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Attachments

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

Submitted Information

For: Michael Trotta
cc: John Bourne

Subject: Tri-County Block & Brick
Swanton, OH

Date: November 13, 2006

Project: 0610-11 PTP

Samples Submitted: 3 types of integrally colored split-face CMUs

Sample Type	Name	Color	Integral Water Repellent	Size
Split-face CMU	"Dark Buff"	Buff	Dry-Block®	15 ½" x 7 ¾" x 2"
Split-face CMU	"Colorado Red"	Red	Dry-Block®	15 ½" x 7 ¾" x 2"
Split-face CMU	"Brown"	Brown	Dry-Block®	15 ½" x 7 ¾" x 2"

Submitted by: Steve Slawinski

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

Three types of integrally colored split-face CMUs, 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 suitable for CMUs was also evaluated.

New Construction Cleaning – Sure Klean® Custom Masonry Cleaner was 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 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.

Protective Water Repellents – Sure Klean® Custom Masonry Sealer and Sure Klean® Weather Seal Siloxane WB Concentrate were evaluated for their ability to provide water repellency to the submitted samples.

Products Evaluated**New Construction Cleaning Products Evaluated**

Sample	Product	Dilution
All Submitted CMUs	Sure Klean® Custom Masonry Cleaner	1:2, 1:4, 1:6

Protective Water Repellent Products Evaluated

Sample	Product	Dilution
All Submitted CMUs	Sure Klean® Custom Masonry Sealer	Concentrate
	Sure Klean® Weather Seal Siloxane WB Concentrate	1:9

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 CMUs.

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.

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 CMUs.

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
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)**

“Dark Buff” Split-face CMU				
Product	Dilution	3 day	7 day	14 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
“Colorado Red” Split-face CMU				
Product	Dilution	3 day	7 day	14 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
“Brown” Split-face CMU				
Product	Dilution	3 day	7 day	14 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%

Test Results – Color Uniformity

Substrate: Split-face CMU		Pigment Color: “Dark Buff”		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Sure Klean® Custom Masonry Cleaner	1:2	4	1	
Sure Klean® Custom Masonry Cleaner	1:4	3	3	
Sure Klean® Custom Masonry Cleaner	1:6	2	3	
Substrate: Split-face CMU		Pigment Color: “Colorado Red”		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Sure Klean® Custom Masonry Cleaner	1:2	4	2	
Sure Klean® Custom Masonry Cleaner	1:4	3	3	
Sure Klean® Custom Masonry Cleaner	1:6	2	4	
Substrate: Split-face CMU		Pigment Color: “Brown”		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Sure Klean® Custom Masonry Cleaner	1:2	4	3	
Sure Klean® Custom Masonry Cleaner	1:4	3	4	
Sure Klean® Custom Masonry Cleaner	1:6	2	4	

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

“Colorado Red” Split-face CMU; 3 Day Cleaning

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

**Sure Klean® Custom
Masonry Cleaner (1:4)**



**Sure Klean® Custom
Masonry Cleaner (1:6)**

**Untreated
Control**

“Colorado Red” Split-face CMU; 7 Day Cleaning

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

**Sure Klean® Custom
Masonry Cleaner (1:4)**



**Sure Klean® Custom
Masonry Cleaner (1:6)**

**Untreated
Control**

Photographs – New Construction Cleaning

“Colorado Red” Split-face CMU; 14 Day Cleaning

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

**Sure Klean® Custom
Masonry Cleaner (1:4)**



**Sure Klean® Custom
Masonry Cleaner (1:6)**

**Untreated
Control**

Photographs – Color Uniformity

“Dark Buff” Split-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)**

Through-body

Conclusions – New Construction Cleaning

Based on the test data, all of the submitted CMUs were efficiently cleaned with Sure Klean® Custom Masonry Cleaner.

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 Tri-County Block & Brick, Swanton, OH 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 CMUs.

Sample	New Construction Cleaning (Type S mortar, 14 day cleaning)
"Brown" Split-Face CMU	Sure Klean® Custom Masonry Cleaner (1:2) OR (1:4) OR (1:6)
"Colorado Red" Split-Face CMU and "Dark Buff" Split-Face CMU	Sure Klean® Custom Masonry Cleaner (1:4) OR (1:6)

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® Custom Masonry Sealer – A clear, solvent-based silicone elastomer formulated to weatherproof custom masonry units, cast stone, architectural concrete block, pre-cast concrete, wood and porous masonry. Custom Masonry Sealer penetrates and fills pores to prevent water penetration through exterior walls exposed to normal weathering.

Sure Klean® Weather Seal Siloxane WB Concentrate – A self-emulsifying water repellent concentrate designed for dilution with fresh water at the job site. This solvent-free blend of silanes and oligomeric alkoxysiloxanes mixes easily with water to produce a penetrating water repellent ideal for application to dense or porous masonry surfaces.

Sample Preparation – Protective Water Repellents

The submitted samples were scored 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

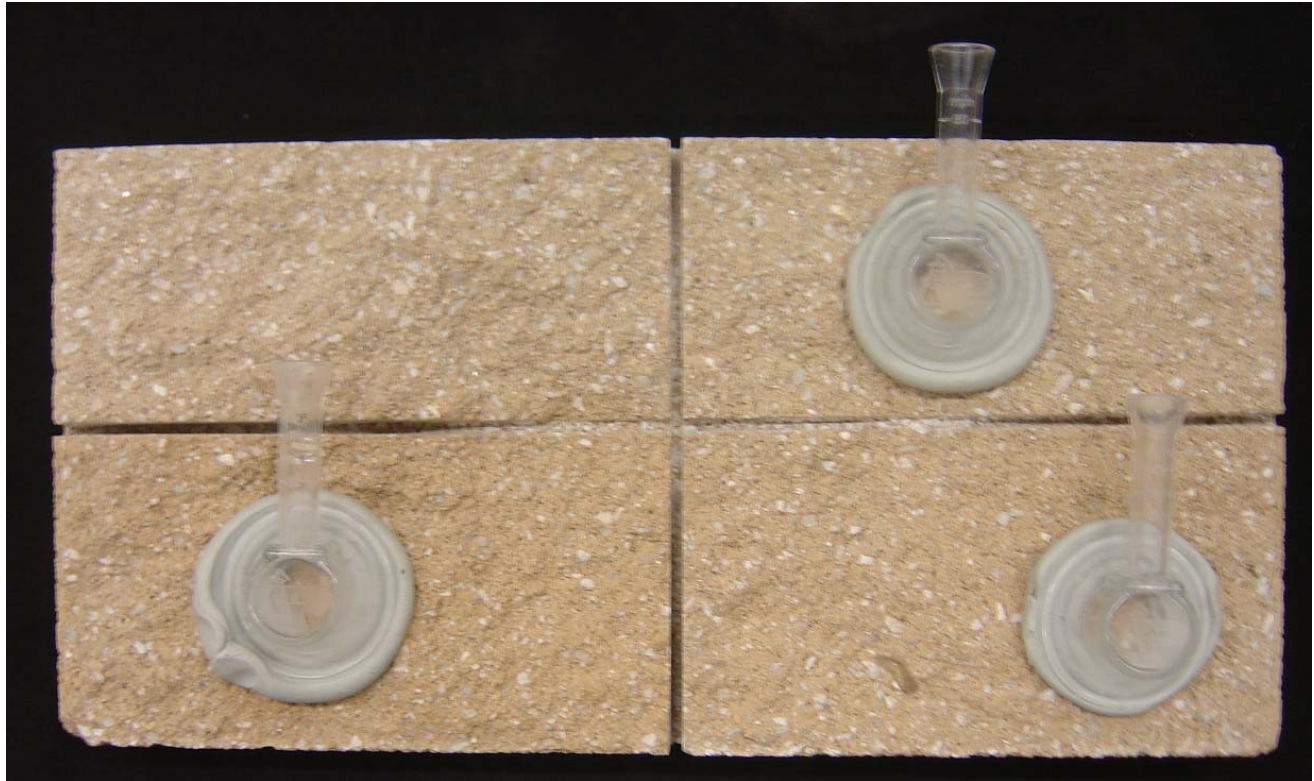
		<i>Results</i>
“Dark Buff” Split-face CMU		
Untreated Control		<40 mph
Sure Klean® Custom Masonry Sealer		59 mph
Sure Klean® Weather Seal Siloxane WB (1:9)		59 mph
“Colorado Red” Split-face CMU		
Untreated Control		<40 mph
Sure Klean® Custom Masonry Sealer		60 mph
Sure Klean® Weather Seal Siloxane WB (1:9)		58 mph
“Brown” Split-face CMU		
Untreated Control		<40 mph
Sure Klean® Custom Masonry Sealer		57 mph
Sure Klean® Weather Seal Siloxane WB (1:9)		60 mph

Photographs – Protective Water Repellents

“Dark Buff” Split-face CMU; RILEM II.4, 60 mph, 20 Minutes

**Untreated
Control**

**Untreated
Control**



**Sure Klean® Custom
Masonry Sealer**

**Sure Klean® Weather Seal
Siloxane WB Concentrate
(1:9)**

Conclusions – Protective Water Repellents

Based upon laboratory evaluations, both of the products tested provided excellent water repellency to each of the submitted samples. In addition, Sure Klean® Custom Masonry provided a slight to moderate color enhancement to the submitted samples. Sure Klean® Weather Seal Siloxane WB Concentrate diluted with nine parts water did not alter the appearance of the samples in any way.

Recommendations – Protective Water Repellents

Recommendations for water repellency for each type of CMU submitted by Tri-County Block & Brick, Swanton, OH 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
All Submitted CMUs	*Sure Klean® Custom Masonry Sealer OR Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)

***NOTE:** Sure Klean® Custom Masonry Sealer is manufactured and marketed in compliance with USEPA AIM VOC regulations (40 CFR 59.403). This product may not be suitable for sale in states and districts with more restrictive AIM VOC 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.

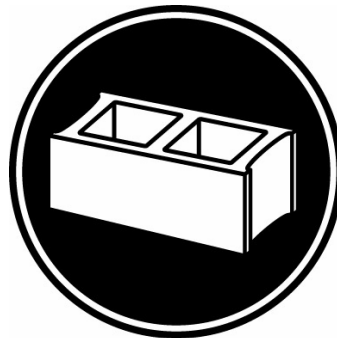


John Lancaster
Project Testing Laboratory Technician



PALLET TAG PROGRAM
Laboratory Report

Tri-County Block & Brick
1628 US 20-A
Swanton, OH 43558
CMU



Project No. 0610-11 PTP

Prepared For:
PROSOCO
SINCE 1939

Prepared By:
AMT Laboratories
November 2006

Submitted Information

For: Michael Trotta
cc: John Bourne

Subject: Tri-County Block & Brick
Swanton, OH

Date: November 13, 2006

Project: 0610-11 PTP

Samples Submitted: 3 types of concrete brick

Sample	Name	Color	Integral Water Repellent	Size
Concrete Brick	"Promenade"	Red w/ Brown Spray	Acme Shield	15 ½" x 3 ¾" x 1 ¾"
Concrete Brick	"Autumn"	Orange w/ Brown Spray	Acme Shield	15 ½" x 3 ¾" x 1 ¾"
Concrete Brick	"San Marco"	Brown w/ Orange Spray	Acme Shield	15 ½" x 3 ¾" x 1 ¾"

Submitted by: Steve Slawinski

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

Three types of concrete brick, all with large, small and fine aggregate were submitted for testing to AMT Laboratories by PROSOCO, Inc. to determine the optimal concentration of cleaner for complete removal of mortar and related new construction soiling which also leaves the external surface looking most like the uncleaned surface of the concrete brick. The effectiveness of protective water repellents suitable for concrete brick was also evaluated.

New Construction Cleaning – Sure Klean® Custom Masonry Cleaner and Sure Klean® Concrete Brick 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 uncleaned surface of the concrete brick.

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 alternation/removal of each cleaned surface with the uncleaned surface of the submitted concrete brick.

Aggregate Exposure is the visual examination comparing aggregate exposure of the uncleaned surface of the concrete brick to surfaces cleaned with the selected product(s) at given dilutions.

Surface Pigment Alteration/Removal is the visual examination comparing the surface pigmentation of the uncleaned surface of the concrete brick to surfaces cleaned with the selected product(s) at given dilutions.

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

- | | |
|---|--|
| 0 – Worst match to uncleaned surface | 3 – Good match to uncleaned surface |
| 1 – Poor match to uncleaned surface | 4 – Best match to uncleaned surface |
| 2 – Fair match to uncleaned surface | |

Protective Water Repellents – Sure Klean® Custom Masonry Sealer and Sure Klean® Weather Seal Siloxane WB Concentrate were evaluated for their ability to provide water repellency to the submitted samples.

Products Evaluated**New Construction Cleaning Products Evaluated**

Sample	Product	Dilution
All Submitted Concrete Brick	Sure Klean® Concrete Brick Cleaner	(1:2), (1:3)
	Sure Klean® Custom Masonry Cleaner	(1:6)

Protective Water Repellent Products Evaluated

Sample	Product	Dilution
All Submitted Concrete Brick	Sure Klean® Custom Masonry Sealer	Concentrate
	Sure Klean® Weather Seal Siloxane WB Concentrate	(1:9)

New Construction Cleaning

These cleaning trials were conducted to determine the optimal concentration of cleaner to most efficiently remove Type S mortar from the submitted samples while providing the best color uniformity when compared to the uncleaned surface of the submitted concrete brick.

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® Concrete Brick Cleaner – Removes common construction and atmospheric staining from concrete brick 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. Concrete Brick 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 sample's surface 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 provide the best color uniformity when compared to the uncleaned surface of the submitted concrete brick.

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 Cleaner3 minutes
 - Sure Klean® Concrete Brick Cleaner 3-5 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. Visually compare the color of the cleaned surfaces of the concrete brick to an uncleaned surface 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)**

“Promenade” Concrete Brick				
Product	Dilution	3 day	7 day	14 day
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
“Autumn” Concrete Brick				
Product	Dilution	3 day	7 day	14 day
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
“San Marco” Concrete Brick				
Product	Dilution	3 day	7 day	14 day
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%

Test Results – Color Uniformity

Substrate: Concrete Brick		Pigment Color: "Promenade"		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Sure Klean® Concrete Brick Cleaner	1:2	2	3	
Sure Klean® Concrete Brick Cleaner	1:3	3	4	
Sure Klean® Custom Masonry Cleaner	1:6	0	4	
Substrate: Concrete Brick		Pigment Color: "Autumn"		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Sure Klean® Concrete Brick Cleaner	1:2	3	3	
Sure Klean® Concrete Brick Cleaner	1:3	3	4	
Sure Klean® Custom Masonry Cleaner	1:6	2	4	
Substrate: Concrete Brick		Pigment Color: "San Marco"		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Sure Klean® Concrete Brick Cleaner	1:2	3	3	
Sure Klean® Concrete Brick Cleaner	1:3	3	4	
Sure Klean® Custom Masonry Cleaner	1:6	2	4	

Scale used for reporting results of both categories:

- 0 – **Worst** match to uncleaned surface
- 1 – **Poor** match to uncleaned surface
- 2 – **Fair** match to uncleaned surface
- 3 – **Good** match to uncleaned surface
- 4 – **Best** match to uncleaned surface

Photographs – New Construction Cleaning

"Autumn" Concrete Brick; 3 Day Cleaning



Sure Klean®
Concrete Brick
Cleaner (1:2)

Sure Klean® Concrete
Brick Cleaner (1:3)

Sure Klean® Custom
Masonry Cleaner (1:6)

Untreated Control

Photographs – New Construction Cleaning

“Autumn” Concrete Brick; 14 Day Cleaning



**Sure Klean®
Concrete Brick
Cleaner (1:2)**

**Sure Klean® Concrete
Brick Cleaner (1:3)**

**Sure Klean® Custom
Masonry Cleaner (1:6)**

Untreated Control

“Autumn” Concrete Brick; 21 Day Cleaning



**Sure Klean®
Concrete Brick
Cleaner (1:2)**

**Sure Klean® Concrete
Brick Cleaner (1:3)**

**Sure Klean® Custom
Masonry Cleaner (1:6)**

Untreated Control

Photographs – Color Uniformity

“San Marco” Concrete Brick; Color Uniformity



**Sure Klean®
Concrete Brick
Cleaner (1:2)**

**Sure Klean® Concrete
Brick Cleaner (1:3)**

**Sure Klean® Custom
Masonry Cleaner (1:6)**

Untreated Control

Conclusions – New Construction Cleaning

Based on the test results, both of the PROSOCO, Inc. products tested performed well in removing excess Type S mortar from the submitted samples even after allowing the mortar to remain on the surface of the samples for 14 days.

Sure Klean® Custom Masonry Cleaner diluted with six parts water removed moderate amounts of pigmented matrix from the surface of the submitted concrete brick, exposing small and fine aggregate. Both dilutions of Sure Klean® Concrete Brick Cleaner removed slight amounts of pigmented matrix, exposing small and fine aggregate.

Recommendations – New Construction Cleaning

Recommendations for cleaning for each type of concrete brick submitted by Tri-County Block & Brick, Swanton, OH 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 uncleaned surface of the concrete brick.

Sample	New Construction Cleaning (Type S mortar, 14 day cleaning)
All Submitted Concrete Brick	Sure Klean® Concrete Brick 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.

NOTE: Sure Klean® Custom Masonry Cleaner can be used on integrally colored concrete brick. Use Sure Klean® Concrete Brick Cleaner for concrete brick with surface applied (flash-spray) color.

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® Custom Masonry Sealer – A clear, solvent-based silicone elastomer formulated to weatherproof custom masonry units, cast stone, architectural concrete block, pre-cast concrete, wood and porous masonry. Custom Masonry Sealer penetrates and fills pores to prevent water penetration through exterior walls exposed to normal weathering.

Sure Klean® Weather Seal Siloxane WB Concentrate – A self-emulsifying water repellent concentrate designed for dilution with fresh water at the job site. This solvent-free blend of silanes and oligomeric alkoxy siloxanes mixes easily with water to produce a penetrating water repellent ideal for application to dense or porous masonry surfaces.

Sample Preparation – Protective Water Repellents

The submitted samples were scored and allowed to dry for 24 hours prior to treatment. Both treatments 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

“Promenade” Concrete Brick	
Untreated Control	58 mph
Sure Klean® Custom Masonry Sealer	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph
“Autumn” Concrete Brick	
Untreated Control	55 mph
Sure Klean® Custom Masonry Sealer	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph
“San Marco” Concrete Brick	
Untreated Control	<40 mph
Sure Klean® Custom Masonry Sealer	60 mph
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	60 mph

Photographs – Protective Water Repellents

“Promenade” Concrete Brick; RILEM II.4, 60 mph, 20 Minutes



Sure Klean® Custom Masonry Sealer

Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)

Untreated Control

Conclusions – Protective Water Repellents

Based upon laboratory evaluations, all of the PROSOCO, Inc. products tested provided excellent water repellency to each of the submitted samples. In addition, Sure Klean® Custom Masonry Sealer provided a slight color enhancement to the submitted samples. Sure Klean® Weather Seal Siloxane WB Concentrate diluted with nine parts water did not provide color enhancement to the samples.

Recommendations – Protective Water Repellents

Recommendations for water repellency for each type of concrete brick submitted by Tri-County Block & Brick, Swanton, OH 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
All Submitted Concrete Brick	*Sure Klean® Custom Masonry Sealer OR Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)

***NOTE:** Sure Klean® Custom Masonry Sealer is manufactured and marketed in compliance with USEPA AIM VOC regulations (40 CFR 59.403). This product may not be suitable for sale in states and districts with more restrictive AIM VOC 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.

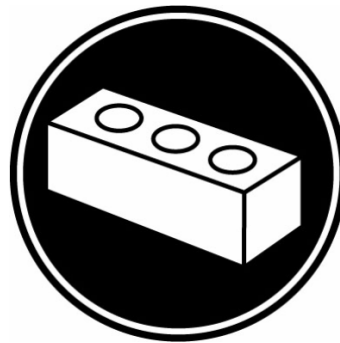


John Lancaster
Project Testing Laboratory Technician



PALLET TAG PROGRAM
Laboratory Report

Tri-County Block & Brick
1628 US 20-A
Swanton, OH 43558
Concrete Brick



Project No. 0610-11 PTP

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PROSOCO
SINCE 1939

Prepared By:
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