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Submitted Information

For: Gary Hayes
cc: Jeff Lucas

Subject: County Materials
Waukesha, WI

Date: September 29, 2008

Project: 0808-11 PTP

Samples Submitted: 4 types of Smooth-Face CMU's and 3 types of Split CMU's

Name	Color	Type	Integral Water Repellent	Size
"Chocolate"	Brown	Smooth-Face CMU	BASF Rheopel® Plus	15 ½" x 7 ½" x 1 ½"
"White"	White	Smooth-Face CMU	BASF Rheopel® Plus	15 ½" x 7 ½" x 1 ½"
"LW"	Dark Gray	Smooth-Face CMU	None	15 ½" x 7 ½" x 1 ½"
"WR Natural"	Buff	Smooth-Face CMU	BASF Rheopel® Plus	15 ½" x 7 ½" x 1 ½"
"FFS Natural"	Buff	Full-face Split CMU	BASF Rheopel® Plus	15 ½" x 7 ½" x 2"
"FFS Chocolate"	Brown	Full-face Split CMU	BASF Rheopel® Plus	15 ½" x 7 ½" x 2"
"FFS White"	White	Full-face Split CMU	BASF Rheopel® Plus	15 ½" x 7 ½" x 2"

Submitted by: Gary Hayes

Introduction

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

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

Purpose of Testing

Seven types of integrally colored CMU's, all with large, small and fine aggregate were submitted for testing to AMT Laboratories by PROSOCO, Inc. to determine the optimum cleaning/cure time combination for complete removal of mortar and related new construction soiling. The effectiveness of protective water repellents and graffiti control products suitable for CMU's were also evaluated.

New Construction Cleaning – Sure Klean® Custom Masonry Cleaner and Sure Klean® Burnished Custom Masonry Cleaner were evaluated to determine the optimal concentration of cleaner for removal of laboratory applied mortar which also leaves the external surface looking most like the natural through-body color of the CMU.

To simulate new construction soiling all samples were placed on a bench with finished surface facing upward. Hollow cylinders measuring 50 mm in diameter and 75 mm tall were positioned on top of each sample and filled with a wet mixture of Type S mortar. The wet, mortar-filled cylinder was allowed to remain in contact with the samples for 10 minutes before removal.

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

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.

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

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

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

- | | |
|--|---------------------------------------|
| 0 – Worst match to through-body | 3 – Good match to through-body |
| 1 – Poor match to through-body | 4 – Best match to through-body |
| 2 – Fair match to through-body | |

NOTE: When cleaning integrally colored CMU's.

Integrally colored concrete masonry units (CMU's) 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.

Protective Water Repellents – Sure Klean® Weather Seal Blok-Guard® & Graffiti Control and Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II were evaluated for their ability to provide water repellency to the submitted samples.

Graffiti Control – Sure Klean® Weather Seal Blok-Guard® & Graffiti Control and Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II was evaluated for their ability to control graffiti on the submitted samples. Sure Klean® Fast Acting Stripper, Defacer Eraser® Graffiti Wipe, and Enviro Klean® SafStrip® 8 were evaluated for their ability to remove graffiti from the submitted samples.

Products Evaluated**New Construction Cleaning Products Evaluated**

Sample	Product	Dilution
All Submitted CMU's	Sure Klean® Custom Masonry Cleaner	1:2, 1:4, 1:6
	Sure Klean® Burnished Custom Masonry Cleaner	1:2, 1:3

Protective Water Repellent Products Evaluated

Sample	Product	Dilution
All Submitted CMU's	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Concentrate
	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Concentrate

Graffiti Control Products Evaluated

Sample	Product	Dilution
All Submitted CMU's	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Concentrate
	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Concentrate

Graffiti Removal Products Evaluated

Sample	Product	Dilution
All Submitted CMU's	Sure Klean® Fast Acting Stripper	Concentrate
	Defacer Eraser® Graffiti Wipe	Concentrate
	Enviro Klean® SafStrip® 8	Concentrate

New Construction Cleaning

These cleaning trials were conducted to determine the optimal cleaning/cure time combination to most efficiently remove Type S mortar from the submitted samples while providing the best color uniformity when compared to the through-body color of the submitted CMU's.

Description of Products Evaluated – New Construction Cleaning

Sure Klean® Custom Masonry Cleaner – A general purpose, concentrated acidic cleaner for most custom masonry and colored concrete. Removes concrete splashes, excess mortar, mud, heavy efflorescence and surface soiling, leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 2-6 parts water. Apply by brush or low-pressure spray.

Sure Klean® Burnished Custom Masonry Cleaner – Removes common construction and atmospheric staining from custom masonry and other architectural concrete surfaces. This general-purpose, non-etching, acidic cleaner removes rust, mud, oil, atmospheric dirt, mortar smears and other stains without altering the surface texture. Burnished Custom Masonry Cleaner adds depth to colors and brightens white matrices and exposed aggregate.

Sample Preparation – New Construction Cleaning

Type S mortar was prepared in compliance with the manufacturer's instructions, applied to the samples and allowed to cure for 3, 7, and 14 days. Mortar removal was accomplished using chemical assistance and a high-pressure water rinse with pressure rinsing equipment. The removal of Type S masonry mortar was visually evaluated after 3, 7, and 14 days of curing. A visual examination was also made to determine the optimal dilution of the tested cleaners that provides the best color uniformity when compared to the through-body color of the CMU's.

Test Method – New Construction Cleaning

Chemical cleaners were evaluated using the following procedure:

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

Sure Klean® Custom Masonry Cleaner.....	3 minutes
Sure Klean® Burnished Custom Masonry Cleaner	3 minutes
4. Reapply the product and moderately agitate with a brush.
5. Pressure rinse thoroughly.*
6. Allow the sample to dry for at least 18 hours and visually examine.
7. Break the sample in half and compare the through-body surfaces to the cleaned surfaces for the best match.

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

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

“Chocolate”				
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	95 %	100 %	100 %
Custom Masonry Cleaner	1:4	100 %	100 %	100 %
Custom Masonry Cleaner	1:6	99 %	100 %	100 %
Burnished Custom Masonry Cleaner	1:2	100 %	100 %	100 %
Burnished Custom Masonry Cleaner	1:3	100 %	100 %	100 %
“White”				
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	100 %	100 %	100 %
Custom Masonry Cleaner	1:4	100 %	100 %	100 %
Custom Masonry Cleaner	1:6	100 %	100 %	100 %
Burnished Custom Masonry Cleaner	1:2	100 %	100 %	100 %
Burnished Custom Masonry Cleaner	1:3	100 %	100 %	100 %
“LW”				
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	100 %	100 %	90 %
Custom Masonry Cleaner	1:4	97 %	100 %	100 %
Custom Masonry Cleaner	1:6	87 %	100 %	100 %
Burnished Custom Masonry Cleaner	1:2	100 %	100 %	87 %
Burnished Custom Masonry Cleaner	1:3	95 %	80 %	85 %
“WR Natural”				
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	100 %	100 %	100 %
Custom Masonry Cleaner	1:4	100 %	100 %	100 %
Custom Masonry Cleaner	1:6	100 %	100 %	100 %
Burnished Custom Masonry Cleaner	1:2	100 %	97 %	100 %
Burnished Custom Masonry Cleaner	1:3	100 %	100 %	100 %

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

“FFS Natural”				
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	100 %	100 %	100 %
Custom Masonry Cleaner	1:4	100 %	100 %	100 %
Custom Masonry Cleaner	1:6	100 %	100 %	100 %
Burnished Custom Masonry Cleaner	1:2	100 %	100 %	100 %
Burnished Custom Masonry Cleaner	1:3	100 %	100 %	100 %
“FFS Chocolate”				
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	90 %	100 %	97 %
Custom Masonry Cleaner	1:4	99 %	100 %	100 %
Custom Masonry Cleaner	1:6	98 %	100 %	97 %
Burnished Custom Masonry Cleaner	1:2	95 %	100 %	87 %
Burnished Custom Masonry Cleaner	1:3	100 %	80 %	85 %
“FFS White”				
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	100 %	100 %	100 %
Custom Masonry Cleaner	1:4	100 %	100 %	100 %
Custom Masonry Cleaner	1:6	100 %	100 %	100 %
Burnished Custom Masonry Cleaner	1:2	100 %	100 %	100 %
Burnished Custom Masonry Cleaner	1:3	100 %	100 %	100 %

Test Results – Color Uniformity

Substrate: Smooth-face CMU		Pigment Color: “Chocolate”	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	0	1
Custom Masonry Cleaner	1:4	0	1
Custom Masonry Cleaner	1:6	0	1
Burnished Custom Masonry Cleaner	1:2	3	3
Burnished Custom Masonry Cleaner	1:3	3	3
Substrate: Smooth-face CMU		Pigment Color: “White”	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	3	3
Custom Masonry Cleaner	1:4	3	3
Custom Masonry Cleaner	1:6	3	3
Burnished Custom Masonry Cleaner	1:2	3	3
Burnished Custom Masonry Cleaner	1:3	3	3
Substrate: Smooth-face CMU		Pigment Color: “LW”	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	1	1
Custom Masonry Cleaner	1:4	1	1
Custom Masonry Cleaner	1:6	2	2
Burnished Custom Masonry Cleaner	1:2	3	3
Burnished Custom Masonry Cleaner	1:3	3	3
Substrate: Smooth-face CMU		Pigment Color: “WR Natural”	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	0	1
Custom Masonry Cleaner	1:4	0	1
Custom Masonry Cleaner	1:6	0	1
Burnished Custom Masonry Cleaner	1:2	2	2
Burnished Custom Masonry Cleaner	1:3	2	2

Scale used for reporting results of both categories

- 0 – **Worst** match to through-body 3 – **Good** match to through-body
 1 – **Poor** match to through-body 4 – **Best** match to through-body
 2 – **Fair** match to through-body

Test Results – Color Uniformity

Substrate: Full-face Split CMU		Pigment Color: “FFS Natural”	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	0	0
Custom Masonry Cleaner	1:4	0	0
Custom Masonry Cleaner	1:6	0	0
Burnished Custom Masonry Cleaner	1:2	2	3
Burnished Custom Masonry Cleaner	1:3	2	3
Substrate: Full-face Split CMU		Pigment Color: “FFS Chocolate”	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	1	1
Custom Masonry Cleaner	1:4	1	1
Custom Masonry Cleaner	1:6	1	1
Burnished Custom Masonry Cleaner	1:2	2	2
Burnished Custom Masonry Cleaner	1:3	2	2
Substrate: Full-face Split CMU		Pigment Color: “FFS White”	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	1	1
Custom Masonry Cleaner	1:4	1	1
Custom Masonry Cleaner	1:6	1	1
Burnished Custom Masonry Cleaner	1:2	3	3
Burnished Custom Masonry Cleaner	1:3	3	3

Scale used for reporting results of both categories

- 0 – **Worst** match to through-body 3 – **Good** match to through-body
 1 – **Poor** match to through-body 4 – **Best** match to through-body
 2 – **Fair** match to through-body

Photographs – New Construction Cleaning**“Chocolate”; Type S Mortar
3 Day Cleaning**

Sure Klean®
Custom Masonry Cleaner
(1:2)

Sure Klean®
Custom Masonry Cleaner
(1:4)



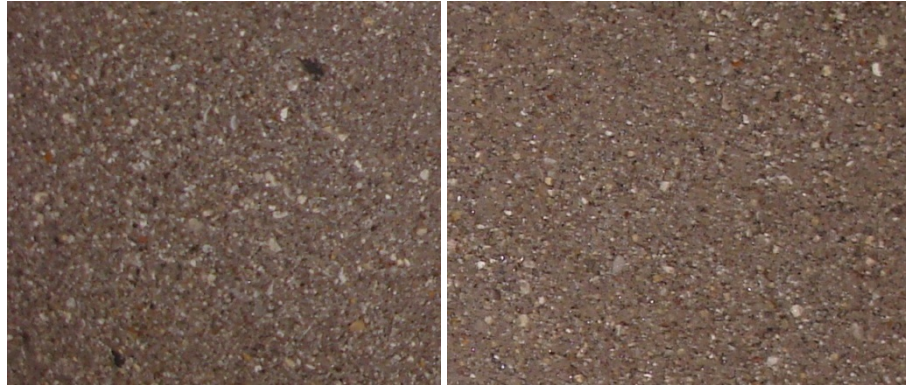
Sure Klean®
Custom Masonry Cleaner
(1:6)

Uncleaned Surface



Sure Klean®
Burnished Custom
Masonry Cleaner
(1:2)

Sure Klean®
Burnished Custom
Masonry Cleaner
(1:3)

Photographs – New Construction Cleaning**“Chocolate”; Type S Mortar
7 Day Cleaning**

Sure Klean®
Custom Masonry Cleaner
(1:2)

Sure Klean®
Custom Masonry Cleaner
(1:4)



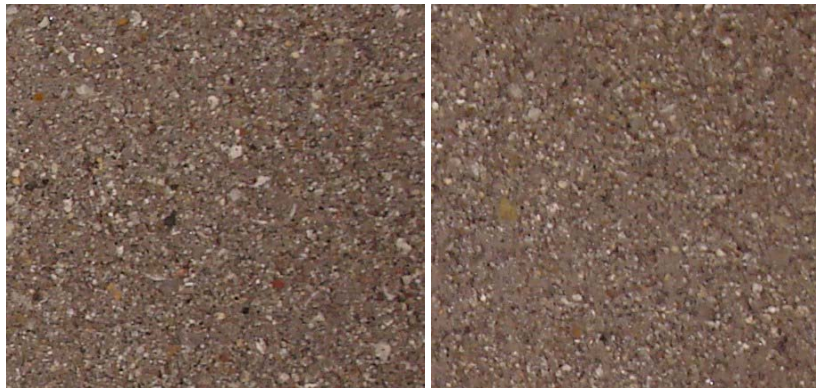
Sure Klean®
Custom Masonry Cleaner
(1:6)

Uncleaned Surface



Sure Klean®
Burnished Custom
Masonry Cleaner
(1:2)

Sure Klean®
Burnished Custom
Masonry Cleaner
(1:3)

Photographs – New Construction Cleaning**“Chocolate”; Type S Mortar
14 Day Cleaning**

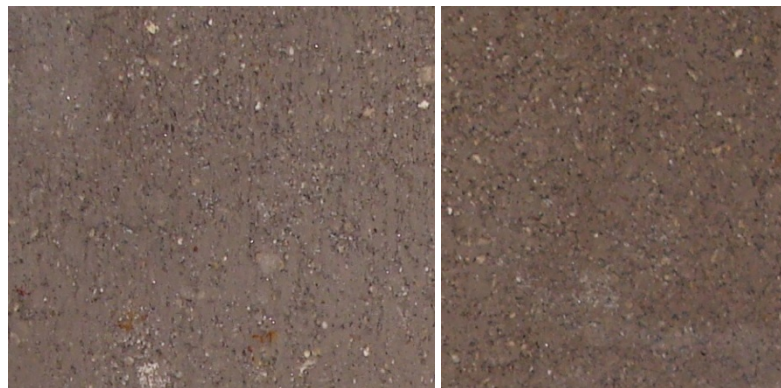
Sure Klean®
Custom Masonry Cleaner
(1:2)

Sure Klean®
Custom Masonry Cleaner
(1:4)



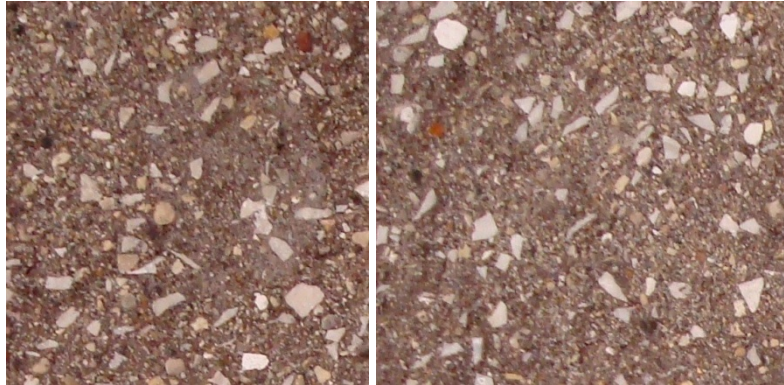
Sure Klean®
Custom Masonry Cleaner
(1:6)

Uncleaned Surface

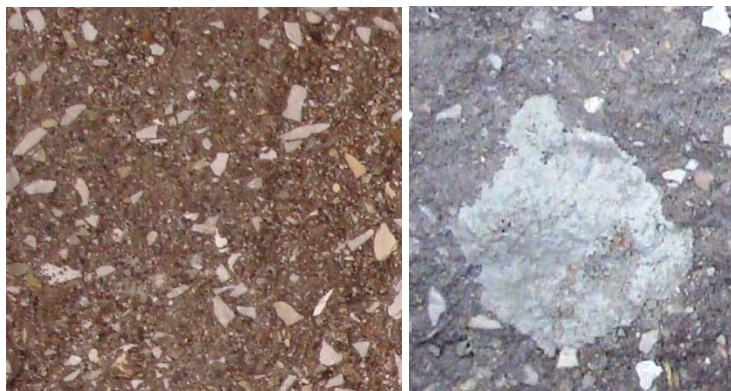


Sure Klean®
Burnished Custom
Masonry Cleaner
(1:2)

Sure Klean®
Burnished Custom
Masonry Cleaner
(1:3)

Photographs – New Construction Cleaning**“FFS Chocolate”; Type S Mortar
3 Day Cleaning**

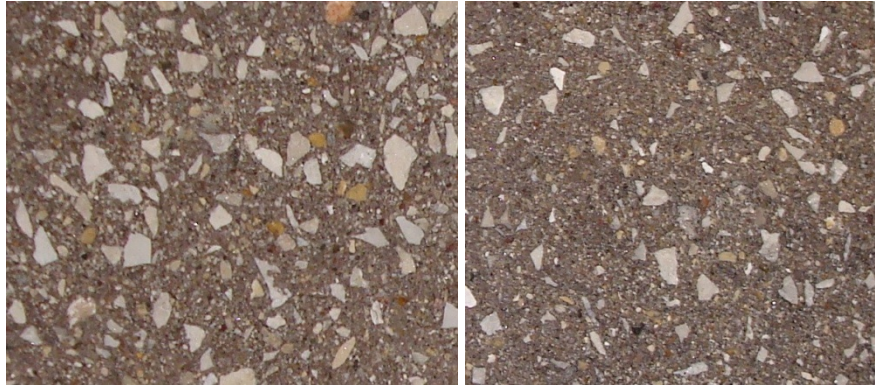
Sure Klean® Custom Masonry Cleaner (1:2)	Sure Klean® Custom Masonry Cleaner (1:4)
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Sure Klean® Custom Masonry Cleaner (1:6)	Uncleaned Surface
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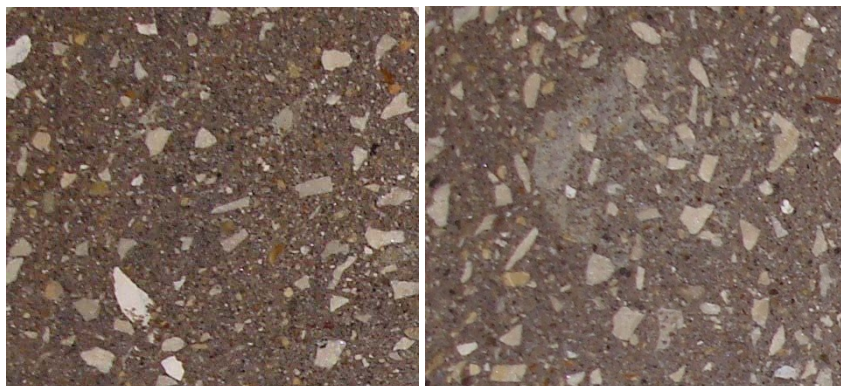
Sure Klean® Burnished Custom Masonry Cleaner (1:2)	Sure Klean® Burnished Custom Masonry Cleaner (1:3)
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Photographs – New Construction Cleaning**“FFS Chocolate”; Type S Mortar
7 Day Cleaning**

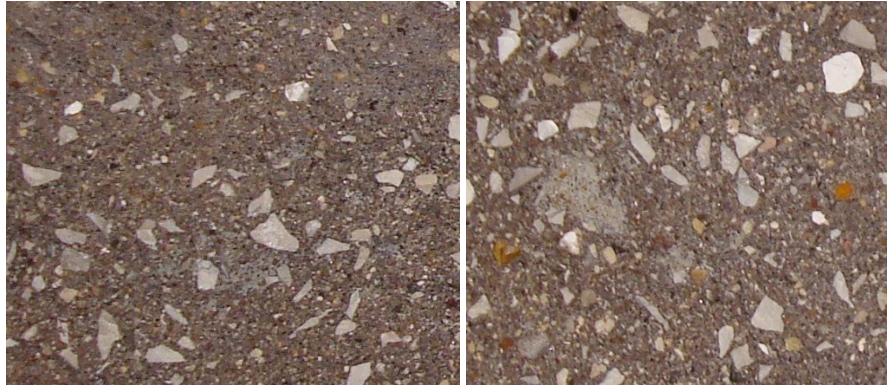
Sure Klean® Custom Masonry Cleaner (1:2)	Sure Klean® Custom Masonry Cleaner (1:4)
--	--



Sure Klean® Custom Masonry Cleaner (1:6)	Uncleaned Surface
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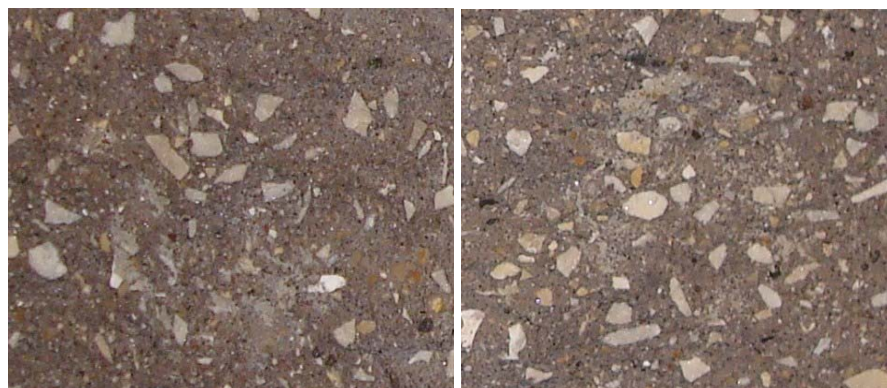
Sure Klean® Burnished Custom Masonry Cleaner (1:2)	Sure Klean® Burnished Custom Masonry Cleaner (1:3)
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Photographs – New Construction Cleaning**“FFS Chocolate”; Type S Mortar
14 Day Cleaning**

Sure Klean® Custom Masonry Cleaner (1:2)	Sure Klean® Custom Masonry Cleaner (1:4)
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Sure Klean® Custom Masonry Cleaner (1:6)	Uncleaned Surface
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Sure Klean® Burnished Custom Masonry Cleaner (1:2)	Sure Klean® Burnished Custom Masonry Cleaner (1:3)
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Photographs – Color Uniformity**“White” Smooth Face CMU; Color Uniformity**

Sure Klean® Custom Masonry Cleaner (1:2)	Sure Klean® Custom Masonry Cleaner (1:4)	Sure Klean® Custom Masonry Cleaner (1:6)
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Sure Klean® Burnished Custom Masonry Cleaner (1:2)	Uncleaned Surface	Sure Klean® Burnished Custom Masonry Cleaner (1:3)
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Photographs – Color Uniformity**“FFS White” Full-face Split CMU; Color Uniformity**

Sure Klean® Custom Masonry Cleaner (1:2)	Sure Klean® Custom Masonry Cleaner (1:4)	Sure Klean® Custom Masonry Cleaner (1:6)
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Sure Klean® Burnished Custom Masonry Cleaner (1:2)	Uncleaned Surface	Sure Klean® Burnished Custom Masonry Cleaner (1:3)
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Conclusions – New Construction Cleaning

Based on the test data, all of the submitted CMU's were efficiently cleaned with Sure Klean® Custom Masonry Cleaner and Sure Klean® Burnished Custom Masonry Cleaner. Both of the cleaners left the masonry clean and uniform. Sure Klean® Burnished Custom Masonry Cleaner provided better color uniformity than Sure Klean® Custom Masonry Cleaner on all but the "White" smooth face CMU.

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

Recommendations – New Construction Cleaning

Recommendations for cleaning for each type of CMU submitted by County Materials, Waukesha, WI are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar while providing the best match to the through-body color of the CMU's.

Sample	New Construction Cleaning (Type S mortar, 14 day cleaning)
"Chocolate" "LW" "WR Natural" "FFS Natural" "FFS Chocolate" "FFS White"	Sure Klean® Burnished Custom Masonry Cleaner (1:3)
"White"	Sure Klean® Custom Masonry Cleaner (1:6) or Sure Klean® Burnished Custom Masonry Cleaner (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.

Protective Water Repellents

The testing described below evaluates the suitability of water repellent treatments.

The surface treatments evaluated were selected for their suitability for application based on the following selection criteria:

1. Weatherproofing properties
 2. Color change
 3. Ease of application
-

Description of Products Evaluated – Protective Water Repellents

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

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

Sample Preparation – Protective Water Repellents

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

Test Methods – Protective Water Repellents

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

The water absorption tube test simulating wind driven rain conditions was performed. This test simulates 60 mile per hour wind driven rain conditions for a period of 20 minutes. See Technical Services TECH Note RILEM Tube Test Procedures.

Test Results – Protective Water Repellents**Water Absorption Tube Test: RILEM II.4, 60 mph, 20 Minutes****Results**

“Chocolate”	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
“White”	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	57 mph
“LW”	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	58 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	58 mph
“WR Natural”	
Untreated Control	57 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	60 mph
“FFS Natural”	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	59 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	58 mph
“FFS Chocolate”	
Untreated Control	50 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	59 mph
“FFS White”	
Untreated Control	<40 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	60 mph
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	57 mph

Photographs – Protective Water Repellents**“Chocolate”; RILEM II.4, 60 mph, 20 Minutes**

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Untreated Control	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II
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Conclusions – Protective Water Repellents

Based upon laboratory evaluations, both of the products tested provided excellent water repellency to the submitted samples. In addition, Sure Klean® Blok-Guard® & Graffiti Control and Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II provided a slight to moderate color enhancement to the submitted samples.

Recommendations – Protective Water Repellents

Recommendations for water repellency for each CMU submitted by County Materials, Waukesha, WI are provided in the chart below. Recommendations are based on the treatment that proved most effective and can provide water repellency on all types submitted.

Sample	Protective Water Repellents
“Chocolate”	
“White”	
“LW”	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control
“WR Natural”	or
“FFS Natural”	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II
“FFS Chocolate”	
“FFS White”	

***NOTE:** Sure Klean® Weather Seal Blok-Guard® & Graffiti Control is manufactured and marketed in compliance with VOC regulations. This product may not be suitable for sale in states and districts with more restrictive regulations.

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

Graffiti Control

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

Description of Products Evaluated – Graffiti Control

Graffiti Control Treatments

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

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

Products Evaluated for Graffiti Removal

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

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

Enviro Klean® SafStrip® 8 – Enviro Klean® SafStrip® 8 is a neutral-pH stripping compound for nearly any hard surface – masonry, concrete, wood or metal. It bears the Enviro Klean® brand because it removes most high-strength paints and clear coats without the methylene chloride or methanol found in traditional solvent paint strippers. Use SafStrip 8 to break the bond of the toughest oil-based “alkyd” paints, acrylics, lacquers and clear sealers. It also removes graffiti media such as spray paint and “magic” marker. SafStrip 8’s gel-like consistency makes it hard to spill and easy to apply. It immediately emulsifies in water.

Graffiti Agents

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

Sample Preparation – Graffiti Control

Sections of the CMU’s were treated with Sure Klean® Weather Seal Blok-Guard® & Graffiti Control and Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II in accordance with the current PROSOCO, Inc. Product Data Sheet application instructions and allowed to cure for at least one day. At the end of the cure period, a visual adverse effects evaluation was made and then the graffiti agents were applied to the substrates.

Spray paint and markers were applied as graffiti agents to all treated surfaces no sooner than one day following application of Sure Klean® Weather Seal Blok-Guard® & Graffiti Control and Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II. Removal of the graffiti agents was attempted 24 hours after application of the graffiti agents, using Defacer Eraser® Graffiti Wipe, Sure Klean® Fast Acting Stripper, and Enviro Klean® SafStrip® 8.

Test Method – Graffiti Control

Chemical cleaners were evaluated using the following procedure:

1. Apply the product to a dry surface, soiled with graffiti.
2. Allow appropriate dwell time:
 - Defacer Eraser® Graffiti Wipe5 minutes
 - Sure Klean® Fast Acting Stripper20 minutes
 - Enviro Klean® SafStrip® 8.....30 minutes
3. Pressure rinse thoroughly until water runs clear. *
4. Allow the surface to dry thoroughly and visually examine to determine effectiveness.

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

Test Results – Graffiti Control

“Chocolate”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	90	60	60	60	68
Defacer Eraser® Graffiti Wipe	40	50	50	50	48
Enviro Klean® SafStrip® 8	85	50	50	50	59
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	95	95	95	95	95
Defacer Eraser® Graffiti Wipe	40	95	95	95	81
Enviro Klean® SafStrip® 8	85	100	95	95	94
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	90	50	50	50	60
Defacer Eraser® Graffiti Wipe	85	10	10	10	29
Enviro Klean® SafStrip® 8	80	20	20	20	94
“White”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	95	50	50	50	61
Defacer Eraser® Graffiti Wipe	40	20	20	20	25
Enviro Klean® SafStrip® 8	75	40	40	40	49
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	85	65	60	60	68
Defacer Eraser® Graffiti Wipe	70	60	60	60	63
Enviro Klean® SafStrip® 8	90	80	60	60	73
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	80	80	85	85	83
Defacer Eraser® Graffiti Wipe	35	70	40	40	46
Enviro Klean® SafStrip® 8	80	90	85	85	85

Test Results – Graffiti Control

“LW”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	90	80	60	40	68
Defacer Eraser® Graffiti Wipe	95	40	70	40	61
Enviro Klean® SafStrip® 8	70	20	60	55	51
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	65	80	80	80	76
Defacer Eraser® Graffiti Wipe	70	50	50	50	55
SafStrip® 8	75	60	60	60	64
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	60	90	50	75	69
Defacer Eraser® Graffiti Wipe	55	85	50	65	64
SafStrip® 8	55	50	50	40	49
“WR Natural”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	90	60	60	60	68
Defacer Eraser® Graffiti Wipe	20	10	10	10	13
Enviro Klean® SafStrip® 8	65	50	50	50	54
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	90	85	40	70	72
Defacer Eraser® Graffiti Wipe	65	50	40	40	49
Enviro Klean® SafStrip® 8	90	55	40	50	59
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	85	80	40	50	64
Defacer Eraser® Graffiti Wipe	80	75	40	40	59
Enviro Klean® SafStrip® 8	85	70	45	40	60

Test Results – Graffiti Control

“FFS Natural”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	80	80	40	20	55
Defacer Eraser® Graffiti Wipe	10	20	40	20	22
Enviro Klean® SafStrip® 8	40	40	30	20	32
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	75	80	80	80	79
Defacer Eraser® Graffiti Wipe	70	20	20	20	33
Enviro Klean® SafStrip® 8	75	65	70	70	70
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	75	80	90	70	79
Defacer Eraser® Graffiti Wipe	55	90	70	70	71
Enviro Klean® SafStrip® 8	65	90	90	65	78
“FFS Chocolate”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	90	85	50	80	77
Defacer Eraser® Graffiti Wipe	10	90	50	80	58
Enviro Klean® SafStrip® 8	80	50	50	50	58
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	75	95	100	95	91
Defacer Eraser® Graffiti Wipe	65	100	100	95	90
Enviro Klean® SafStrip® 8	70	90	80	85	81
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	90	100	65	85	85
Defacer Eraser® Graffiti Wipe	10	40	20	20	23
Enviro Klean® SafStrip® 8	65	65	50	50	58
“FFS White”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	95	80	70	70	79
Defacer Eraser® Graffiti Wipe	20	50	75	75	55
Enviro Klean® SafStrip® 8	85	70	70	65	73
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	85	100	100	100	96
Defacer Eraser® Graffiti Wipe	85	95	95	95	93
Enviro Klean® SafStrip® 8	90	85	90	90	89
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Sure Klean® Fast Acting Stripper	87	95	95	50	82
Defacer Eraser® Graffiti Wipe	65	90	60	80	79
Enviro Klean® SafStrip® 8	70	60	60	50	60

Photographs – Graffiti Control**“Chocolate” Smooth Face CMU; Before Graffiti Removal**

Untreated Control

“Chocolate” Smooth Face CMU; After Graffiti RemovalEnviro Klean®
SafStrip® 8Sure Klean® Fast Acting
StripperDefacer Eraser®
Graffiti Wipe

Untreated Control

Enviro
Klean®
SafStrip® 8Sure Klean®
Fast Acting
StripperDefacer
Eraser®
Graffiti WipeSure Klean® Weather Seal
Blok-Guard® & Graffiti ControlEnviro
Klean®
SafStrip® 8Sure Klean®
Fast Acting
StripperDefacer
Eraser®
Graffiti WipeSure Klean® Weather Seal
Blok-Guard® & Graffiti Control II

Photographs – Graffiti Control**“FFS White” Full-face Split CMU; Before Graffiti Removal**

Untreated Control

“FFS White” Full-face Split CMU; After Graffiti RemovalEnviro Klean®
SafStrip® 8

Sure Klean® Fast Acting Stripper

Defacer Eraser®
Graffiti Wipe

Untreated Control

Enviro
Klean®
SafStrip® 8Sure
Klean®
Fast Acting
StripperDefacer
Eraser®
Graffiti
WipeSure Klean® Weather Seal
Blok-Guard® & Graffiti ControlEnviro
Klean®
SafStrip® 8Sure Klean®
Fast Acting
StripperDefacer
Eraser®
Graffiti
WipeSure Klean® Weather Seal
Blok-Guard® & Graffiti Control II

Conclusions – Graffiti Control

Based upon laboratory evaluations, graffiti removal was improved when the submitted samples were treated with Sure Klean® Weather Seal Blok-Guard® & Graffiti Control and Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II prior to graffiti application. Both graffiti repellents were effective in preventing the staining penetration of the red enamel spray paint and permanent markers.

Recommendations – Graffiti Control

Recommendations for graffiti control treatment for each CMU submitted by County Materials Corporation, Waukesha, WI are provided in the chart below. Recommendations are based on the treatment that proved most effective for providing graffiti repellency and the product that was most effective at removing the graffiti on all types submitted.

Sample	Graffiti Repellents	Graffiti Removers
“Chocolate” “FFS Chocolate” “FFS White”	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Sure Klean® Fast Acting Stripper or Defacer Eraser® Graffiti Wipe or Enviro Klean® SafStrip 8®
“White” “FFS Natural”	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Sure Klean® Fast Acting Stripper or Enviro Klean® SafStrip 8®
“LW” “WR Natural”	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Sure Klean® Fast Acting Stripper

***NOTE:** Sure Klean® Weather Seal Blok-Guard® & Graffiti Control is manufactured and marketed in compliance with VOC regulations. This product may not be suitable for sale in states and districts with more restrictive regulations

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.



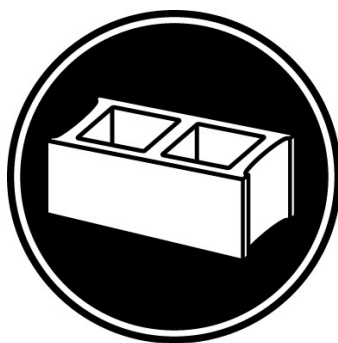
Alia Bober
Project Testing Laboratory Technician



PALLET TAG PROGRAM

Laboratory Report

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