

Pallet Tag Program Laboratory Report

Kansas Building Products Wichita, KS



Project No. 2103-02 PTP

Prepared For:



Prepared By:

J. Succes Conadoll

J. Lucas Comadoll Project Testing Technician AMT Laboratories

April 2021



LABORATORY REPORT

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

FOR: Frank Bauer, Kansas Building Products cc: Mike Dickey Clay Witt, PROSOCO, Inc. Jake Boyer, PROSOCO, Inc. Al Morris, PROSOCO, Inc.

SUBJECT:	Kansas Building Products	DATE:	April 28, 2021
	Wichita, KS	PROJECT:	2103-02 PTP
	Pallet Tag Evaluation		

SAMPLES SUBMITTED: 4 types of CMUs

Block	Name	Color	Size
(4) Split Face CMU	"Charcoal"	Gray	15.5" x 7.5"
(4) Split Face CMU	"Mocha"	Brown	15.5" x 7.5"
(4) Split Face CMU	"Sandbar"	Buff	15.5" x 7.5"
(4) Split Face CMU	"Sunflower"	Yellow	15.5" x 7.5"

SUBMITTED BY: Frank Bauer Kansas Building Products 1600 South Hoover Road Wichita, KS 67209



PURPOSE OF TEST:

- To determine the most appropriate PROSOCO, Inc. new construction cleaner(s) for the submitted samples.
- To evaluate the color and sheen enhancement characteristics of the requested PROSOCO® 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.



PRODUCTS EVALUATED:

New Construction Cleaning	Dilution:
Sure Klean® Custom Masonry Cleaner	1:4, 1:6
Enviro Klean® Safety Klean	1:2, 1:3

Water Repellency	Dilution:
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	N/A*
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	N/A*
Sure Klean® Weather Seal Siloxane WB Concentrate	1:9

Graffiti Resistance	Dilution:
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	N/A*
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	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.



TEST METHODS: New Construction Cleaning

Sure Klean[®] Custom Masonry Cleaner and Enviro Klean[®] Safety Klean were evaluated to determine the optimal concentration of cleaner which leaves the external surface looking most like the natural through-body color of the CMU.

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.

<u>Aggregate Exposure</u> is the visual examination comparing aggregate exposure of the interior, throughbody section of the CMU 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 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.
- 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.

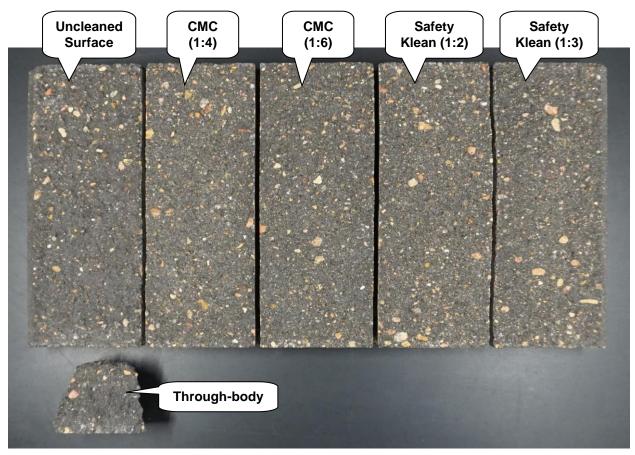
***Rinsing Equipment –** Masonry washing equipment generating approximately 700-800 psi with a water flow rate of 8 gallons per minute delivered through a 40-degree fan spray tip was used for rinsing.



TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning

Name: "Charcoal" Split Face CMU				
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Custom Masonry Cleaner	1:4	2	2	
Custom Masonry Cleaner	1:6	1	1	
Safety Klean	1:2	2	2	
Safety Klean	1:3	1	1	

"Charcoal" Split Face CMU After Cleaning

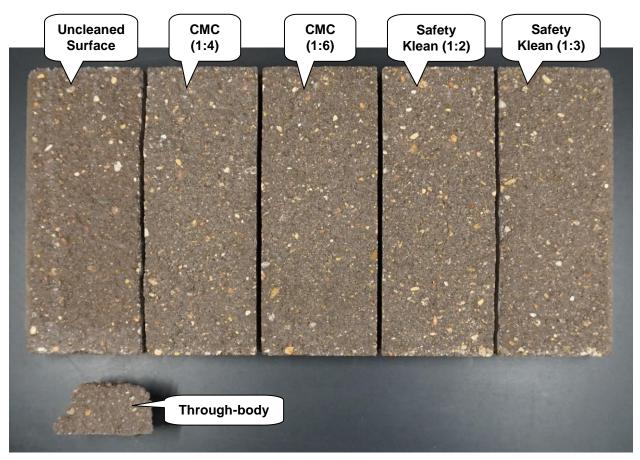




TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)

Name: "Mocha" Split Face CMU				
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Custom Masonry Cleaner	1:4	2	2	
Custom Masonry Cleaner	1:6	1	1	
Safety Klean	1:2	2	2	
Safety Klean	1:3	1	1	

"Mocha" Split Face CMU After Cleaning

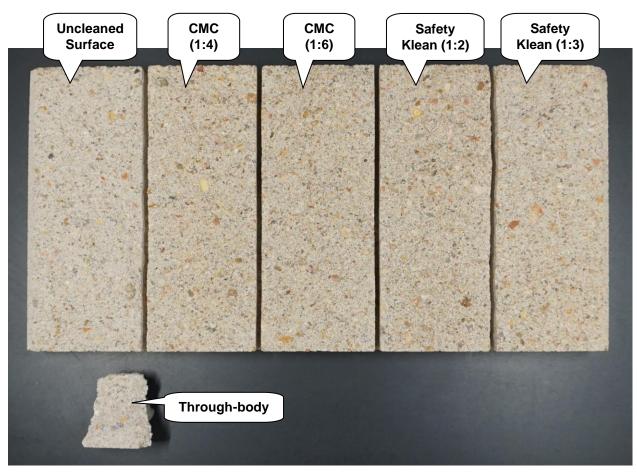




TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)

Name: "Sandbar" Split Face CMU				
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Custom Masonry Cleaner	1:4	2	2	
Custom Masonry Cleaner	1:6	1	1	
Safety Klean	1:2	2	2	
Safety Klean	1:3	1	1	

"Sandbar" Split Face CMU After Cleaning

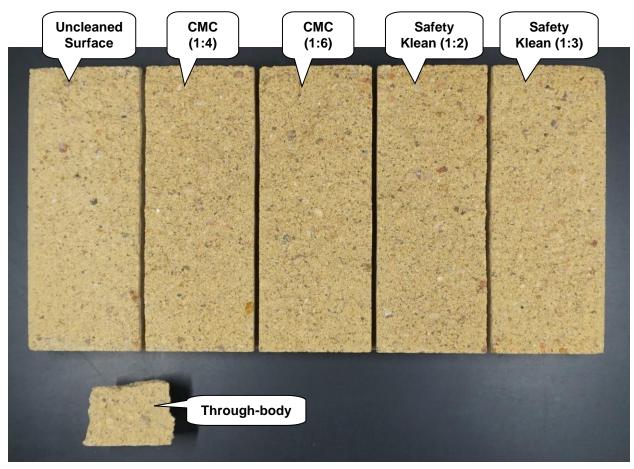




TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)

Name: "Sunflower" Split Face CMU				
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Custom Masonry Cleaner	1:4	2	2	
Custom Masonry Cleaner	1:6	1	1	
Safety Klean	1:2	2	2	
Safety Klean	1:3	1	1	

"Sunflower" Split Face CMU After Cleaning





CONCLUSIONS: New Construction Cleaning

In the cleaning tests conducted, Sure Klean® Custom Masonry Cleaner diluted with four parts water and Enviro Klean® Safety Klean diluted with two parts water removed a moderate amount of surface pigment, exposing a moderate amount of aggregate. Sure Klean® Custom Masonry Cleaner diluted with six parts water and Enviro Klean® Safety Klean diluted with three parts water removed a slight amount of surface pigment, exposing a slight amount of aggregate.

Both Sure Klean® Custom Masonry Cleaner and Enviro Klean® Safety Klean provided an accurate match to the through-body color of the CMU.

When choosing the most appropriate product for the desired result:

- For excess mortar and heavy efflorescence Test Sure Klean® Custom Masonry Cleaner
- For an effective, safe alternative to acidic cleaning compounds Test Enviro Klean® Safety Klean

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 CMU submitted by Kansas Building Products, Wichita, KS 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
"Charcoal" Split Face CMU	
"Mocha" Split Face CMU	Sure Klean® Custom Masonry Cleaner (1:4) or (1:6) OR
"Sandbar" Split Face CMU	Enviro Klean® Safety Klean (1:2) or (1:3)
"Sunflower" Split Face CMU	

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.

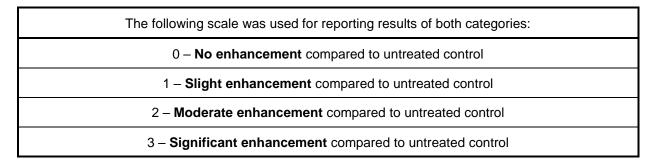


SAMPLE PREPARATION: Treatment Application

Prior to treatment application, the submitted CMUs were cleaned with Sure Klean® Custom Masonry Cleaner diluted with six parts water in accordance with the current PROSOCO, Inc. Product Data Sheet instructions. After the samples had dried for at least 24 hours, Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15, Sure Klean® Weather Seal Blok-Guard® & Graffiti Control, and Sure Klean® Weather Seal Siloxane WB Concentrate 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.

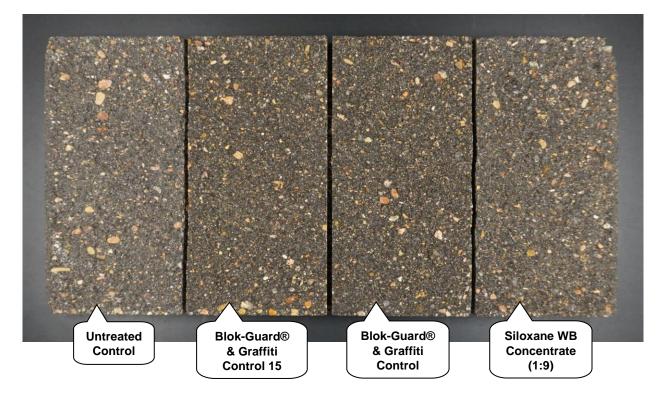




TEST RESULTS AND PHOTOGRAPHS: Color and Sheen Enhancement

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

"Charcoal" Split Face CMU with Treatments

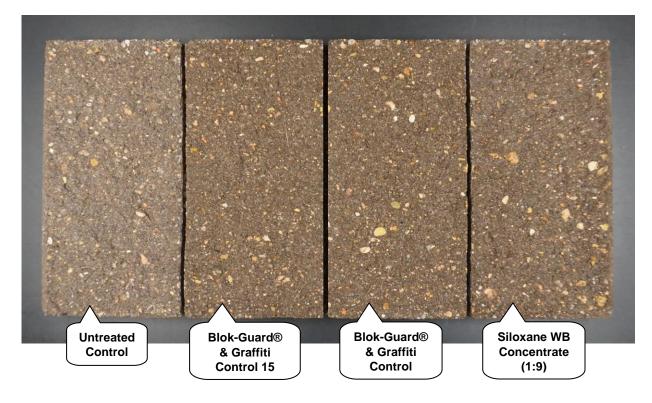




TEST RESULTS AND PHOTOGRAPHS: Color and Sheen Enhancement (cont.)

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

"Mocha" Split Face CMU with Treatments





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

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

"Sandbar" Split Face CMU with Treatments





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

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

"Sunflower" Split Face CMU with Treatments





CONCLUSIONS: Color and Sheen Enhancement

The treatments evaluated provided a range of color enhancement results, from a slight change in appearance to a moderate change depending on the 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.

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 CMU submitted by Kansas Building Products, Wichita, KS are provided in the chart below. Recommendations are based on the treatment(s) that proved most effective.

Sample	Color and Sheen Enhancement
"Charcoal" Split Face CMU	
"Mocha" Split Face CMU	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15 (Recommended if moderate color enhancement is desired) OR Sure Klean® Weather Seal Blok-Guard® & Graffiti Control
"Sandbar" Split Face CMU	(Recommended if slight to moderate color enhancement is desired) OR Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) (Recommended if slight enhancement is desired)
"Sunflower" Split Face CMU	

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

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 "Sandbar" Split Face CMU

TEST RESULTS AND PHOTOGRAPHS: Protective Water Repellents

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

"Charcoal" Split Face CMU	
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 Siloxane WB Concentrate (1:9)	60 mph



TEST RESULTS AND PHOTOGRAPHS: Protective Water Repellents (cont.)

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

"Mocha" Split Face CMU	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	59 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

"Sandbar" Split Face CMU	
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 Siloxane WB Concentrate (1:9)	60 mph

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



CONCLUSIONS: Protective Water Repellents

Based on the laboratory evaluations, all of the treatments provided good water repellent protection to the submitted CMUs.

RECOMMENDATIONS: Protective Water Repellents

Recommendations for water repellency for each type of CMU submitted by Kansas Building Products, Wichita, KS are provided in the chart below. Recommendations are based on the treatment(s) that proved most effective.

Sample	Water Repellency
"Charcoal" Split Face CMU	
"Mocha" Split Face CMU	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15 OR
"Sandbar" Split Face CMU	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control OR Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)
"Sunflower" Split Face CMU	

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

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.

	Graffiti Remover		
--	------------------	--	--

- 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.



"Charcoal" Split Face CMU				
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	4	3	8	5.0
Graffiti Remover	4	4	8	5.3
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	9	10	9.3
Graffiti Remover	9	9	10	9.3
Blok-Guard [®] & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	9	9	10	9.3
Graffiti Remover	9	9	10	9.3

"Mocha" Split Face CMU				
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating
SafStrip® 8	4	4	8	5.3
Graffiti Remover	4	4	8	5.3
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	8	8	10	8.7
Graffiti Remover	9	9	10	9.3

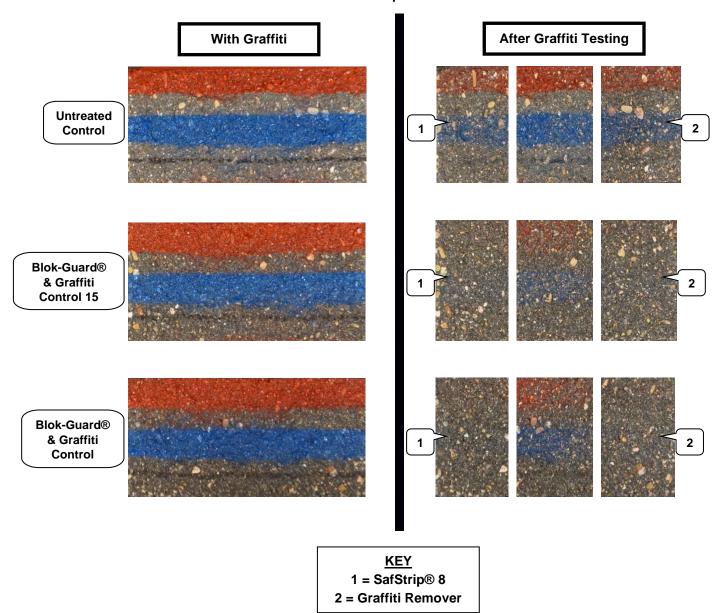


"Sandbar" Split Face CMU						
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating		
SafStrip® 8	4	4	6	4.7		
Graffiti Remover	4	4	6	4.7		
Blok-Guard® & Graffiti Control 15	Red Paint	Blue Paint	Black Marker	Avg. Rating		
SafStrip® 8	9	8	10	9.0		
Graffiti Remover	9	9	10	9.3		
Blok-Guard [®] & Graffiti Control	Red Paint	Blue Paint	Black Marker	Avg. Rating		
SafStrip® 8	8	8	10	8.7		
Graffiti Remover	9	9	10	9.3		

"Sunflower" Split Face CMU						
Untreated Control	Red Paint	Blue Paint	Black Marker	Avg. Rating		
SafStrip® 8	4	4	6	4.7		
Graffiti Remover	4	4	6	4.7		
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	9	8	10	9.0		
Graffiti Remover	9	9	10	9.3		

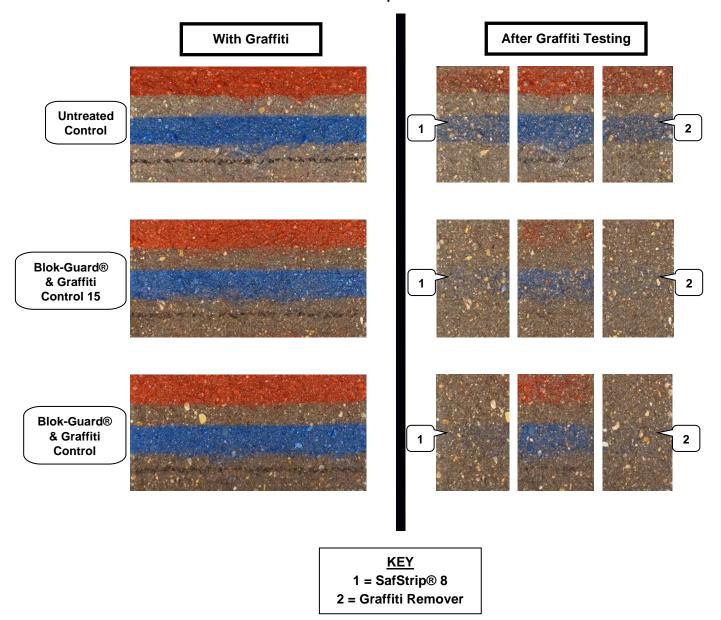


"Charcoal" Split Face CMU



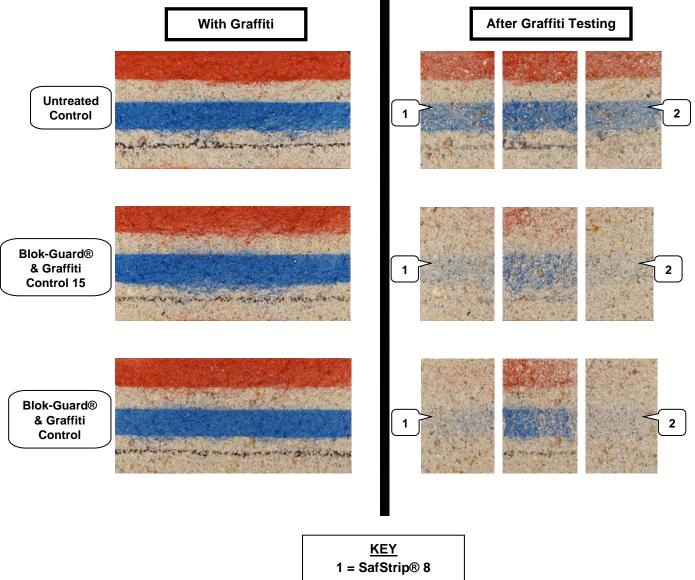


"Mocha" Split Face CMU





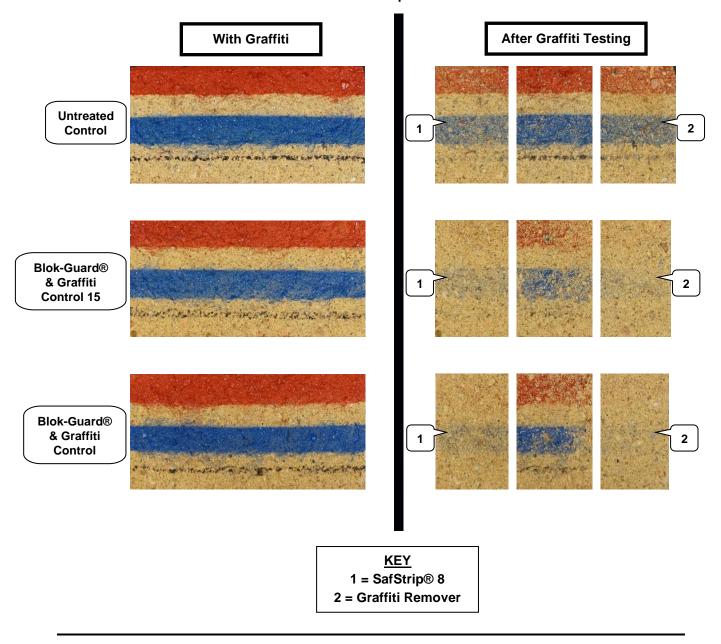
"Sandbar" Split Face CMU



2 = Graffiti Remover



"Sunflower" Split Face CMU



CONCLUSIONS: Graffiti Resistance

Based on the laboratory evaluations, graffiti removal was improved with both treatments.

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

Recommendations for graffiti resistance for each type of CMU submitted by Kansas Building Products, Wichita, KS 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	
"Charcoal" Split Face CMU	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control 15		
"Mocha" Split Face CMU		¹ Sure Klean® Graffiti Remover OR ² Enviro Klean® SafStrip® 8	
"Sandbar" Split Face CMU	OR Sure Klean® Weather Seal Blok-Guard® & Graffiti Control		
"Sunflower" Split Face CMU			

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.

J. Quese Conadoll

J. Lucas Comadoll Project Testing Technician

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.