirt Stain Removal - Concrete Block

Recommendations for removing the red dirt staining from each type of concrete block submitted by Tileco Inc., Kapolei, HI are provided in the chart below.

Sample	Red Dirt Stain Removal
"Basaltlime with red dirt" Standard Finish Block	
"Mesa Buff Sunrise with red dirt" Standard Finish Block	
"Waimea Sunset with red dirt" Standard Finish Block	Enviro Klean® Klean 'N Release Cleaner (1:10) or (Conc.) OR
"Evening with red dirt" Ground Face Block	Sure Klean® Light Duty Concrete Cleaner (1:3)
"Mesa Buff Sunrise with red dirt" Ground Face Block	
"Waimea Sunset with red dirt" Ground Face Block	

The most appropriate cleaner and dilution should be determined on the specific job-site, and will be dependent primarily on the nature and severity of soiling present at that location.

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



SAMPLE PREPARATION: Treatment Application

Prior to treatment application, the submitted Standard Finish Block and Split Face Block were cleaned with Sure Klean® Custom Masonry Cleaner diluted with six parts water. The Ground Face Block were cleaned with Sure Klean® Vana Trol® diluted with eight parts water. The Pavers were cleaned with Sure Klean® Light Duty Concrete Cleaner diluted with three parts water in accordance with the current PROSOCO, Inc. Product Data Sheet instructions. After the samples had dried for at least 24 hours, all of the treatments were applied in a brushing application in accordance with the current PROSOCO, Inc. Product Data Sheet instructions. The treatments were allowed to cure for at least 72 hours prior to testing.

TEST METHODS: Color and Sheen Enhancement

After 72 hours, a visual evaluation was made comparing the untreated control surface to the treated surface to determine the effectiveness of the evaluated products in providing color and/or sheen enhancement to the submitted samples.

The following scale was used for reporting results of both categories:	
0 - No enhancement compared to untreated control	
1 - Slight enhancement compared to untreated control	
2 - Moderate enhancement compared to untreated control	
3 - Significant enhancement compared to untreated control	



"Adobe Midnite" Standard Finish Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	0	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Adobe Midnite" Standard Finish Block with Treatments





"Basaltlime" Standard Finish Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Basaltlime" Standard Finish Block with Treatments





"Cinderlime" Standard Finish Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Cinderlime" Standard Finish Block with Treatments





"Kailua Sunrise" Standard Finish Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

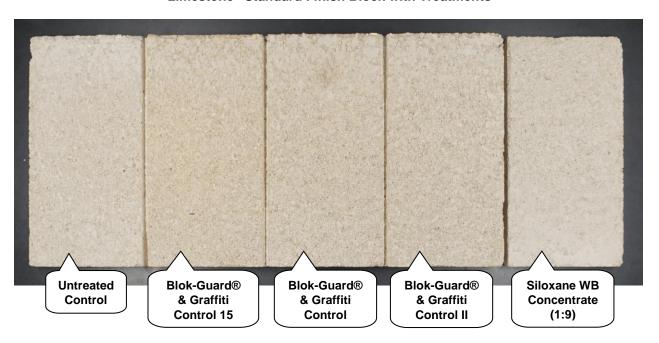
"Kailua Sunrise" Standard Finish Block with Treatments





"Limestone" Standard Finish Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Limestone" Standard Finish Block with Treatments





"Mesa Buff Sunrise" Standard Finish Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Mesa Buff Sunrise" Standard Finish Block with Treatments





"Punaluu Eclipse" Standard Finish Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Punaluu Eclipse" Standard Finish Block with Treatments





"Waimea Sunset" Standard Finish Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Waimea Sunset" Standard Finish Block with Treatments





"Basaltlime" Split Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	0	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Basaltlime" Split Face Block with Treatments





"Cinderlime" Split Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	0	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	0	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Cinderlime" Split Face Block with Treatments





"Espresso Midnite" Split Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Espresso Midnite" Split Face Block with Treatments





"Limestone" Split Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Limestone" Split Face Block with Treatments





"Mesa Buff Sunrise" Split Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	0	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Mesa Buff Sunrise" Split Face Block with Treatments





"Punaluu Eclipse" Split Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Punaluu Eclipse" Split Face Block with Treatments





"Waimea Sunset" Split Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Waimea Sunset" Split Face Block with Treatments





"Adobe Midnite" Ground Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	1	0

"Adobe Midnite" Ground Face Block with Treatments





"Eclipse" Ground Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	1	0

"Eclipse" Ground Face Block with Treatments





"Evening" Ground Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	1	0

"Evening" Ground Face Block with Treatments





"Kailua Sunrise" Ground Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	1	0

"Kailua Sunrise" Ground Face Block with Treatments





"Mesa Buff Sunrise" Ground Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	1	0

"Mesa Buff Sunrise" Ground Face Block with Treatments





"Midnite" Ground Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	1	0

"Midnite" Ground Face Block with Treatments





"Morning" Ground Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Morning" Ground Face Block with Treatments





"Punaluu Eclipse" Ground Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Punaluu Eclipse" Ground Face Block with Treatments





"Sunrise" Ground Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Sunrise" Ground Face Block with Treatments





"Sunset" Ground Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

"Sunset" Ground Face Block with Treatments





"Waimea Sunset" Ground Face Block	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	2	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	1	0
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	1	0
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0

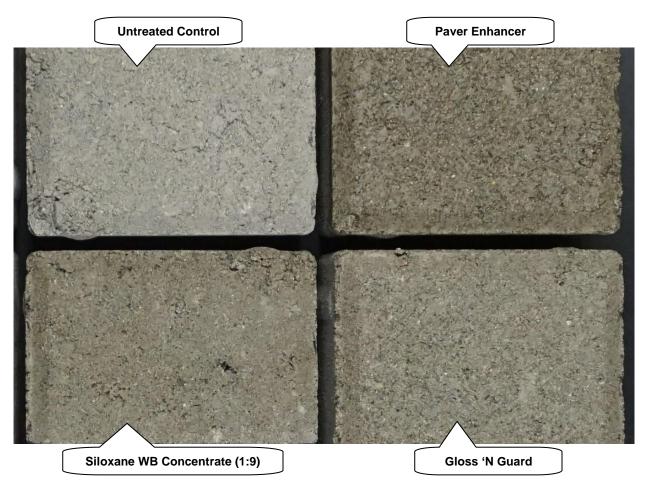
"Waimea Sunset" Ground Face Block with Treatments





"Gray" Paver	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	2	0
Sure Klean® Weather Seal Gloss 'N Guard	2	1
Sure Klean® Weather Seal Paver Enhancer	3	0

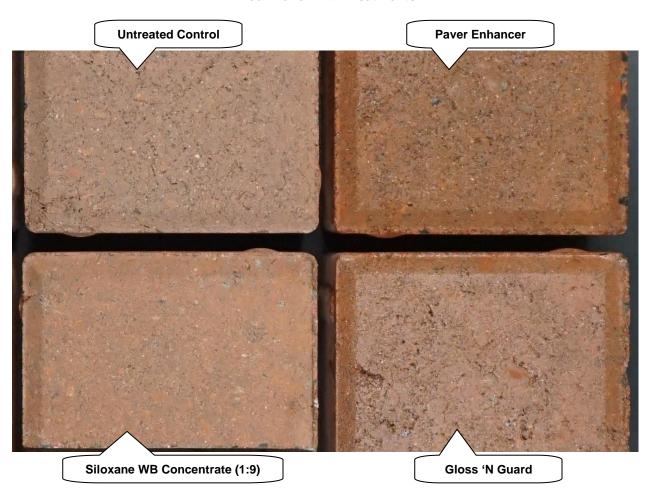
"Gray" Paver with Treatments





"Red" Paver	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0
Sure Klean® Weather Seal Gloss 'N Guard	2	1
Sure Klean® Weather Seal Paver Enhancer	3	0

"Red" Paver with Treatments

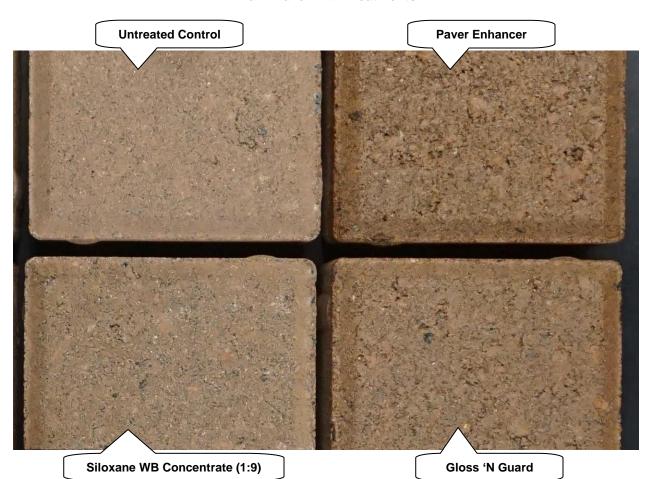




TEST RESULTS AND PHOTOGRAPHS: Color and Sheen Enhancement (cont.)

"Tan" Paver	Color Enhancement	Sheen Enhancement
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0	0
Sure Klean® Weather Seal Gloss 'N Guard	2	1
Sure Klean® Weather Seal Paver Enhancer	3	0

"Tan" Paver with Treatments





CONCLUSIONS: Color and Sheen Enhancement

The treatments evaluated provided a range of color enhancement results, from no change in appearance to a significant change depending on the sample and treatment.

Enhancement levels may vary by substrate color, lighting, orientation application method, and other variables. Always test in the field to confirm intended results.

None of the treatments evaluated provided any sheen enhancement except Sure Klean® Weather Seal Gloss 'N Guard.

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



RECOMMENDATIONS: Color and Sheen Enhancement

Recommendations for color and sheen enhancement for each type of concrete block or concrete paver submitted by Tileco Inc., Kapolei, HI are provided in the chart below. Recommendations are based on the treatment(s) that proved most effective.

Sample	Color and Sheen Enhancement
All Submitted Standard Finish Block	
All Submitted Split Face Block	Please refer to pages 43-73 of the report for individual
All Submitted Ground Face Block	recommendations based on the desired result.
All Submitted Pavers	

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.



TEST METHODS: Protective Water Repellents – Concrete Block

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

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

Water Absorption Tube Test of "Kailua Sunrise" Ground Face Block



TEST RESULTS AND PHOTOGRAPHS: Protective Water Repellents – Concrete Block

"Adobe Midnite" Standard Finish Block	
Untreated Control	55 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph



"Basaltlime" Standard Finish Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Cinderlime" Standard Finish Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	59 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Kailua Sunrise" Standard Finish Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	58 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Limestone" Standard Finish Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	58 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph



"Mesa Buff Sunrise" Standard Finish Block	
Untreated Control	54 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Punaluu Eclipse" Standard Finish Block	
Untreated Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Waimea Sunset" Standard Finish Block	
Untreated Control	58 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Basaltlime" Split Face Block	
Untreated Control	54 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph



"Cinderlime" Split Face Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Espresso Midnite" Split Face Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Limestone" Split Face Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Mesa Buff Sunrise" Split Face Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	58 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph



"Punaluu Eclipse" Split Face Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Waimea Sunset" Split Face Block	
Untreated Control	54 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Adobe Midnite" Ground Face Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	58 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Eclipse" Ground Face Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph



"Evening" Ground Face Block	
Untreated Control	55 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Kailua Sunrise" Ground Face Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Mesa Buff Sunrise" Ground Face Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	58 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Midnite" Ground Face Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph



"Morning" Ground Face Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	58 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Punaluu Eclipse" Ground Face Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Sunrise" Ground Face Block	
Untreated Control	55 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	59 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Sunset" Ground Face Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	58 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph



"Waimea Sunset" Ground Face Block	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	58 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph



TEST METHODS: Protective Water Repellents - Concrete Pavers

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

The water absorption tube test simulating wind driven rain conditions was performed on the submitted samples. Tests were run with 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:

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

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

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

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

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





TEST RESULTS AND PHOTOGRAPHS: Protective Water Repellents – Concrete Pavers

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

 $\underline{\mathbf{AA}}$ = Above Average $\underline{\mathbf{A}}$ = Average $\underline{\mathbf{BA}}$ = Below Average

"Gray" Paver	Results in mL loss	Ranking
Untreated Control	-0.2	
Sure Klean® Weather Seal Siloxane WB Concentrate	-0.0	<u>AA</u>
Sure Klean® Weather Seal Gloss 'N Guard	-0.0	<u>AA</u>
Sure Klean® Weather Seal Paver Enhancer	-0.0	<u>AA</u>

"Red" Paver	Results in mL loss	Ranking
Untreated Control	-0.1	
Sure Klean® Weather Seal Siloxane WB Concentrate	-0.0	<u>AA</u>
Sure Klean® Weather Seal Gloss 'N Guard	-0.0	<u>AA</u>
Sure Klean® Weather Seal Paver Enhancer	-0.0	<u>AA</u>

"Tan" Paver	Results in mL loss	Ranking
Untreated Control	-0.7	
Sure Klean® Weather Seal Siloxane WB Concentrate	-0.0	<u>AA</u>
Sure Klean® Weather Seal Gloss 'N Guard	-0.0	<u>AA</u>
Sure Klean® Weather Seal Paver Enhancer	-0.0	<u>AA</u>

CONCLUSIONS: Protective Water Repellents

Based on the laboratory evaluations, all of the treatments provided good water repellent protection to the submitted concrete block or concrete pavers. Although some of the untreated areas in the 20 minute RILEM test absorbed very little water, the treatments will likely provide long-term water repellent protection and help to prevent water-related staining.



RECOMMENDATIONS: Protective Water Repellents

Recommendations for water repellency for each type of concrete block or concrete paver submitted by Tileco Inc., Kapolei, HI are provided in the chart below. Recommendations are based on the treatment(s) that proved most effective.

Sample	Water Repellency
All Submitted Standard Finish Block	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15
All Submitted Split Face Block	OR Sure Klean® Weather Seal Blok-Guard® & Graffiti Control OR Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II OR
All Submitted Ground Face Block	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)
All Submitted Pavers	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) OR Sure Klean® Weather Seal Gloss 'N Guard OR Sure Klean® Weather Seal Paver Enhancer

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.



TEST METHODS: Graffiti Resistance - Concrete Block

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

Graffiti comes in many forms, many of which are low quality, readily available spray paints and markers. While those forms of graffiti are most common and may be easier to remove, the testing below was conducted with the graffiti types we have found to be the most resilient and hardest to remove in order to provide you with a "worst-case scenario." Always test in field conditions to verify intended performance.

Spray paint and marker were applied as graffiti agents to the untreated and treated surfaces five days after application of the graffiti resistant products. Removal of the graffiti agents was attempted 24 hours after application of the graffiti agents, using Enviro Klean® SafStrip® 8 and Sure Klean® Graffiti Remover.

Chemical cleaners were evaluated using the following procedure:

- 1. Apply the product to a dry surface, soiled with graffiti.
- 2. Allow appropriate dwell time and periodically agitate:

- 3. 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 40-degree fan spray tip was used for rinsing.

Graffiti removal was evaluated visually using a scale from 0 to 10, with 0 indicating no removal of the graffiti agent and 10 indicating complete removal of the graffiti agent.



"Adobe Midnite" Standard Finish Block				
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	1	1	5	2.3
Graffiti Remover	3	3	5	3.7
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	5	10	7.7
Graffiti Remover	9	9	10	9.3
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	5	5	9	6.3
Graffiti Remover	7	7	8	7.3
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	6	10	8.0
Graffiti Remover	9	8	9	8.7

"Basaltlime" Standard Finish Block				
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	3	1	5	3.0
Graffiti Remover	3	3	1	2.3
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	7	10	8.3
Graffiti Remover	9	8	10	9.0
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	6	5	9	6.7
Graffiti Remover	7	7	5	6.3
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	6	9	7.7
Graffiti Remover	9	7	9	8.3



"Cinderlime" Standard Finish Block				
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	3	2	5	3.3
Graffiti Remover	2	2	1	1.7
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	6	10	8.3
Graffiti Remover	9	8	10	9.0
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	7	5	9	7.0
Graffiti Remover	8	7	9	8.0
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	6	10	8.0
Graffiti Remover	8	7	7	7.3

"Kailua Sunrise" Standard Finish Block					
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	2	2	10	4.7	
Graffiti Remover	2	3	10	5.0	
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	9	6	10	8.3	
Graffiti Remover	9	8	10	9.0	
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	6	5	9	6.7	
Graffiti Remover	7	7	8	7.3	
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	8	6	9	7.7	
Graffiti Remover	8	7	8	7.7	



"Limeston	e" Standard Fi	nish Block		
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	3	2	2	2.3
Graffiti Remover	3	3	2	2.7
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	6	8	7.3
Graffiti Remover	9	8	9	8.7
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	6	5	8	6.3
Graffiti Remover	7	6	8	7.0
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	7	8	7.7
Graffiti Remover	9	8	7	8.0

"Mesa Buff Sunrise" Standard Finish Block					
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	3	2	4	3.0	
Graffiti Remover	2	3	2	2.3	
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	9	7	10	8.7	
Graffiti Remover	9	8	10	9.0	
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	6	5	9	6.7	
Graffiti Remover	7	6	8	7.0	
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	8	6	9	7.7	
Graffiti Remover	8	8	8	8.0	



"Punaluu Eclipse" Standard Finish Block				
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	3	2	5	3.3
Graffiti Remover	2	2	4	2.7
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	6	10	8.3
Graffiti Remover	9	8	10	9.0
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	7	5	10	7.3
Graffiti Remover	7	7	10	8.0
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	3	9	6.7
Graffiti Remover	8	8	9	8.3

"Waimea Sunset" Standard Finish Block					
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	2	2	8	4.0	
Graffiti Remover	4	4	5	4.3	
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	9	6	10	8.3	
Graffiti Remover	9	8	10	9.0	
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	8	5	10	7.7	
Graffiti Remover	9	7	10	8.7	
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	8	5	10	7.7	
Graffiti Remover	8	8	9	8.3	



"Basaltlime" Split Face Block				
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	1	2	8	3.7
Graffiti Remover	2	2	5	3.0
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	5	10	7.7
Graffiti Remover	8	7	10	8.3
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	5	5	9	6.3
Graffiti Remover	6	5	10	7.0
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	7	5	9	7.0
Graffiti Remover	7	7	8	7.3

"Cinderlime" Split Face Block					
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	2	2	8	4.0	
Graffiti Remover	1	3	8	4.0	
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	9	6	10	8.3	
Graffiti Remover	9	8	10	9.0	
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	7	5	10	7.3	
Graffiti Remover	8	7	10	8.3	
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	8	5	10	7.7	
Graffiti Remover	8	7	9	8.0	



"Espresso Midnite" Split Face Block					
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	3	2	8	4.3	
Graffiti Remover	2	2	8	4.0	
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	9	6	10	8.3	
Graffiti Remover	9	8	10	9.0	
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	6	5	10	7.0	
Graffiti Remover	7	7	10	8.0	
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	8	7	10	8.3	
Graffiti Remover	8	8	10	8.7	

"Limestone" Split Face Block					
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	3	2	3	2.7	
Graffiti Remover	3	3	3	3.0	
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	9	6	10	8.3	
Graffiti Remover	9	8	10	9.0	
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	8	5	9	7.3	
Graffiti Remover	8	7	9	8.0	
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	8	5	8	7.0	
Graffiti Remover	8	7	8	7.7	



"Mesa Buff Sunrise" Split Face Block				
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	2	2	3	2.3
Graffiti Remover	2	3	3	2.7
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	6	10	8.3
Graffiti Remover	9	8	10	9.0
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	7	5	9	7.0
Graffiti Remover	7	6	9	7.3
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	5	9	7.3
Graffiti Remover	8	7	9	8.0

"Punaluu Eclipse" Split Face Block					
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	3	2	8	4.3	
Graffiti Remover	3	3	8	4.7	
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	9	6	10	8.3	
Graffiti Remover	9	8	10	9.0	
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	7	5	10	7.3	
Graffiti Remover	8	7	10	8.3	
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	7	5	10	7.3	
Graffiti Remover	8	6	10	8.0	



"Waimea Sunset" Split Face Block				
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	3	3	8	4.7
Graffiti Remover	1	2	8	3.7
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	6	10	8.3
Graffiti Remover	9	8	10	9.0
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	6	6	10	7.3
Graffiti Remover	8	7	10	8.3
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	6	10	8.0
Graffiti Remover	8	8	10	8.7

"Adobe Midnite" Ground Face Block					
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	5	5	8	6.0	
Graffiti Remover	3	3	3	3.0	
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	9	8	10	9.0	
Graffiti Remover	9	9	10	9.3	
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	6	6	10	7.3	
Graffiti Remover	7	7	5	6.3	
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating	
SafStrip® 8	8	7	10	8.3	
Graffiti Remover	8	9	9	8.7	



"Eclips	se" Ground Fac	e Block		
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	6	6	8	6.7
Graffiti Remover	6	6	5	5.7
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	8	10	9.0
Graffiti Remover	10	9	10	9.7
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	6	8	7.3
Graffiti Remover	8	7	8	7.7
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	8	10	9.0
Graffiti Remover	9	8	10	9.0

"Evening" Ground Face Block				
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	6	6	8	6.7
Graffiti Remover	6	6	3	5.0
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	10	9	10	9.7
Graffiti Remover	10	10	10	10.0
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	8	10	9.0
Graffiti Remover	9	9	10	9.3
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	8	10	9.0
Graffiti Remover	9	9	9	9.0



"Kailua Sui	"Kailua Sunrise" Ground Face Block			
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	5	5	8	6.0
Graffiti Remover	6	6	5	5.7
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	8	10	9.0
Graffiti Remover	9	9	10	9.3
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	6	6	9	7.0
Graffiti Remover	7	7	9	7.7
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	7	9	8.0
Graffiti Remover	8	8	9	8.3

"Mesa Buff Sunrise" Ground Face Block				
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	6	6	5	5.7
Graffiti Remover	6	6	3	5.0
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	8	10	9.0
Graffiti Remover	9	9	10	9.3
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	6	6	9	7.0
Graffiti Remover	7	7	8	7.3
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	7	8	7.7
Graffiti Remover	9	8	9	8.7



"Midnit	e" Ground Fac	e Block		
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	6	5	8	6.3
Graffiti Remover	6	6	3	5.0
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	8	10	9.0
Graffiti Remover	9	9	10	9.3
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	7	7	10	8.0
Graffiti Remover	8	8	10	8.7
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	8	9	8.3
Graffiti Remover	9	9	9	9.0

"Morning" Ground Face Block				
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	6	5	8	6.3
Graffiti Remover	6	6	3	5.0
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	7	10	8.7
Graffiti Remover	9	9	10	9.3
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	7	7	10	8.0
Graffiti Remover	8	8	9	8.3
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	7	10	8.3
Graffiti Remover	9	8	8	8.3



"Punaluu E	clipse" Ground	Face Block		
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	6	6	9	7.0
Graffiti Remover	6	6	9	7.0
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	7	10	8.7
Graffiti Remover	9	9	10	9.3
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	7	10	8.3
Graffiti Remover	8	7	10	8.3
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	7	10	8.7
Graffiti Remover	9	8	10	9.0

"Sunrise" Ground Face Block				
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	6	5	5	5.3
Graffiti Remover	6	6	3	5.0
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	7	10	8.7
Graffiti Remover	9	9	10	9.3
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	6	9	7.7
Graffiti Remover	7	7	8	7.3
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	7	9	8.0
Graffiti Remover	9	8	8	8.3

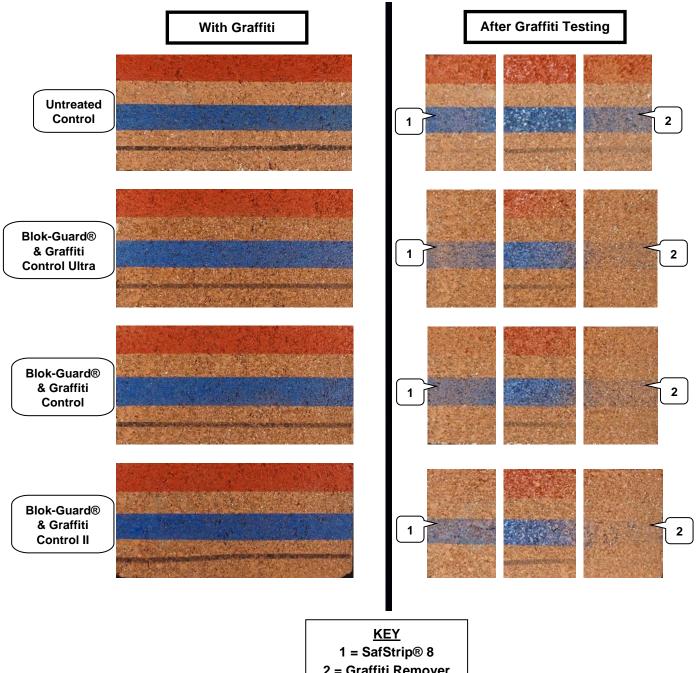


"Sunse	et" Ground Fac	e Block		
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	6	5	8	6.3
Graffiti Remover	6	6	5	5.7
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	7	10	8.7
Graffiti Remover	9	8	10	9.0
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	7	10	8.3
Graffiti Remover	8	8	10	8.7
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	7	10	8.3
Graffiti Remover	8	8	9	8.3

"Waimea Sunset" Ground Face Block				
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	6	5	5	5.3
Graffiti Remover	6	6	5	5.7
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	7	10	8.7
Graffiti Remover	9	9	10	9.3
Blok-Guard® & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	7	10	8.3
Graffiti Remover	8	8	10	8.7
Blok-Guard® & Graffiti Control II	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	8	7	10	8.3
Graffiti Remover	8	8	9	8.3



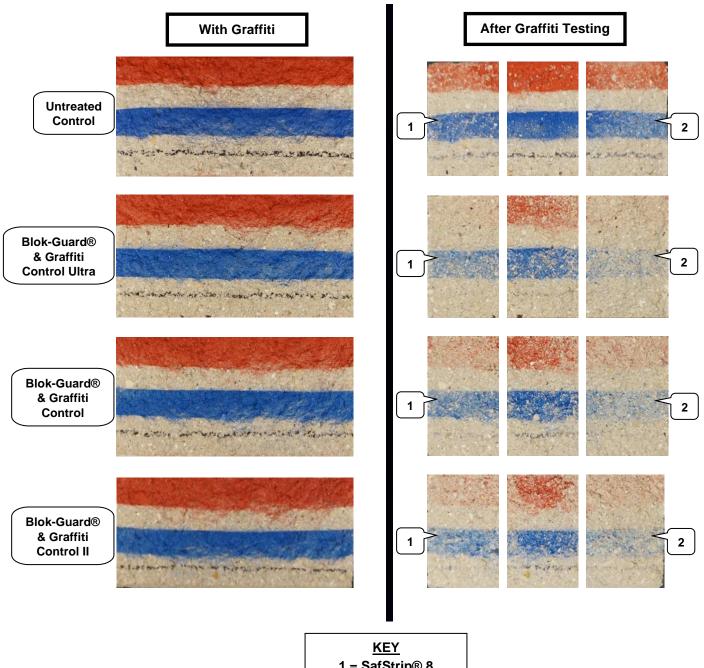
"Waimea Sunset" Standard Finish Block



2 = Graffiti Remover



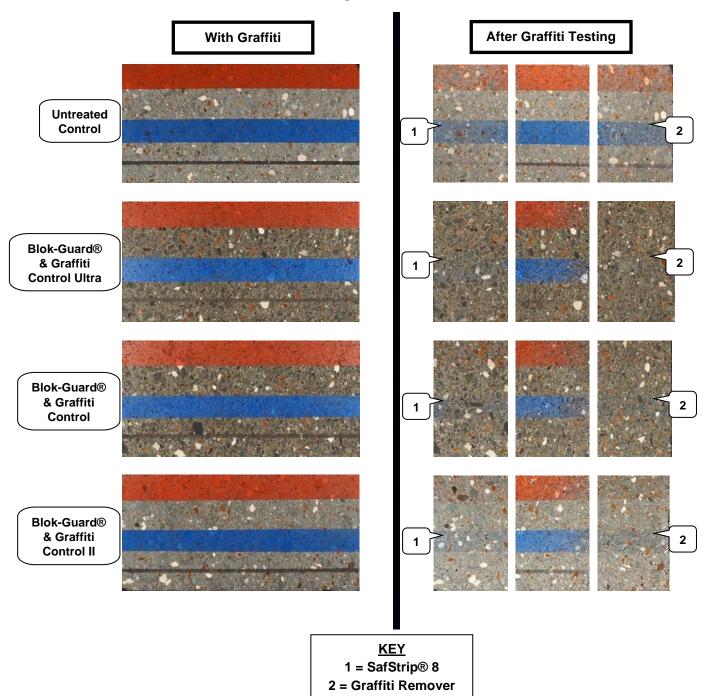
"Limestone" Split Face Block



1 = SafStrip® 8 2 = Graffiti Remover



"Evening" Ground Face Block





CONCLUSIONS: Graffiti Resistance - Concrete Block

Based on the laboratory evaluations, graffiti removal was improved with all three treatments. However, Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15 was the most effective treatment.

Enviro Klean® SafStrip® 8 and Sure Klean® Graffiti Remover were both effective in removing graffiti from the submitted samples. However, Sure Klean® Graffiti Remover was the most effective.

On-site testing is always recommended to ensure the desired result. Heavy graffiti staining may require more than one application of the graffiti remover.



RECOMMENDATIONS: Graffiti Resistance - Concrete Block

Recommendations for graffiti resistance for each type of concrete block submitted by Tileco Inc., Kapolei, HI are provided in the chart below. Recommendations are based on the treatment(s) that proved most effective on average for providing graffiti repellency and the product that was most effective on average at removing the graffiti on all types submitted. Heavy graffiti staining may require more than one application of the graffiti remover.

Sample	Graffiti Repellents	Graffiti Removers
All Submitted Standard Finish Block	10. ma 1/la an @ Waadh an Ca al Diala	
All Submitted Split Face Block	¹ Sure Klean® Weather Seal Blok- Guard® & Graffiti Control 15 OR ² Sure Klean® Weather Seal Blok- Guard® & Graffiti Control OR ² Sure Klean® Weather Seal Blok-	¹ Sure Klean® Graffiti Remover OR ² Enviro Klean® SafStrip® 8
All Submitted Ground Face Block	Guard® & Graffiti Control II	

NOTE: "1" indicates the most effective product and "2" indicates the second most effective product.

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.

Temperature:

ambient (~70°F)

250°F

120°F



Olive oil

Coffee

Wesson oil

SAMPLE PREPARATION: Treatments - Concrete Pavers

Food and Oil Products Evaluated for Stain Testing:

Each stain repellent was applied in accordance with the current PROSOCO, Inc. Product Date Sheet instructions. The treatments were allowed to cure for at least 72 hours prior to the stain testing described below.

TEST METHODS: Surface Beading Evaluation – Concrete Pavers

Coca Cola	ambient (~70°F)
Ketchup	ambient (~70°F)
Mustard	ambient (~70°F)
Red wine	ambient (~70°F)
Balsamic vinegar	ambient (~70°F)
Sov sauce	ambient (~70°F)

The food and oil products were applied to the test areas by using a dropper creating a bead $0.5-1.0\,\mathrm{cm}$ in diameter. The beading properties of the oils and liquids were visually evaluated within two minutes after application. The results are reported as a rating based on the angle of contact between the base of the droplet and the substrate. A rating of "1 or 2" indicated the smallest angle of contact (<90°) which correlates to "above average" repellency. A rating of "3 or 4" indicates "average" repellency. A rating of "5 or greater" indicated that the oils or liquids quickly absorbed into the substrate and correlates to "below average" repellency.

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



TEST METHODS: Surface Beading Evaluation – Concrete Pavers (cont.)

Rating System (1-5)

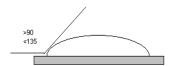
1. No wetting of contact area (no darkening); angle less than 90°



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.





TEST RESULTS: Surface Beading Evaluation – Concrete Pavers

	All Pavers						
	Untreated Control	Gloss 'N Guard					
Coca Cola	3	3					
Ketchup	N/A	N/A					
Mustard	N/A	N/A					
Red Wine	3	3					
Bals. Vin.	4	3					
Soy Sauce	4	3					
Olive Oil	5	4					
Wesson Oil	5	4					
Hot Coffee	3	3					

N/A - non-free flowing staining agent

TEST METHODS: Stain Resistance Evaluation – Concrete Pavers

The soiling agents were allowed to dwell on the treated and untreated substrate for times of 24 hours, 4 hours, 1 hour, and 10 minutes. The test areas were then cleaned with Enviro Klean® Klean 'N Release Cleaner diluted with ten parts water and scrubbed under a stream of running water. The 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 AND PHOTOGRAPHS: Stain Resistance Evaluation – Concrete Pavers

"Gray" Paver

% Removal

Untreated	d Control								
	Cola	Ketch.	Must.	Red Wine	Bals. Vin.	Soy Sauce	Olive Oil	Wesson Oil	Coffee
24 hour	90%	100%*	70%*	50%	50%	N/A*	<1%	<1%	30%
4 hour	100%	100%*	90%*	20%	60%	N/A*	<1%	<1%	100%
1 hour	100%	100%*	100%*	50%	100%*	N/A*	<1%	<1%	100%
10 min.	100%	100%	100%*	90%	100%*	N/A*	<1%	<1%	100%
Sure Klean® Weather Seal Gloss 'N Guard									
	ane weat	ner Sear G	ioss 'n Gu	ıard					
	Cola	Ketch.	Must.	Red Wine	Bals. Vin.	Soy Sauce	Olive Oil	Wesson Oil	Coffee
24 hour				Red		,			Coffee 100%
24 hour 4 hour	Cola	Ketch.	Must.	Red Wine	Vin.	Sauce	Oil	Oil	
	Cola 100%	Ketch. 100%	Must. 100%	Red Wine 100%	Vin. 100%	Sauce 100%	Oil 60%	Oil 60%	100%

"Red" Paver

% Removal

Untreated Control									
	Cola	Ketch.	Must.	Red Wine	Bals. Vin.	Soy Sauce	Olive Oil	Wesson Oil	Coffee
24 hour	20%	100%*	80%	50%	N/A*	N/A*	<1%	<1%	N/A*
4 hour	100%	100%*	100%*	50%	100%*	N/A*	<1%	<1%	N/A*
1 hour	100%	100%*	100%*	100%	100%*	N/A*	<1%	<1%	100%
10 min.	100%	100%	100%*	100%	100%*	N/A*	<1%	<1%	100%
Sure Klea	Sure Klean® Weather Seal Gloss 'N Guard								
									<u> </u>

	Cola	Ketch.	Must.	Red Wine	Bals. Vin.	Soy Sauce	Olive Oil	Wesson Oil	Coffee
24 hour	100%	100%	100%	100%	100%	100%	90%	60%	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%

- % Removal of stain following maintenance cleaning.
- * Indicates etching of surface treatment due to the acidic nature of the staining agent.
- N/A* Indicates the removal of the stain, following maintenance cleaning, was unable to be determined due to olive oil or Wesson oil spreading masking the area in question.



TEST RESULTS AND PHOTOGRAPHS: Stain Resistance Evaluation – Concrete Pavers (cont.)

"Tan" Paver

% Removal

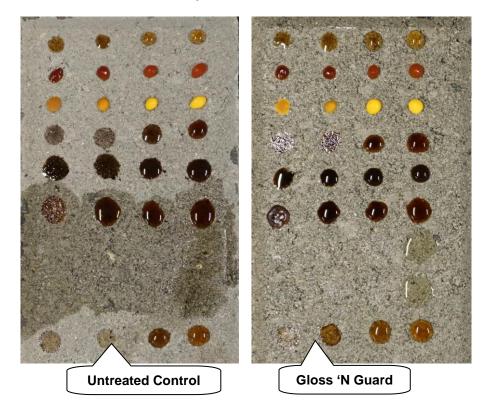
Untreated	d Control								
	Cola	Ketch.	Must.	Red Wine	Bals. Vin.	Soy Sauce	Olive Oil	Wesson Oil	Coffee
24 hour	20%	100%*	100%*	70%	100%*	N/A*	<1%	<1%	30%
4 hour	100%	100%*	100%*	70%	100%*	N/A*	<1%	<1%	50%
1 hour	100%	100%*	100%*	70%	100%*	N/A*	<1%	<1%	100%
10 min.	100%	100%*	100%*	100%	100%*	N/A*	<1%	<1%	100%
Sure Klean® Weather Seal Gloss 'N Guard									
Sure Klea	an® Weatl	her Seal G	loss 'N Gι	ıard					
Sure Klea	an® Weatl	her Seal G Ketch.	loss 'N Gu Must.	Red Wine	Bals. Vin.	Soy Sauce	Olive Oil	Wesson Oil	Coffee
Sure Klea				Red		,			Coffee 100%
	Cola	Ketch.	Must.	Red Wine	Vin.	Sauce	Oil	Oil	
24 hour	Cola 100%	Ketch. 100%	Must. 100%	Red Wine 100%	Vin. 100%	Sauce 100%	Oil 60%	Oil 60%	100%

- % Removal of stain following maintenance cleaning.
- * Indicates etching of surface treatment due to the acidic nature of the staining agent.
- N/A* Indicates the removal of the stain, following maintenance cleaning, was unable to be determined due to olive oil or Wesson oil spreading masking the area in question.



TEST RESULTS AND PHOTOGRAPHS: Stain Resistance Evaluation – Concrete Pavers (cont.)

"Gray" Paver With Stains



"Gray" Paver After Stain Testing





CONCLUSIONS: Surface Beading and Stain Resistance - Concrete Pavers

In the surface beading evaluation, Sure Klean® Weather Seal Gloss 'N Guard slightly improved the surface beading characteristics of the submitted pavers.

In the stain resistance tests conducted, Sure Klean® Weather Seal Gloss 'N Guard proved effective at repelling the applied stains on the submitted samples.

RECOMMENDATIONS: Stain Resistance - Concrete Pavers

Recommendations for stain resistance for each type of paver submitted by Tileco Inc., Kapolei, HI are provided in the chart below. Recommendations are based on the treatments that proved most effective for providing stain repellency on the submitted pavers.

Sample	Stain Resistance
All Submitted Pavers	Stain Repellents Sure Klean® Weather Seal Gloss 'N Guard Maintenance Cleaner Enviro Klean® Klean 'N Release Cleaner

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.

J. Lucas Comadoll

QC/Project Testing Technician

J. Succes Conadoll

ALL SAMPLES SUPPLIED FOR THE ABOVE EVALUATION WILL BE DISPOSED OF <u>THIRTY (30) DAYS</u> AFTER THE ISSUE DATE OF THIS REPORT. IF SAMPLES ARE TO BE RETAINED FOR ADDITIONAL TESTING OR RETURNED TO THE SENDER, PROVIDE WRITTEN INSTRUCTIONS TO THE LABORATORY WITHIN <u>THIRTY</u> (30) DAYS OF THE ISSUE DATE OF THIS REPORT.

Recommendations made within this report are based on laboratory test applications and observations. Final determination of the suitability of a product and/or procedure should be made only after thorough job testing on actual surfaces.