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cc: Joe Talecki
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SUBJECT: Claytons Masonry Centers
Freehold, NJ

DATE: September 13, 2002

PROJECT: 0206-21 PTP

SAMPLES SUBMITTED: Seven (7) types of red clay bricks

Sample/Color	Size
(4) #9 Glen-Gery 900-S Red Matt Modular Cored	7½" x 3¾" x 2½"
(4) #10 Glen-Gery 900-S Red Matt Modular Solid	
(4) #11 Glen-Gery 200-S Flashed/Full Range Modular Cored	
(4) #12 Glen-Gery 200-S Flashed/Full Range Modular Solids	
(4) #13 Glen-Gery 51DD Modular Solid	
(4) #14 Glen-Gery 52DD Modular Solid	
(4) #15 Glen-Gery 53DD Modular Solid	

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PURPOSE OF TESTING:

Seven different types of red clay bricks were submitted to PROSOCO, Inc.'s Testing Laboratory with a request to determine if application of the products evaluated will produce any surface alteration during new construction cleaning operations. Additionally, the effectiveness of water repellent treatments and graffiti control products suitable for clay brick masonry will also be evaluated.

A. New Construction Cleaning – Sure Klean® Custom Masonry Cleaner, and Sure Klean® Burnished Custom Masonry Cleaner* were evaluated for removal of laboratory applied mortar.

To simulate new construction soiling, all bricks 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 brick and filled with a wet mixture of Ash Grove® Type N cementitious mortar. The wet mortar-filled cylinder was allowed to remain in contact with the brick for 10 minutes before removal.

Soiled bricks were allowed to dry before test cleaning.

Heavy deposits of mortar were removed with dry scraping after 24 hours. Prepared cleaning solutions were then evaluated for their effectiveness in removing residual Ash Grove® Type N mortar after 7, 14 and 21 days* of curing.

*Note: Due to limited substrate, Sure Klean® Burnished Custom Masonry Cleaner was only evaluated at 21 days of curing.

B. Limiting Surface Alterations – Sure Klean® Custom Masonry Cleaner, and Sure Klean® Burnished Custom Masonry Cleaner were tested at various dilutions to determine if a cleaning program implemented to remove excess mortar and related new construction soiling would otherwise alter the appearance of cleaned surfaces. Surface Alteration was evaluated visually based upon perceived discoloration or erosion/etching of the masonry unit.

Surface Finish Removal is the visual examination of the brick comparing the surface finish of the untreated control surface to the surface finish cleaned with selected product(s) at given dilutions.

Substrate Deterioration is the visual examination of the brick comparing the surface of the untreated control to surfaces cleaned with selected product(s) at given dilutions looking for any potential erosion/digestion of the brick.

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

Staining is the visual examination for changes that are the result of a chemical reaction that leaves a staining precipitate.

C. Water Repellent Evaluation - Sure Klean® Weather Seal Siloxane WB Concentrate was evaluated on the submitted samples for their ability to provide water repellency.

D. Graffiti Control Evaluation – Defacer Eraser® Graffiti Barrier S was evaluated for its ability to control graffiti on the submitted samples. Defacer Eraser® Graffiti Release and Defacer Eraser® Graffiti Wipe were evaluated for their ability to remove graffiti from the submitted samples.

PRODUCTS EVALUATED FOR CLEANING AND LIMITING SURFACE ALTERATIONS

SAMPLE	TREATMENT	DILUTION
All submitted red clay bricks	Sure Klean® Custom Masonry Cleaner	1:2, 1:4, 1:6
	Sure Klean® Burnished Custom Masonry Cleaner	1:2, 1:3

WATER REPELLENT PRODUCTS EVALUATED

SAMPLE	TREATMENT	DILUTION
All submitted red clay bricks	Sure Klean® Weather Seal Siloxane WB Concentrate	1:9, 1:14

GRAFFITI CONTROL PRODUCTS EVALUATED

SAMPLE	PRODUCT
All submitted red clay bricks	Defacer Eraser® Graffiti Barrier S

GRAFFITI REMOVAL PRODUCTS EVALUATED

SAMPLE	PRODUCT
All submitted red clay bricks	Defacer Eraser® Graffiti Release
	Defacer Eraser® Graffiti Wipe

SECTION A – NEW CONSTRUCTION CLEANING

DESCRIPTION OF PRODUCTS EVALUATED – New Construction Cleaning

These cleaning trials were conducted to determine the optimal cleaning/cure time combination to most efficiently remove Ash Grove® Type N mortar from the submitted fired clay bricks.

Ash Grove® Type N cementitious mortar was prepared in compliance with the manufacturers instructions, applied to the brick surface and allowed to cure for 7, 14 and 21 days. Mortar removal was accomplished using chemical assistance and a high-pressure water rinse with pressure rinsing equipment. The removal of Ash Grove® Type N cementitious masonry cement mortar was visually evaluated after 7, 14 and 21 days of curing.

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 - A general-purpose, non-etching acidic cleaner that removes rust, mud, oil, atmospheric dirt, mortar smears and other stains without altering the surface texture. Burnished Custom Masonry Cleaner adds depth to colors, brightens white matrices and exposed aggregate.

TEST METHOD – New Construction Cleaning

Dilution ratios refer to mixtures of concentrated cleaner : fresh water. Chemical cleaners were evaluated using the following procedure:

1. Prewet the surface with water.
2. Apply the cleaner.
3. Allow the appropriate dwell time, as specified.
   - Custom Masonry Cleaner ..... 3 minutes
   - Burnished Custom Masonry Cleaner ..... 5 minutes
4. Pressure rinse thoroughly. *

* Pressure rinsing was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.

Test Results - New Construction Cleaning

% Removal

#9 Glen-Gery 900-S Red Matt Modular Cored

Product	Dilution	7 day	14 day	21 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
	1:4	100%	100%	100%
	1:6	100%	100%	100%
Sure Klean® Burnished Custom Masonry Cleaner	1:2	---	---	100%
	1:3	---	---	99%

#10 Glen-Gery 900-S Red Matt Modular Solid

Product	Dilution	7 day	14 day	21 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
	1:4	100%	100%	100%
	1:6	100%	100%	99%
Sure Klean® Burnished Custom Masonry Cleaner	1:2	---	---	99%
	1:3	---	---	99%

#11 Glen-Gery 200-S Flashed/Full Range Modular Cored

Product	Dilution	7 day	14 day	21 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
	1:4	100%	100%	100%
	1:6	100%	100%	100%
Sure Klean® Burnished Custom Masonry Cleaner	1:2	---	---	100%
	1:3	---	---	100%

#12 Glen-Gery 200-S Flashed/Full Range Modular Solids

Product	Dilution	7 day	14 day	21 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
	1:4	100%	100%	100%
	1:6	100%	100%	100%
Sure Klean® Burnished Custom Masonry Cleaner	1:2	---	---	99%
	1:3	---	---	99%

Test Results – New Construction Cleaning (cont.)

#13 Glen-Gery 51DD Modular Solid

Product	Dilution	7 day	14 day	21 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
	1:4	100%	100%	100%
	1:6	100%	100%	100%
Sure Klean® Burnished Custom Masonry Cleaner	1:2	---	---	100%
	1:3	---	---	100%

#14 Glen-Gery 52DD Modular Solid

Product	Dilution	7 day	14 day	21 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
	1:4	100%	100%	100%
	1:6	100%	100%	100%
Sure Klean® Burnished Custom Masonry Cleaner	1:2	---	---	100%
	1:3	---	---	100%

#15 Glen-Gery 53DD Modular Solid

Product	Dilution	7 day	14 day	21 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
	1:4	100%	100%	100%
	1:6	100%	100%	100%
Sure Klean® Burnished Custom Masonry Cleaner	1:2	---	---	100%
	1:3	---	---	100%

CONCLUSIONS – New Construction Cleaning

Based on the test results, Sure Klean® Custom Masonry Cleaner and Sure Klean® Burnished Custom Masonry Cleaner, in all dilutions tested, performed extremely well in removing excess mortar smears on the submitted red clay bricks. Both Sure Klean® products performed well in removing the mortar soils even after allowing the mortar to remain on the surface of the brick for 21 days under ideal curing conditions.

It is also recommended that the selected cleaners always be used in the lowest possible concentration, typically a 1:6 dilution of Sure Klean® Custom Masonry Cleaner and 1:3 dilution of Sure Klean® Burnished Custom Masonry Cleaner. They should be rinsed with the lowest pressure of water as practical, at least 400 psi, to minimize removal of the decorative finish. Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction.

RECOMMENDED PRODUCTS AND DILUTIONS – NEW CONSTRUCTION CLEANING

Recommendations for cleaning for each type of clay bricks submitted by Claytons Masonry Centers, Freehold, NJ are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar while limiting surface alterations.

Brick Type	New Construction Cleaning (Type N, 21 Days)
#9 Glen-Gery 900-S Red Matt Modular Cored	Sure Klean® Custom Masonry Cleaner (1:6) Sure Klean® Burnished Custom Masonry Cleaner (1:2)
#10 Glen-Gery 900-S Red Matt Modular Solid	Sure Klean® Custom Masonry Cleaner (1:4)
#11 Glen-Gery 200-S Flashed/Full Range Modular Cored	Sure Klean® Custom Masonry Cleaner (1:6) Sure Klean® Burnished Custom Masonry Cleaner (1:3)
#12 Glen-Gery 200-S Flashed/Full Range Modular Solid	Sure Klean® Custom Masonry Cleaner (1:6)
#13 Glen-Gery 51DD Modular Solid	Sure Klean® Custom Masonry Cleaner (1:6) Sure Klean® Burnished Custom Masonry Cleaner (1:3)
#14 Glen-Gery 52DD Modular Solid	Sure Klean® Custom Masonry Cleaner (1:6) Sure Klean® Burnished Custom Masonry Cleaner (1:3)
#15 Glen-Gery 53DD Modular Solid	Sure Klean® Custom Masonry Cleaner (1:6) Sure Klean® Burnished Custom Masonry Cleaner (1:3)

Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction.

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

See product literature for application and product information.

SECTION B – LIMITING SURFACE ALTERATIONS

DESCRIPTION OF PRODUCTS EVALUATED – Limiting Surface Alterations

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 - A general-purpose, non-etching acidic cleaner that removes rust, mud, oil, atmospheric dirt, mortar smears and other stains without altering the surface texture. Burnished Custom Masonry Cleaner adds depth to colors, brightens white matrices and exposed aggregate.

TEST METHOD – Limiting Surface Alterations:

Dilution ratios refer to mixtures of concentrated cleaner : fresh water. Chemical cleaners were evaluated using the following procedure

1. Prewet the surface with water.
2. Apply the cleaner.
3. Allow the appropriate dwell time, as specified.
   Custom Masonry Cleaner .....3 minutes
   Burnished Custom Masonry Cleaner.....5 minutes
4. Pressure rinse thoroughly. *

* Pressure rinsing was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.

TEST RESULTS – Limiting Surface Alterations

Substrate: Red clay brick	**Pigment Color:** #9 Glen-Gery 900-S Red Matt Modular Cored				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Custom Masonry Cleaner	1:2	0	0	0	0
Custom Masonry Cleaner	1:4	0	0	0	0
Custom Masonry Cleaner	1:6	0	0	0	0
Burnished Custom Masonry Cleaner	1:2	0	0	0	1
Burnished Custom Masonry Cleaner	1:3	0	0	0	1
Substrate: Red clay brick	**Pigment Color:** #10 Glen-Gery 900-S Red Matt Modular Solid				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Custom Masonry Cleaner	1:2	0	0	0	0
Custom Masonry Cleaner	1:4	0	0	0	0
Custom Masonry Cleaner	1:6	0	0	0	0
Burnished Custom Masonry Cleaner	1:2	0	0	0	1
Burnished Custom Masonry Cleaner	1:3	0	0	0	1
Substrate: Red clay brick	**Pigment Color:** #11 Glen-Gery 200-S Flashed/Full Range Modular Cored				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Custom Masonry Cleaner	1:2	0	0	0	0
Custom Masonry Cleaner	1:4	0	0	0	0
Custom Masonry Cleaner	1:6	0	0	0	0
Burnished Custom Masonry Cleaner	1:2	0	0	0	0
Burnished Custom Masonry Cleaner	1:3	0	0	0	0
Substrate: Red clay brick	**Pigment Color:** #12 Glen-Gery 200-S Flashed/Full Range Modular Solids				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Custom Masonry Cleaner	1:2	0	0	0	0
Custom Masonry Cleaner	1:4	0	0	0	0
Custom Masonry Cleaner	1:6	0	0	0	0
Burnished Custom Masonry Cleaner	1:2	0	0	0	1
Burnished Custom Masonry Cleaner	1:3	0	0	0	1

Scale used for reporting results of both categories

0 – No change
1 – change – slight
2 – change – moderate
3 – change – heavy
4 – change - excessive

TEST RESULTS – Limiting Surface Alterations (Cont.)

Substrate: Red clay brick	**Pigment Color:** #13 Glen-Gery 51DD Modular Solid				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Custom Masonry Cleaner	1:2	0	0	0	0
Custom Masonry Cleaner	1:4	0	0	0	0
Custom Masonry Cleaner	1:6	0	0	0	0
Burnished Custom Masonry Cleaner	1:2	0	0	0	1
Burnished Custom Masonry Cleaner	1:3	0	0	0	1

Substrate: Red clay brick	**Pigment Color:** #14 Glen –Gery 52DD Modular Solid				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Custom Masonry Cleaner	1:2	0	0	0	0
Custom Masonry Cleaner	1:4	0	0	0	0
Custom Masonry Cleaner	1:6	0	0	0	0
Burnished Custom Masonry Cleaner	1:2	0	0	0	1
Burnished Custom Masonry Cleaner	1:3	0	0	0	0

Substrate: Red clay brick	**Pigment Color:** #15 Glen-Gery 53DD Modular Solid				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Custom Masonry Cleaner	1:2	0	0	0	0
Custom Masonry Cleaner	1:4	0	0	0	0
Custom Masonry Cleaner	1:6	0	0	0	0
Burnished Custom Masonry Cleaner	1:2	0	0	0	0
Burnished Custom Masonry Cleaner	1:3	0	0	0	0

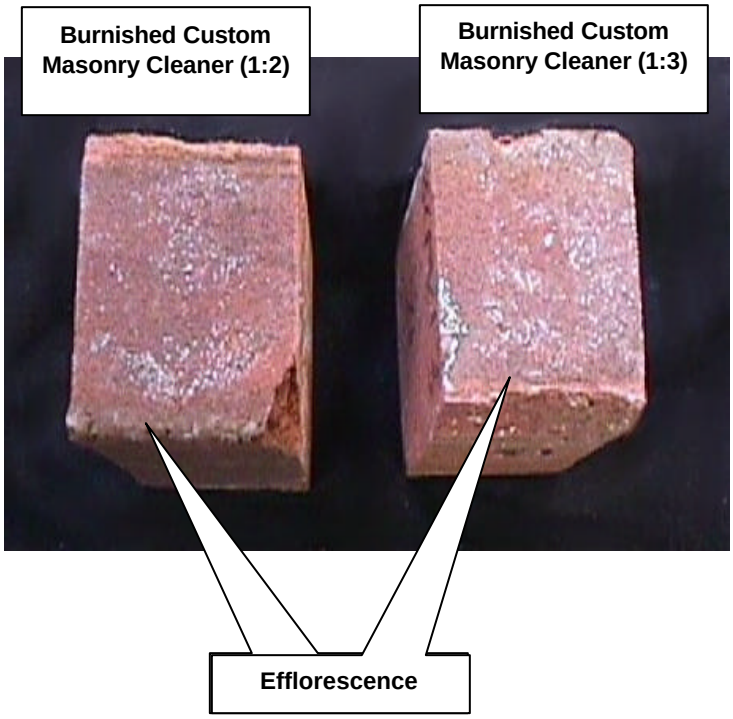
Scale used for reporting results of both categories

0 – No change
1 – change – slight
2 – change – moderate
3 – change – heavy
4 – change - excessive

PHTOTOGRAPHS – Limiting Surface Alterations

#13 Glen-Gery 51DD Modular Solid

AFTER
21 day cleaning



CONCLUSIONS – Limiting Surface Alterations

Test results show that Sure Klean® Custom Masonry Cleaner in all dilutions did not caused any surface alterations on all types of the submitted red clay bricks. Sure Klean® Burnished Custom Masonry Cleaner did have some efflorescence on brick types #9, #10, #12, #13 and #14. It is also recommended that the selected cleaners always be used in the lowest possible concentration, typically a 1:6 dilution of Sure Klean® Custom Masonry Cleaner. They should be rinsed with the lowest pressure of water as practical, at least 400 psi, to minimize removal of the decorative finish. Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction.

RECOMMENDED PRODUCTS AND DILUTIONS – Limiting Surface Alterations

Product recommendations for limiting surface alterations for each type of clay brick submitted by Claytons Masonry Centers, Freehold, NJ are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar while limiting surface alterations.

Brick Type	Limiting Surface Alterations
#9 Glen-Gery 900-S Red Matt Modular Cored	Sure Klean® Custom Masonry Cleaner (1:6)
#10 Glen-Gery 900-S Red Matt Modular Solid	Sure Klean® Custom Masonry Cleaner (1:4)
#11 Glen-Gery 200-S Flashed/Full Range Modular Cored	Sure Klean® Custom Masonry Cleaner (1:6) Sure Klean® Burnished Custom Masonry Cleaner (1:3)
#12 Glen-Gery 200-S Flashed/Full Range Modular Solids	Sure Klean® Custom Masonry Cleaner (1:6)
#13 Glen-Gery 51DD Modular Solid	Sure Klean® Custom Masonry Cleaner (1:6)
#14 Glen-Gery 52DD Modular Solid	Sure Klean® Custom Masonry Cleaner (1:6) Sure Klean® Burnished Custom Masonry Cleaner (1:3)
#15 Glen-Gery 53DD Modular Solid	Sure Klean® Custom Masonry Cleaner (1:6) Sure Klean® Burnished Custom Masonry Cleaner (1:3)

Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction.

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

See product literature for application and product information.

SECTION C - 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

DESCRIPTIONS OF PRODUCTS EVALUATED - Protective Water Repellents:

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 which is ideal for application to either dense or porous masonry surfaces.

SAMPLE PREPARATION - Protective Water Repellents:

The submitted red clay brick were cut, oven dried and allowed to reabsorb atmospheric humidity for 24 hours prior to treatment. The treatment method consisted of two 10-second immersions with a 20-second absorption period between immersions to simulate a wet-on-wet application. All treatments were allowed to cure for at least 3 days prior to testing.

TEST METHODS - Protective Water Repellents:

Water Absorption: ASTM C 67, Immersion

Water absorption was determined by comparing the dry weight of the sample with its weight after immersion in water at 10-minute, 30-minute, 60-minute and 24-hour intervals. See ASTM C 67 for additional information.

Reduced water absorption values – reported as effectiveness – measure the effectiveness of selected treatments in protecting samples from water penetration and water related decay mechanisms. Generally a reduction of approximately 80% is required to provide resistance to water intrusion under normal exposure conditions.

TEST RESULTS – Protective Water Repellents

Water Absorption: ASTM C 67, Immersion

#9 Glen-Gery 900-S Cored	% Absorption	% Effectiveness
Untreated Control	7.68	---
Weather Seal Siloxane WB (1:9)	0.49	94%
Weather Seal Siloxane WB (1:14)	0.49	94%
#10 Glen-Gery 900-S Solid	**% Absorption**	**% Effectiveness**
Untreated Control	8.48	---
Weather Seal Siloxane WB (1:9)	0.41	95%
Weather Seal Siloxane WB (1:14)	0.40	95%
#11 Glen-Gery 200-S Cored	**% Absorption**	**% Effectiveness**
Untreated Control	9.68	---
Weather Seal Siloxane WB (1:9)	0.41	96%
Weather Seal Siloxane WB (1:14)	0.46	95%
#12 Glen-Gery 200-S Solids	**% Absorption**	**% Effectiveness**
Untreated Control	7.07	---
Weather Seal Siloxane WB (1:9)	0.55	92%
Weather Seal Siloxane WB (1:14)	0.71	90%
#13 Glen-Gery 51DD Solid	**% Absorption**	**% Effectiveness**
Untreated Control	3.95	---
Weather Seal Siloxane WB (1:9)	0.35	91%
Weather Seal Siloxane WB (1:14)	0.40	90%
#14 Glen-Gery 52DD Solid	**% Absorption**	**% Effectiveness**
Untreated Control	3.08	---
Weather Seal Siloxane WB (1:9)	0.32	90%
Weather Seal Siloxane WB (1:14)	0.45	86%
#15 Glen-Gery 53DD Solid	**% Absorption**	**% Effectiveness**
Untreated Control	6.32	---
Weather Seal Siloxane WB (1:9)	0.75	88%
Weather Seal Siloxane WB (1:14)	0.57	91%

CONCLUSIONS - Protective Water Repellents:

Based upon laboratory evaluations, Sure Klean® Weather Seal Siloxane WB Concentrate diluted with both nine and fourteen parts fresh water exhibited above average water repellency on all submitted red clay bricks.

RECOMMENDATIONS - Protective Water Repellents:

Recommendations for water repellent treatments for each type of clay bricks submitted by Claytons Masonry Centers, Freehold, NJ are provided in the chart below. Recommendations are based on the treatments that proved most effective by results and can provide water repellency on all types submitted if possible.

Brick Type	Water Repellent
#9 Glen-Gery 900-S Red Matt Modular Cored	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) or (1:14)
#10 Glen-Gery 900-S Red Matt Modular Solid	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) or (1:14)
#11 Glen-Gery 200-S Flashed/Full Range Modular Cored	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) or (1:14)
#12 Glen-Gery 200-S Flashed/Full Range Modular Solids	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) or (1:14)
#13 Glen-Gery 51DD Modular Solid	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) or (1:14)
#14 Glen-Gery 52DD Modular Solid	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) or (1:14)
#15 Glen-Gery 53DD Modular Solid	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) or (1:14)

It must be pointed out that in any installation, the brick are a single component of the masonry facade. The ability of a water repellent treatment to prevent the ingress of water is affected by a variety of other factors. Therefore, on-site testing should be carried out for all installations with the recommended systems to ensure job site workmanship yields equivalent results.

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

SECTION D – GRAFFITI CONTROL

DESCRIPTION OF PRODUCTS EVALUATED

These trials were conducted to determine the optimal graffiti control treatment.

Graffiti Control Treatments

Defacer Eraser® Graffiti Barrier S – A clear, water-based sacrificial coating for control of graffiti on most building surfaces. Easy-to-apply Graffiti Barrier S stops spray paints, crayons and ink from penetrating and staining the underlying surface.

Products Evaluated for Graffiti Removal

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

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 removed a variety of graffiti stains from most smooth masonry, wood and metal surfaces.

Graffiti Agents

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

SAMPLE PREPARATION – Graffiti Control

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

Sections of the concrete samples were treated with one coat of Defacer Eraser® Graffiti Barrier S in accordance with PROSOCO, Inc.'s Product Guide application recommendations and then allowed to cure for at least 3 days. At the end of the three-day 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 at least 3 days following application of Defacer Eraser® Graffiti Barrier S. Removal of the graffiti agents was attempted 24 hours after application of the graffiti agents, using Defacer Eraser® Graffiti Release and Defacer Eraser® Graffiti Wipe.

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:
   - Graffiti Release..... 15 minutes
   - Graffiti Wipe ..... 20 minutes
3. Pressure rinse thoroughly until water runs clear. *
4. Allow the surface to dry thoroughly and visually examine to determine effectiveness.

* Pressure rinsing was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.

TEST RESULTS – Graffiti Control

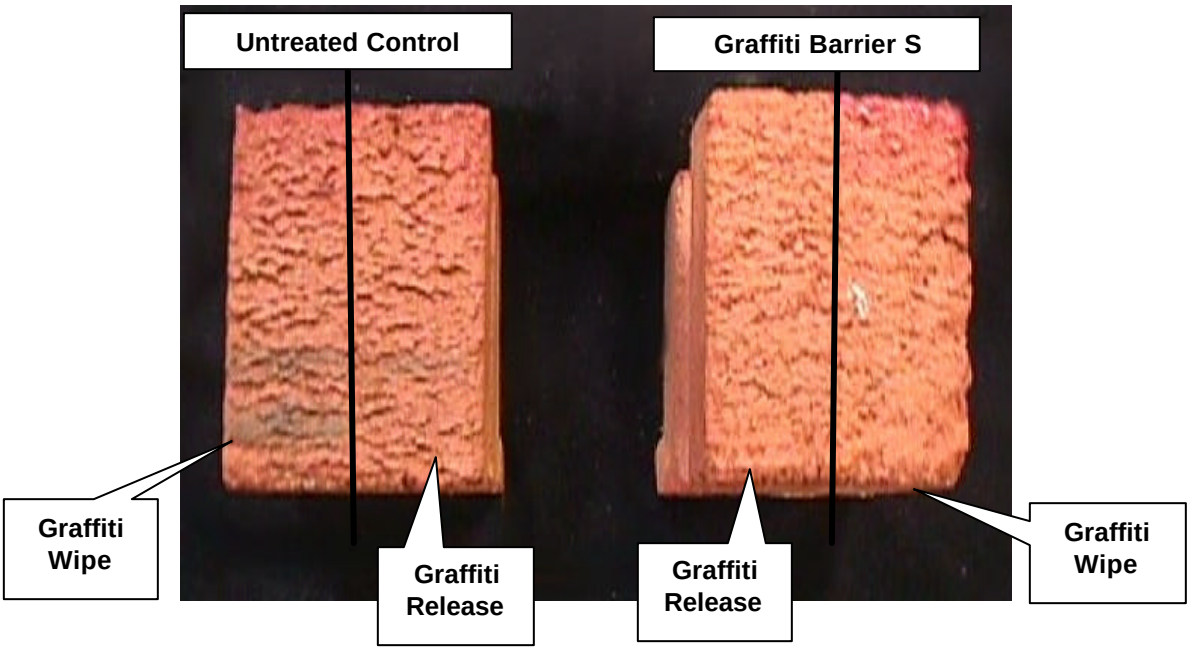
#9					
Untreated Control	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Release	90%	80%	99%	90%	**90%**
Graffiti Wipe	95%	60%	50%	90%	**74%**
Graffiti Barrier S	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Release	95%	100%	100%	100%	**99%**
Graffiti Wipe	100%	100%	100%	100%	**100%**
#10					
Untreated Control	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Release	79%	99%	99%	99%	**94%**
Graffiti Wipe	99%	50%	50%	70%	**67%**
Graffiti Barrier S	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Release	80%	100%	100%	100%	**95%**
Graffiti Wipe	100%	100%	100%	100%	**100%**
#11					
Untreated Control	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Release	80%	50%	99%	99%	**82%**
Graffiti Wipe	100%	40%	40%	80%	**65%**
Graffiti Barrier S	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Release	80%	100%	100%	100%	**95%**
Graffiti Wipe	100%	100%	100%	100%	**100%**

#12					
Untreated Control	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Release	90%	100%	99%	100%	**97%**
Graffiti Wipe	90%	50%	50%	99%	**72%**
Graffiti Barrier S	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Release	95%	100%	100%	100%	**99%**
Graffiti Wipe	99%	100%	100%	100%	**99.7%**
#13					
Untreated Control	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Release	90%	80%	80%	80%	**83%**
Graffiti Wipe	90%	70%	70%	70%	**75%**
Graffiti Barrier S	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Release	90%	100%	100%	100%	**98%**
Graffiti Wipe	100%	100%	100%	100%	**100%**
#14					
Untreated Control	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Release	98%	99%	99%	99%	**98.7%**
Graffiti Wipe	99%	99%	99%	99%	**99%**
Graffiti Barrier S	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Release	99%	100%	100%	100%	**99.7%**
Graffiti Wipe	100%	100%	100%	100%	**100%**
#15					
Untreated Control	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Release	75%	85%	85%	85%	**83%**
Graffiti Wipe	100%	70%	70%	80%	**80%**
Graffiti Barrier S	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Release	20%	100%	100%	100%	**80%**
Graffiti Wipe	100%	100%	100%	100%	**100%**

PHOTOGRAPHS – Graffiti Control

#9 Glen-Gery 900-S Red Matt Modular Cored

AFTER
Graffiti Removal



CONCLUSIONS – Graffiti Control

Based upon laboratory evaluations, Defacer Eraser® Graffiti Wipe most effective at removing graffiti from the submitted samples. Graffiti removal was improved when the submitted samples were treated with Defacer Eraser® Graffiti Barrier S prior to graffiti application.

RECOMMENDATIONS – GRAFFITI CONTROL

Recommendations for graffiti control treatment for each type of red clay bricks submitted by Claytons Masonry Centers 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.

Brick Type	Graffiti Repellents	Graffiti Removers
#9 Glen-Gery 900-S Red Matt Modular Cored	Defacer Eraser® Graffiti Barrier S	Defacer Eraser® Graffiti Wipe
#10 Glen-Gery 900-S Red Matt Modular Solid	Defacer Eraser® Graffiti Barrier S	Defacer Eraser® Graffiti Wipe
#11 Glen-Gery 200-S Flashed/Full Range Modular Cored	Defacer Eraser® Graffiti Barrier S	Defacer Eraser® Graffiti Wipe
#12 Glen-Gery 200-S Flashed/Full Range Modular Solids	Defacer Eraser® Graffiti Barrier S	Defacer Eraser® Graffiti Wipe
#13 Glen-Gery 51DD Modular Solid	Defacer Eraser® Graffiti Barrier S	Defacer Eraser® Graffiti Wipe
#14 Glen-Gery 52DD Modular Solid	Defacer Eraser® Graffiti Barrier S	Defacer Eraser® Graffiti Wipe
#15 Glen-Gery 53DD Modular Solid	Defacer Eraser® Graffiti Barrier S	Defacer Eraser® Graffiti Wipe

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 graffiti control product and procedure for a particular project. See product literature for application and product information.

Carmen M. Niven
Project Testing Coordinator

CMN/

Laboratory Report

Pallet Tag Program Evaluation

Claytons Masonry Centers
Freehold, NJ

Project No. **0206-21 PTP**

Prepared For:

Craig MacFarlane

Claytons Masonry Centers
225 Throckmorton Street
Freehold, NJ 07728

Prepared By:

PROSOCO, Inc.
September 2002

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ATTACHMENTS

Technical Services TECH Note RILEM Tube Test Procedures

Product Data literature for all products evaluated

PALLET TAG PROGRAM
LABORATORY REPORT

FOR: Craig MacFarlane

cc: Joe Talecki
Steve Dean
John Bourne

SUBJECT: Claytons Masonry Centers
Freehold, NJ

DATE: September 13, 2002

PROJECT: 0206-21 PTP

SAMPLES SUBMITTED: Six types of concrete pavers: four colors of Cambridge pavers and two colors of Bolduc pavers.

Sample	Size
(4) #5 Holland's Onyx Cambridge paver	7¾" x 3¾" x 2¼ " (all)
(4) #6 Holland's Ruby Cambridge paver	
(4) #7 Holland's Ruby/Onyx Cambridge paver	
(4) #8 Holland's Sahara Cambridge paver	
(4) #16 Adirondack Bolduc paver in Terracotta Gray	(2) 9" x 5½" x 2½" (2) 5½" x 4½" x 2½"
(5) #17 Adirondack Bolduc paver in Garnet Red	(1) 9½" x 5¼" x 2½" (1) 7½ " x 5½" x 2½" (1) 6½" x 5½" x 2½" (1) 5" x 4½" x 2½"

Submitted by: Craig MacFarlane
Claytons Masonry Centers
225 Throckmorton Street
Freehold, NJ 07728

PURPOSE OF TESTING:

Six integrally colored concrete pavers with large, small and fine aggregate were submitted for testing using PROSOCO's new construction cleaning, water repellent products, and stain repellents.

A. Cleaning & Color Uniformity Testing* - Sure Klean® Custom Masonry Cleaner was evaluated at various dilutions to determine the optimal concentration of cleaner that 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 alternation/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 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
1 – **Poor** match to through-body
2 – **Fair** match to through-body
3 – **Good** match to through-body
4 – **Best** match to through-body

*** NOTE: When cleaning integrally colored CMU.**

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 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.

B. Protective Water Repellents - Sure Klean® Weather Seal Siloxane WB Concentrate, Stand Off® SLX 100 Water & Oil Repellent, Sure Klean® Weather Seal Siloxane PD, and Stand Off® Impregnator were evaluated for their ability to provide water repellency to the submitted samples.

C. Stain Resistance – Stand Off® Gloss N' Guard WB, Stand Off® Stone, Tile & Masonry Protector, Stand Off® Stain Barrier, Stand Off® Impregnator, and Stand Off® SLX 100 Water & Oil Repellent were evaluated for its ability to resist applied staining agents on the submitted samples. Enviro Klean® 2010 All Surface Cleaner diluted with 10 parts fresh water was evaluated for their ability to remove the staining agents from the submitted samples.

PRODUCTS EVALUATED FOR CLEANING AND COLOR UNIFORMITY

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

WATER REPELLENT PRODUCTS EVALUATED

Sample	Product	Dilution
All Submitted Concrete Pavers	Sure Klean® Weather Seal Siloxane WB Concentrate	1:9, 1:14
	Sure Klean® Weather Seal Siloxane PD	Concentrate
	Stand Off® Impregnator	Concentrate
	Stand Off® SLX 100 Water & Oil Repellent	Concentrate

STAIN REPELLANT PRODUCTS EVALUATED

Sample	Product
All Submitted Concrete Pavers	Stand Off® Gloss N' Guard
	Stand Off® Stain Barrier
	Stand Off® Stone, Tile, & Masonry Protector
	Stand Off® Impregnator
	Stand Off® SLX 100 Water & Oil Repellent

SECTION A – CLEANING & COLOR UNIFORMITY TESTING

DESCRIPTION OF PRODUCTS EVALUATED

These cleaning trials were conducted to determine the optimal cleaning/color uniformity.

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.

TEST METHOD – Cleaning & Color Uniformity

Dilution ratios refer to mixtures of parts concentrated cleaner : parts fresh water. Chemical cleaners were evaluated using the following procedure:

1. Prewet the surface with water.
2. Apply each cleaner at the appropriate dilutions.
3. Allow appropriate dwell time, as specified.
   Custom Masonry Cleaner.....3 minutes
4. Reapply the products 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 was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.

TEST RESULT: Color Uniformity

Substrate: Cambridge Paver	**Pigment Color:** #5 Holland's Onyx		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	3	3
Custom Masonry Cleaner	1:6	2	3
Substrate: Cambridge Paver	**Pigment Color:** #6 Holland's Ruby		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	3	3
Custom Masonry Cleaner	1:6	2	2
Substrate: Cambridge Paver	**Pigment Color:** #7 Holland's Ruby/Onyx		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	3
Custom Masonry Cleaner	1:4	4	4
Custom Masonry Cleaner	1:6	3	2
Substrate: Cambridge Paver	**Pigment Color:** #8 Holland's Sahara		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	3	4
Custom Masonry Cleaner	1:6	2	4

Scale used for reporting results of both categories

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

TEST RESULTS Continued**: Color Uniformity**

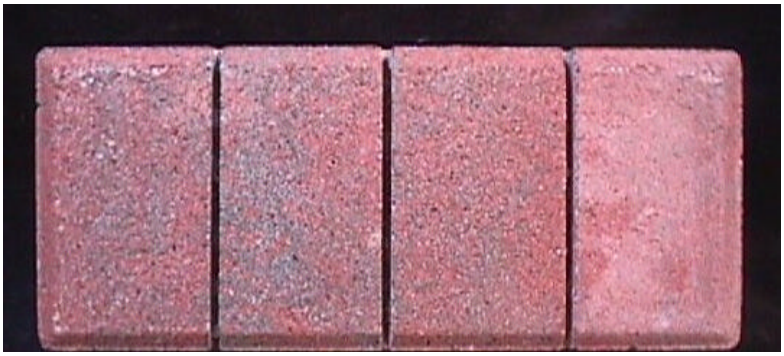
Substrate: Bolduc Paver	**Pigment Color:** #16 Adirondack Terracotta Gray		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	3
Custom Masonry Cleaner	1:4	4	3
Custom Masonry Cleaner	1:6	4	4
Substrate: Bolduc Paver	**Pigment Color:** #17 Adirondack Garnet Red		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	3	4
Custom Masonry Cleaner	1:6	2	4

Scale used for reporting results of both categories

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

PHOTOGRAPHS: Cleaning

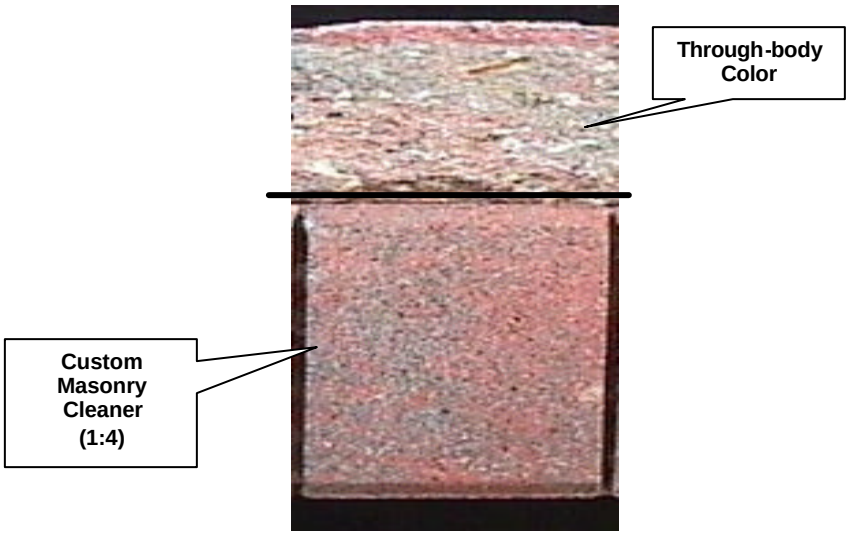
#7 Holland's Ruby/Onyx Cambridge Paver



Custom Masonry Cleaner (1:2) | **Custom Masonry Cleaner (1:4)** | **Custom Masonry Cleaner (1:6)** | **Untreated Control**

PHOTOGRAPHS: Color Uniformity

#7 Holland's Ruby/Onyx Cambridge Paver



CONCLUSIONS - Cleaning & Color Uniformity

Based upon the test data, all of the submitted concrete pavers were efficiently cleaned with each dilution of the selected PROSOCO Inc.'s cleaning products. Use higher concentrations and surface agitation to maximize aggregate exposure. Use low concentration and surface agitation to minimize aggregate exposure.

All dilutions of Sure Klean® Custom Masonry Cleaner tested affected the substrate in a similar manner, removing slight to heavy concentrations of pigmented matrix from the concrete pavers, exposing fine and small aggregate, and enhancing the natural appearance of the integrally colored concrete masonry unit.

RECOMMENDED PRODUCTS AND DILUTIONS – CLEANING & COLOR UNIFORMITY

Recommendations for cleaning for each type of concrete paver submitted by Claytons Masonry Centers, Freehold, NJ are provided in the chart below. Recommendations are based on the dilution that provides the best color uniformity.

Sample	New Construction Cleaning & Color Uniformity
#5 Holland's Onyx Cambridge paver	Sure Klean® Custom Masonry Cleaner (1:2)
#6 Holland's Ruby Cambridge paver	Sure Klean® Custom Masonry Cleaner (1:2)
#7 Holland's Ruby/Onyx Cambridge paver	Sure Klean® Custom Masonry Cleaner (1:4)
#8 Holland's Sahara Cambridge paver	Sure Klean® Custom Masonry Cleaner (1:2)
#16 Adirondack Bolduc Terracotta Gray paver	Sure Klean® Custom Masonry Cleaner (1:6)
#17 Adirondack Bolduc Garnet Red paver	Sure Klean® Custom Masonry Cleaner (1:2)

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 application and product information.

SECTION B - 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

DESCRIPTIONS OF PRODUCTS EVALUATED - Protective Water Repellents:

Sure Klean® Weather Seal Siloxane WB Concentrate – A self-emulsifying water repellent concentrate designed for dilution with fresh water at the jobsite. 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.

Stand Off® SLX 100 Water & Oil Repellent – A modified, "neat" silane system that offers invisible protection and low volatility. SLX 100 protects concrete and masonry surfaces against water and waterborne contaminants. In addition to water repellency SLX 100 offers stain resistance and chloride screen.

Stand Off® Impregnator – Combines water and oil repellency to prevent staining by waterborne or oily substances. Deeply penetrates and chemically bonds within the substrate to provide long-lasting protection against water- and oil-related staining and deterioration. In addition, Impregnator forms an effective chloride screen to reduce surface erosion and corrosion of rebar in reinforced concrete caused by water and water-carried salts.

Sure Klean® Weather Seal Siloxane PD – A ready-to-use, water-based silane/siloxane water repellent. Designed for use on concrete and masonry surfaces, Siloxane PD penetrates more deeply than conventional water or sensitive concrete, GRFC, most masonry, and stucco surfaces.

SAMPLE PREPARATION - Protective Water Repellents:

The submitted blocks were scored, allowed to dry, and to reabsorb atmospheric humidity for 24 hours prior to treatment. The treatment method consisted of a wet-on-wet brush application. All treatments were allowed to cure at least 14 days 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
#5 Holland's Onyx	
Untreated Control	< 40 mph
Siloxane WB Concentrate (1:9)	60 mph
Siloxane PD	59 mph
SLX 100	58 mph
Impregnator	60 mph
#6 Holland's Ruby	
Untreated Control	< 40 mph
Siloxane WB Concentrate (1:9)	57 mph
Siloxane PD	50 mph
SLX 100	58 mph
Impregnator	54 mph
#7 Holland's Ruby/Onyx	
Untreated Control	< 40 mph
Siloxane WB Concentrate (1:9)	59 mph
Siloxane PD	59 mph
SLX 100	60 mph
Impregnator	55 mph
#8 Holland's Sahara	
Untreated Control	49 mph
Siloxane WB Concentrate (1:9)	60 mph
Siloxane PD	60 mph
SLX 100	56 mph
Impregnator	59 mph
#16 Adirondack Terracotta Gray	
Untreated Control	49 mph
Siloxane WB Concentrate (1:9)	60 mph
Siloxane PD	55 mph
SLX 100	58 mph
Impregnator	59 mph

TEST RESULTS - Protective Water Repellents Continued

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

#17 Adirondack Garnet Red	
Untreated Control	< 40 mph
Siloxane WB Concentrate (1:9)	58 mph
Siloxane PD	57 mph
SLX 100	59 mph
Impregnator	60 mph

PHOTOGRAPHS – Protective Water Repellents

#17 Adirondack Garnet Red Bolduc Paver

SLX 100 **Siloxane PD** **Siloxane WB 1:9**

Impregnator **Untreated Control**

CONCLUSIONS - Protective Water Repellents

Based upon laboratory evaluations, all water repellents tested provided above average water repellency to all of the submitted samples.

RECOMMENDATIONS - PROTECTIVE WATER REPELLENTS

Recommendations for water repellency treatment for each type of concrete paver submitted by Claytons Masonry Centers, Freehold, NJ 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	Water Repellent
#5 Holland's Onyx Cambridge paver	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) Sure Klean® Weather Seal Siloxane PD Stand Off® SLX 100 Water & Oil Repellent Stand Off® Impregnator
#6 Holland's Ruby Cambridge paver	
#7 Holland's Ruby/Onyx Cambridge paver	
#8 Holland's Sahara Cambridge paver	
#16 Adirondack Bolduc Terracotta Gray paver	
#17 Adirondack Bolduc Garnet Red paver	

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 application and product information.

SECTION C – STAIN RESISTANCE

DESCRIPTION OF PRODUCTS EVALUATED
These trials were conducted to determine the effectiveness of treatments in preventing food and oil staining on the submitted samples.

Products Evaluated for Stain Protection:

Stand Off® SLX 100 Water & Oil Repellent - A modified, "neat" silane system that offers invisible protection and low volatility. SLX 100 protects concrete and masonry surfaces against water and waterborne contaminants. In addition to water repellency SLX 100 offers stain resistance and chloride screen.

Stand Off® Stain Barrier - A penetrating oil and stain repellent. Easy-to-use. Low-VOC, low-odor protective treatment improves the stain resistance and simplifies maintenance cleaning of interior and exterior stone, quarry tile, concrete and masonry surfaces.

Stand Off® Stone, Tile & Masonry Protector – A penetrating oil and stain repellent. Easy-to-use. Low-VOC, low-odor protective treatment improves the stain resistance and simplifies maintenance cleaning of interior and exterior stone, quarry tile, concrete and masonry surfaces.

Stand Off® Impregnator – Combines water and oil repellency to prevent staining by waterborne or oily substances. Deeply penetrates and chemically bonds within the substrate to provide long-lasting protection against water- and oil-related staining and deterioration. In addition, Impregnator forms an effective chloride screen to reduce surface erosion and corrosion of rebar in reinforced concrete caused by water and water-carried salts.

Stand Off® Gloss 'N Guard WB – A highly durable polyurethane protective coating for tile, pavers, terrazzo and other polished and unpolished masonry. Gloss 'N Guard WB dries to a high-gloss finish which enhances the natural beauty of treated surfaces – both horizontal and vertical.

Product Evaluated for Stain Removal:

Enviro Klean® 2010 All Surface Cleaner (1:10)

Food and Oil Products Evaluated:	**Temperature:**
Coca Cola	ambient (~70°F)
Ketchup	ambient (~70°F)
Mustard	ambient (~70°F)
Red wine	ambient (~70°F)
Balsamic Vinegar	ambient (~70°F)
Soy Sauce	ambient (~70°F)
Olive oil	ambient (~70°F)
Wesson Oil	250°F
Coffee	120°F

SAMPLE PREPARATION – Stain Resistance

Samples were cleaned with Enviro Klean® 2010 All Surface Cleaner diluted with 10 parts water, allowed to dry and absorb atmospheric moisture for 24 hours prior to treatment. The method of application for protective treatments consisted of a wet-on-wet saturating brush application. Samples were allowed to cure for at least 2 weeks prior to testing

TEST METHOD – Stain Resistance

Surface Beading Evaluation

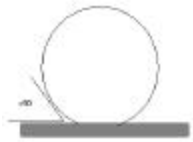
The food and oil products were applied to the test areas by using a dropper creating a bead 0.5 – 1.0 cm in diameter. The beading properties of the oils and liquids were visually evaluated within two minutes after application. The results are reported as a rating based on the angle of contact between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

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

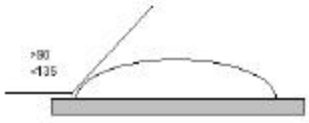
Rating System (1-5)

1. No wetting of contact area (no darkening); angle less than 90^{o}

2. Wetting contained to the contact area (slight darkening); angle is less than 90^{o}



3. Wetting contained to the contact area (slight darkening); angle is greater than 90^{o}, but less than 135 ^{o}.



4. Wetting beyond the contact area (darkening); angle is greater than 135^{o}

5. Wetting beyond the contact area (darkening); angle is flat.

TEST METHODS: Continued

Stain Resistance

The soiling agents were allowed to dwell on the treated and untreated substrate for times of 24 hours, 4 hours, 1 hour, and 10 minutes. The test areas were then cleaned with Enviro Klean® 2010 All Surface Cleaner diluted 1 part concentrate to 10 parts fresh water and scrubbed under a stream of running water from a faucet. Samples were allowed to dry for 24 hours. Evaluation consisted of a visual examination of the tested areas to determine the percentage of staining removal.

TEST RESULTS – Surface Beading

#5 Holland's Onyx Cambridge Paver						
	Untreated Control	**SLX 100**	**Stain Barrier**	**STMP**	**Impregnator**	**Gloss 'N Guard WB**
Coca Cola	5	2	3	2	2	3
Ketchup	N/A	N/A	N/A	N/A	N/A	N/A
Mustard	N/A	N/A	N/A	N/A	N/A	N/A
Red Wine	5	2	2	3	2	3
Balsamic Vinegar	5	2	2	3	2	3
Soy Sauce	5	2	2	2	2	3
Olive Oil	5	2	2	2	2	3
Wesson Oil	5	2	2	2	2	3
Hot Coffee	5	2	3	2	3	3

N/A – non-free flowing staining agent

TEST RESULTS Continued – Surface Beading

#6 Holland's Ruby Cambridge Paver						
	Untreated Control	**SLX 100**	**Stain Barrier**	**STMP**	**Impregnator**	**Gloss 'N Guard WB**
Coca Cola	3	2	2	2	2	3
Ketchup	N/A	N/A	N/A	N/A	N/A	N/A
Mustard	N/A	N/A	N/A	N/A	N/A	N/A
Red Wine	3	2	2	3	3	3
Balsamic Vinegar	3	3	2	3	3	3
Soy Sauce	3	2	2	3	3	3
Olive Oil	4	2	2	2	2	4
Wesson Oil	4	2	2	2	2	4
Hot Coffee	3	3	3	3	3	3

#7 Holland's Ruby/Onyx Cambridge Paver						
	Untreated Control	**SLX 100**	**Stain Barrier**	**STMP**	**Impregnator**	**Gloss 'N Guard WB**
Coca Cola	5	2	2	2	2	3
Ketchup	N/A	N/A	N/A	N/A	N/A	N/A
Mustard	N/A	N/A	N/A	N/A	N/A	N/A
Red Wine	5	3	2	3	2	3
Balsamic Vinegar	5	3	2	3	2	3
Soy Sauce	5	2	2	2	2	3
Olive Oil	5	2	2	2	2	4
Wesson Oil	5	2	2	2	2	4
Hot Coffee	5	3	3	3	3	3

N/A – non-free flowing staining agent

TEST RESULTS Continued – Surface Beading

#8 Holland's Sahara Cambridge Paver						
	Untreated Control	**SLX 100**	**Stain Barrier**	**STMP**	**Impregnator**	**Gloss 'N Guard WB**
Coca Cola	5	2	2	2	2	3
Ketchup	N/A	N/A	N/A	N/A	N/A	N/A
Mustard	N/A	N/A	N/A	N/A	N/A	N/A
Red Wine	5	2	2	2	2	3
Balsamic Vinegar	5	2	2	2	2	3
Soy Sauce	5	2	2	2	2	3
Olive Oil	5	2	2	2	2	3
Wesson Oil	5	2	2	2	2	3
Hot Coffee	5	3	3	3	3	3

#16 Adirondack Terracotta Bolduc Paver						
	Untreated Control	**SLX 100**	**Stain Barrier**	**STMP**	**Impregnator**	**Gloss 'N Guard WB**
Coca Cola	3	2	2	2	2	3
Ketchup	N/A	N/A	N/A	N/A	N/A	N/A
Mustard	N/A	N/A	N/A	N/A	N/A	N/A
Red Wine	3	2	2	3	2	3
Balsamic Vinegar	3	2	3	3	2	3
Soy Sauce	3	2	2	2	2	3
Olive Oil	5	2	2	2	3	4
Wesson Oil	5	2	2	2	3	4
Hot Coffee	3	3	3	3	3	3

N/A – non-free flowing staining agent

TEST RESULTS – Surface Beading

#17 Adirondack Garnet Red Bolduc Paver						
	Untreated Control	**SLX 100**	**Stain Barrier**	**STMP**	**Impregnator**	**Gloss 'N Guard WB**
Coca Cola	3	2	2	3	2	3
Ketchup	N/A	N/A	N/A	N/A	N/A	N/A
Mustard	N/A	N/A	N/A	N/A	N/A	N/A
Red Wine	3	2	3	3	2	3
Balsamic Vinegar	3	2	2	2	2	3
Soy Sauce	3	2	2	2	2	3
Olive Oil	5	3	2	2	2	3
Wesson Oil	5	2	2	2	2	4
Hot Coffee	5	3	3	3	3	3

N/A – non-free flowing staining agent

TEST RESULTS – Stain Resistance

Cleaned with: Enviro Klean® 2010 All Surface Cleaner (1:10)

% Removal

#5 Holland's Onyx Cambridge Paver

	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control									
24 hr	95%	80%	50%*	70%	<1 %	<1 %	<1 %	<1 %	<1 %
4 hour	100%	80%	70%*	80%	<1 %	<1 %	<1 %	<1 %	<1 %
1 hour	100%	100%*	95%*	100%	<1 %	<1 %	<1 %	<1 %	<1 %
10 min.	100%	100%	98%*	100%	<1 %	<1 %	<1 %	<1 %	<1 %
Stand Off® SLX 100 Water & Oil Repellent									
24 hr	100%	95%*	100%*	100%*	100%*	100%	10%	10%	100%
4 hour	100%	99%	100%*	100%	100%*	100%	10%	10%	100%
1 hour	100%	100%	100%*	100%	100%*	100%	10%	10%	100%
10 min.	100%	100%	100%*	100%	100%*	100%	10%	10%	100%
Stand Off® Stain Barrier									
24 hr	90%	100%*	100%*	100%*	100%*	100%	95%	95%	100%
4 hour	99%	100%*	100%*	100%*	100%*	100%	98%	98%	100%
1 hour	100%	100%*	100%*	100%*	100%*	100%	100%	100%	100%
10 min.	100%	100%*	100%*	100%*	100%*	100%	100%	100%	100%
Stand Off® Stone , Tile, & Masonry Protector									
24 hr	100%	99%*	95%*	100%*	99%*	100%	99%	99%	100%
4 hour	100%	100%*	100%*	100%*	100%*	100%	99%	99%	100%
1 hour	100%	100%*	100%*	100%*	100%*	100%	99%	99%	100%
10 min.	100%	100%*	100%*	100%	100%*	100%	99%	99%	100%
Stand Off® Impregnator									
24 hr	100%	100%*	100%*	100%*	100%*	100%	10%	10%	100%
4 hour	100%	100%*	100%*	100%*	100%*	100%	10%	10%	100%
1 hour	100%	100%	100%*	100%*	100%*	100%	10%	10%	100%
10 min.	100%	100%	100%*	100%	100%	100%	10%	10%	100%
Stand Off® Gloss 'N Guard WB									
24 hr	95%	90%	90%	100%	100%	100%	60%	60%	100%
4 hour	100%	98%	95%	100%	100%	100%	60%	60%	100%
1 hour	100%	100%	98%	100%	100%	100%	60%	60%	100%
10 min.	100%	100%	100%	100%	100%	100%	60%	60%	100%

% Removal of staining agent
* Etching due to acidic staining agent

TEST RESULTS – Stain Resistance

Cleaned with: Enviro Klean® 2010 All Surface Cleaner (1:10)

% Removal

#6 Holland's Ruby Cambridge Paver

	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control									
24 hr	100%	100%*	100%*	99%	100%	100%	<1 %	<1 %	90%
4 hour	100%	100%*	100%*	98%	100%	100%	<1 %	<1 %	90%
1 hour	100%	100%*	100%*	100%	100%	100%	<1%	<1 %	95%
10 min.	100%	100%	100%	100%*	100%	100%	<1 %	<1 %	100%
Stand Off® SLX 100 Water & Oil Repellent									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%	100%*	100%*	99%	100%*	100%	98%	98%	100%
4 hour	100%	100%*	100%*	98%	100%*	100%	98%	98%	100%
1 hour	100%	100%*	100%*	100%	100%*	100%	98%	99%	100%
10 min.	100%	100%	100%	100%*	100%*	100%	98%	100%	100%
Stand Off® Stain Barrier									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%	100%*	100%*	90%	100%*	100%	90%	95%	95%
4 hour	100%	100%*	100%*	99%	100%*	100%	100%	100%	100%
1 hour	100%	100%*	100%*	95%	100%*	100%	100%	100%	100%
10 min.	100%	100%	100%	100%*	100%*	100%	100%	100%	100%
Stand Off® Stone , Tile, & Masonry Protector									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	99%	100%*	100%*	99%	100%*	100%	99%	99%	99%
4 hour	100%	100%*	100%*	99%	100%*	100%	100%	100%	100%
1 hour	100%	100%	100%*	99%	100%*	100%	100%	100%	100%
10 min.	100%	100%	100%*	100%*	100%	100%	100%	100%	100%
Stand Off® Impregnator									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%*	100%*	100%*	100%*	100%*	100%	90%	95%	99%
4 hour	100%*	100%*	100%*	100%*	100%*	100%	100%	100%	99%
1 hour	100%	100%*	100%*	100%	100%*	100%	100%	100%	100%
10 min.	100%	100%	100%*	100%	100%	100%	100%	100%	100%
Stand Off® Gloss 'N Guard WB									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	95%	100%	90%	100%	100%	100%	60%	60%	100%
4 hour	100%	100%	95%	100%	100%	100%	60%	60%	100%
1 hour	100%	100%	98%	100%	100%	100%	60%	60%	100%
10 min.	100%	100%	100%	100%	100%	100%	60%	60%	100%

% Removal of staining agent
* Etching due to acidic staining agent

TEST RESULTS – Stain Resistance

Cleaned with: Enviro Klean® 2010 All Surface Cleaner (1:10)

% Removal

#7 Holland's Ruby/Onyx Cambridge Paver

	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control									
24 hr	100%	99%	90%*	100%*	100%	80%	<1 %	<1 %	<1 %
4 hour	100%	99%	95%*	100%*	100%	80%	<1 %	<1 %	<1 %
1 hour	100%	100%	99%*	100%	100%	100%	<1 %	<1 %	<1 %
10 min.	100%	100%	100%*	100%	100%	100%	<1 %	<1 %	<1 %
Stand Off® SLX 100 Water & Oil Repellent									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	90%	100%*	100%*	100%	100%*	90%	30%	30%	100%
4 hour	98%	100%*	100%*	100%	100%*	95%	30%	30%	100%
1 hour	95%	100%*	100%*	100%	100%*	100%	30%	30%	100%
10 min.	100%	100%*	100%	100%	100%	100%	30%	30%	100%
Stand Off® Stain Barrier									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	98%	90%*	100%*	100%*	100%*	99%	100%	99%	80%
4 hour	99%	100%*	100%*	100%*	100%*	100%	100%	100%	100%
1 hour	100%	100%*	100%*	100%*	100%*	100%	100%	100%	100%
10 min.	100%	100%	100%*	100%*	100%*	100%	100%	100%	100%
Stand Off® Stone , Tile, & Masonry Protector									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%	100%*	100%*	100%*	100%*	100%*	98%	98%	99%
4 hour	100%	100%*	100%*	100%	100%*	100%*	99%	99%	99%
1 hour	100%	100%*	100%*	100%	100%*	100%	100%	100%	99%
10 min.	100%	100%	100%*	100%	100%*	100%	100%	100%	99%
Stand Off® Impregnator									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%	100%*	100%*	99%	100%*	100%	30%	60%	100%
4 hour	100%	100%*	100%*	99%	100%*	100%	30%	60%	100%
1 hour	100%	100%	100%*	100%	100%*	100%	30%	60%	100%
10 min.	100%	100%	100%*	100%	100%*	100%	30%	60%	100%
Stand Off® Gloss 'N Guard WB									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	98%	100%*	90%	100%	100%	100%	60%	60%	100%
4 hour	100%	100%*	90%	100%	100%	100%	60%	60%	100%
1 hour	100%	100%	99%	100%	100%	100%	60%	60%	100%
10 min.	100%	100%	100%	100%	100%	100%	60%	60%	100%

% Removal of staining agent
* Etching due to acidic staining agent

TEST RESULTS – Stain Resistance

Cleaned with: Enviro Klean® 2010 All Surface Cleaner (1:10)

% Removal

#8 Holland's Sahara Cambridge Paver

	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control									
24 hr	100%	80%	100%*	100%*	<1 %	10%	<1 %	<1 %	<1 %
4 hour	100%	90%	100%*	100%*	50%	10%	<1 %	<1 %	<1 %
1 hour	100%	100%	100%*	100%*	60%	10%	<1 %	<1 %	<1 %
10 min.	100%	100%	100%*	100%	70%	10%	<1 %	<1 %	<1 %
Stand Off® SLX 100 Water & Oil Repellent									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	80%	100%*	100%*	90%	100%*	95%	40%	40%	100%
4 hour	90%	100%*	100%*	95%	100%*	100%	40%	40%	100%
1 hour	100%	100%*	100%*	100%	100%*	100%	40%	40%	100%
10 min.	100%	100%	100%*	100%	100%*	100%	40%	40%	100%
Stand Off® Stain Barrier									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%*	95%*	100%*	95%	100%	100%	98%	98%	100%
4 hour	100%	100%*	100%*	98%	100%	100%	99%	99%	100%
1 hour	100%	100%*	100%*	100%*	100%	100%	100%	100%	100%
10 min.	100%	100%	100%*	100%*	100%	100%	100%	100%	100%
Stand Off® Stone , Tile, & Masonry Protector									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%	95%*	100%*	98%	100%*	100%	95%	90%	100%
4 hour	100%	100%*	100%*	99%	100%*	100%	98%	99%	100%
1 hour	100%	100%*	100%*	99%*	100%*	100%	100%	100%	100%
10 min.	100%	100%	100%	100%*	100%*	100%	100%	100%	100%
Stand Off® Impregnator									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%	99%*	100%*	98%	100%*	100%	60%	60%	100%
4 hour	100%	99%*	100%*	99%	100%*	100%	60%	60%	100%
1 hour	100%	100%*	100%*	99%	100%*	100%	60%	60%	100%
10 min.	100%	100%	100%*	100%	100%*	100%	60%	60%	100%
Stand Off® Gloss 'N Guard WB									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	95%	98%	70%	90%	99%	99%	50%	50%	100%
4 hour	100%	100%	70%	100%	100%	100%	50%	50%	100%
1 hour	100%	100%	90%	100%	100%	100%	50%	50%	100%
10 min.	100%	100%	95%	100%	100%	100%	50%	50%	100%

% Removal of staining agent
* Etching due to acidic staining agent

TEST RESULTS – Stain Resistance

Cleaned with: Enviro Klean® 2010 All Surface Cleaner (1:10)

% Removal

#16 Adirondack Terracotta Gray Bolduc Paver

	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control									
24 hr	100%	100%*	98%*	99%	99%	90%	<1 %	<1 %	100%
4 hour	100%	100%*	100%*	100%	100%	95%	<1 %	<1 %	100%
1 hour	100%	100%	100%	100%	100%	100%	<1 %	<1 %	100%
10 min.	100%	100%	100%	100%	100%	100%	<1 %	<1 %	100%
Stand Off® SLX 100 Water & Oil Repellent									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%	100%	99%	98%	100%	98%	70%	70%	90%
4 hour	100%	100%	100%	100%	100%	100%	70%	70%	90%
1 hour	100%	100%	100%	100%	100%	100%	80%	80%	100%
10 min.	100%	100%	100%	100%	100%	100%	80%	80%	100%
Stand Off® Stain Barrier									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%	95%	95%	100%	98%*	100%	70%	70%	80%
4 hour	100%	99%	98%	100%	100%*	100%	100%	70%	80%
1 hour	100%	100%	100%	100%	100%*	100%	100%	70%	90%
10 min.	100%	100%	100%	100%	100%	100%	100%	90%	100%
Stand Off® Stone , Tile, & Masonry Protector									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%	99%	98%	95%	99%	99%	80%	80%	90%
4 hour	100%	100%	99%	98%	100%	100%	80%	80%	95%
1 hour	100%	100%	100%	100%	100%	100%	80%	80%	100%
10 min.	100%	100%	100%	100%	100%	100%	95%	95%	100%
Stand Off® Impregnator									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%	98%	100%*	100%	100%	95%	50%	40%	70%
4 hour	100%	100%	100%*	100%	100%	100%	70%	40%	80%
1 hour	100%	100%	100%*	100%	100%	100%	80%	40%	99%
10 min.	100%	100%	100%*	100%	100%	100%	100%	50%	100%
Stand Off® Gloss 'N Guard WB									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	99%	99%	50%*	98%	98%	99%	50%	40%	90%
4 hour	100%	98%	60%*	99%	100%	100%	99%	40%	95%
1 hour	100%	100%	70%*	100%	100%	100%	100%	40%	100%
10 min.	100%	100%	95%*	100%	100%	100%	100%	40%	100%

% Removal of staining agent
* Etching due to acidic staining agent

TEST RESULTS – Stain Resistance

Cleaned with: Enviro Klean® 2010 All Surface Cleaner (1:10)

% Removal

#17 Adirondack Garnet Red Bolduc Paver

	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control									
24 hr	50%	90%	100%*	60%	100%	80%	<1 %	<1 %	<1 %
4 hour	100%	95%	100%*	65%	100%	85%	<1 %	<1 %	<1 %
1 hour	100%	95%	100%*	100%	100%	100%	<1 %	<1 %	<1 %
10 min.	100%	100%	100%*	100%	100%	100%	<1 %	<1 %	<1 %
Stand Off® SLX 100 Water & Oil Repellent									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%	100%	100%*	100%	100%*	100%	80%	80%	100%
4 hour	100%	100%	100%*	100%	100%*	100%	80%	80%	100%
1 hour	100%	100%	100%*	100%	100%*	100%	80%	80%	100%
10 min.	100%	100%	100%	100%	100%	100%	80%	80%	100%
Stand Off® Stain Barrier									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%	100%	100%	100%	100%	100%	95%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off® Stone , Tile, & Masonry Protector									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%	100%	100%	100%	100%	100%	95%	100%	100%
4 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 hour	100%	100%	100%	100%	100%	100%	100%	100%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off® Impregnator									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	100%	90%	100%	100%	100%	100%	80%	80%	100%
4 hour	100%	100%	100%	100%	100%	100%	80%	80%	100%
1 hour	100%	100%	100%	100%	100%	100%	80%	95%	100%
10 min.	100%	100%	100%	100%	100%	100%	90%	100%	100%
Stand Off® Gloss 'N Guard WB									
	Coca Cola	**Ketchup**	**Mustard**	**Red Wine**	**Balsamic Vinegar**	**Soy Sauce**	**Olive Oil**	**Wesson Oil**	**Hot Coffee**
24 hr	98%	100%	70%	100%	100%	100%	70%	70%	100%
4 hour	100%	100%	80%	100%	100%	100%	70%	70%	100%
1 hour	100%	100%	90%	100%	100%	100%	70%	70%	100%
10 min.	100%	100%	95%	100%	100%	100%	70%	70%	100%

% Removal of staining agent

* Etching due to acidic staining agent

PHOTOGRAPHS – Stain Resistance

#8 Holland's Sahara Cambridge Paver

CONCLUSIONS – Stain Resistance

Based upon laboratory evaluations, Stand Off® Stone, Tile & Masonry Protector (STMP) was the most effective at repelling the staining agents from the submitted concrete pavers.

RECOMMENDATIONS – STAIN RESISTANCE

Recommendations for stain resistance treatment for each type of concrete paver submitted by Claytons Masonry Centers, Freehold, NJ are provided in the chart below. Recommendations are based on the treatment that proved most effective for providing stain repellency on all types submitted.

Sample	Stain Repellent	Maintenance Cleaner
#5 Holland's Onyx Cambridge paver	Stand Off® Stone, Tile & Masonry Protector	Enviro Klean® 2010 All Surface Cleaner (1:10)
#6 Holland's Ruby Cambridge paver		
#7 Holland's Ruby/Onyx Cambridge paver		
#8 Holland's Sahara Cambridge paver		
#16 Adirondack Bolduc Terracotta Gray paver		
#17 Adirondack Bolduc Garnet Red paver		

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 graffiti control product and procedure for a particular project. See product literature for application and product information.

Carmen M. Niven
Project Testing Coordinator

CMN/

Laboratory Report

Pallet Tag Program Evaluation

Claytons Masonry Centers
Freehold, NJ

Project No. **0206-21 PTP**

Prepared For:

Craig MacFarlane

Claytons Masonry Centers
225 Throckmorton Street
Freehold, NJ 07728

Prepared By:

PROSOCO, Inc.
September 2002

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FOR: Craig MacFarlane

cc: Joe Talecki
John Bourne
Steve Dean

SUBJECT: Claytons Masonry Centers
Freehold, NJ

DATE: September 13, 2002

PROJECT: 0206-21 PTP

SAMPLES SUBMITTED: (4) types of white concrete brick

Sample/Color	Size
(4) #1 B50 Rough face Modular Cored “Solid White”	7½” x 3¾” x 2½”
(4) #2 B50 Rough Faced Modular Solid “Solid White”	
(4) #3 MC-4 Rough Faced Cored “White and Black Mixed”	
(4) #4 MC-4 Rough Faced Solid “White and Black Mixed”	

Submitted by: Craig MacFarlane
Claytons Masonry Centers
225 Throckmorton Street
Freehold, NJ 07728

PURPOSE OF TESTING:

Four different types of white concrete brick were submitted to PROSOCO, Inc.'s Testing Laboratory with a request to determine if application of the products evaluated will produce any surface alteration during new construction cleaning operations. Additionally, the effectiveness of water repellent treatments and graffiti control products suitable for concrete brick masonry will also be evaluated.

A. New Construction Cleaning – Sure Klean® Custom Masonry Cleaner, and Sure Klean® Burnished Custom Masonry Cleaner were evaluated for removal of laboratory applied mortar.

To simulate new construction soiling, all bricks 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 brick and filled with a wet mixture of Ash Grove® Type N cementitious mortar. The wet mortar-filled cylinder was allowed to remain in contact with the brick for 10 minutes before removal.

Soiled bricks were allowed to dry before test cleaning.

Heavy deposits of mortar were removed with dry scraping after 24 hours. Prepared cleaning solutions were then evaluated for their effectiveness in removing residual Ash Grove® Type N mortar after 7, 14 and 21 days of curing.

B. Color Uniformity Testing* - Sure Klean® Custom Masonry Cleaner and Sure Klean® Burnished Custom Masonry Cleaner were evaluated at various dilutions to determine the optimal concentration of cleaner that 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 alternation/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 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
1 – **Poor** match to through-body
2 – **Fair** match to through-body
3 – **Good** match to through-body
4 – **Best** match to through-body

*** NOTE: When cleaning integrally colored CMU.**

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 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.

C. Protective Water Repellents - Sure Klean® Weather Seal Siloxane WB Concentrate was evaluated for their ability to provide water repellency to the submitted samples.

D. Graffiti Control Evaluation – Defacer Eraser® Graffiti Barrier S was evaluated for its ability to control graffiti on the submitted samples. Defacer Eraser® Graffiti Release and Defacer Eraser® Graffiti Wipe were evaluated for their ability to remove graffiti from the submitted samples.

PRODUCTS EVALUATED FOR CLEANING AND COLOR UNIFORMITY

SAMPLE	TREATMENT	DILUTION
All submitted white concrete bricks	Sure Klean® Custom Masonry Cleaner	1:2, 1:4, 1:6
	Sure Klean® Burnished Custom Masonry Cleaner	1:2, 1:3

WATER REPELLENT PRODUCTS EVALUATED

SAMPLE	TREATMENT	DILUTION
All submitted white concrete bricks	Sure Klean® Weather Seal Siloxane WB Concentrate	1:9, 1:14

GRAFFITI CONTROL PRODUCTS EVALUATED

SAMPLE	PRODUCT
All submitted white concrete bricks	Defacer Eraser® Graffiti Barrier S

GRAFFITI REMOVAL PRODUCTS EVALUATED

SAMPLE	PRODUCT
All submitted white concrete bricks	Defacer Eraser® Graffiti Release
	Defacer Eraser® Graffiti Wipe

SECTION A – NEW CONSTRUCTION CLEANING

DESCRIPTION OF PRODUCTS EVALUATED – New Construction Cleaning

These cleaning trials were conducted to determine the optimal cleaning/cure time combination to most efficiently remove Ash Grove® Type N mortar from the submitted concrete bricks.

Ash Grove® Type N cementitious mortar was prepared in compliance with the manufacturers instructions, applied to the brick surface and allowed to cure for 7, 14 and 21 days. Mortar removal was accomplished using chemical assistance and a high-pressure water rinse with pressure rinsing equipment. The removal of Ash Grove® Type N cementitious masonry cement mortar was visually evaluated after 7, 14 and 21 days of curing.

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 - A general-purpose, non-etching acidic cleaner that removes rust, mud, oil, atmospheric dirt, mortar smears and other stains without altering the surface texture. Burnished Custom Masonry Cleaner adds depth to colors, brightens white matrices and exposed aggregate.

TEST METHOD – New Construction Cleaning

Dilution ratios refer to mixtures of concentrated cleaner : fresh water. Chemical cleaners were evaluated using the following procedure:

1. Prewet the surface with water.
2. Apply the cleaner.
3. Allow the appropriate dwell time, as specified.
   - Custom Masonry Cleaner ..... 3 minutes
   - Burnished Custom Masonry Cleaner ..... 5 minutes
4. Pressure rinse thoroughly. *

* Pressure rinsing was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.

Test Results - New Construction Cleaning

% Removal

#1 B50 Rough Faced Modular Cored "Solid White"

Product	Dilution	7 day	14 day	21 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
	1:4	100%	100%	100%
	1:6	100%	100%	100%
Sure Klean® Burnished Custom Masonry Cleaner	1:2	---	---	99%
	1:3	---	---	98%

#2 B50 Rough Faced Modular Solid "Solid White"

Product	Dilution	7 day	14 day	21 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
	1:4	100%	100%	99%
	1:6	100%	100%	95%
Sure Klean® Burnished Custom Masonry Cleaner	1:2	---	---	99%
	1:3	---	---	98%

#3 MC-4 Rough Faced Cored "White and Black Mixed"

Product	Dilution	7 day	14 day	21 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
	1:4	100%	100%	100%
	1:6	100%	100%	100%
Sure Klean® Burnished Custom Masonry Cleaner	1:2	---	---	99%
	1:3	---	---	98%

#4 MC-4 Rough Faced Solid "White with Black Mixed"

Product	Dilution	7 day	14 day	21 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
	1:4	100%	100%	99%
	1:6	100%	100%	99%
Sure Klean® Burnished Custom Masonry Cleaner	1:2	---	---	99%
	1:3	---	---	99%

CONCLUSIONS – New Construction Cleaning

Based upon the test data, all of the submitted concrete brick samples were efficiently cleaned with each dilution of the selected PROSOCO Inc.'s cleaning products. Use higher concentrations and surface agitation to maximize aggregate exposure. Use low concentration and surface agitation to minimize aggregate exposure.

All dilutions of Sure Klean® Custom Masonry Cleaner and Sure Klean® Burnished Custom Masonry Cleaner tested affected the substrate in a similar manner, removing slight to heavy concentrations of pigmented matrix from the rough-face concrete brick faces, exposing small and large aggregate, and enhancing the natural appearance of the integrally colored concrete masonry unit.

RECOMMENDED PRODUCTS AND DILUTIONS – NEW CONSTRUCTION CLEANING

Recommendations for cleaning for each type of concrete brick submitted by Claytons Masonry Centers, Freehold, NJ are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar.

Sample	New Construction Cleaning (Type N, 21 Days)
#1 B50 Rough Faced Modular Cored "Solid White"	Sure Klean® Custom Masonry Cleaner (1:6)
#2 B50 Rough Faced Modular Solid "Solid White"	Sure Klean® Custom Masonry Cleaner (1:2)
#3 MC-4 Rough Faced Cored "White and Black Mixed"	Sure Klean® Custom Masonry Cleaner (1:6)
#4 MC-4 Rough Faced Solid "White and Black Mixed"	Sure Klean® Custom Masonry Cleaner (1:2)

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 application and product information.

SECTION B – COLOR UNIFORMITY

DESCRIPTION OF PRODUCTS EVALUATED – Color Uniformity

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 - A general-purpose, non-etching acidic cleaner that removes rust, mud, oil, atmospheric dirt, mortar smears and other stains without altering the surface texture. Burnished Custom Masonry Cleaner adds depth to colors, brightens white matrices and exposed aggregate.

TEST METHOD – Color Uniformity:

Dilution ratios refer to mixtures of concentrated cleaner : fresh water. Chemical cleaners were evaluated using the following procedure

1. Prewet the surface with water.
2. Apply the cleaner.
3. Allow the appropriate dwell time, as specified.
   - Custom Masonry Cleaner ..... 3 minutes
   - Burnished Custom Masonry Cleaner ..... 5 minutes
4. Pressure rinse thoroughly. *

* Pressure rinsing was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.

TEST RESULTS – Color Uniformity

Substrate: White concrete brick	**Pigment Color:** #1 B50 Rough Faced Modular Cored "Solid White"		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	3	4
Custom Masonry Cleaner	1:6	3	4
Burnished Custom Masonry Cleaner	1:2	3	3
Burnished Custom Masonry Cleaner	1:3	3	3
Substrate: White concrete brick	**Pigment Color:** #2 B50 Rough Faced Modular Solid "Solid White"		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	3	4
Custom Masonry Cleaner	1:6	3	4
Burnished Custom Masonry Cleaner	1:2	3	3
Burnished Custom Masonry Cleaner	1:3	3	2
Substrate: White concrete brick	**Pigment Color:** #3 MC-4 Rough Faced Cored "White and Black Mixed"		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	3
Custom Masonry Cleaner	1:4	4	4
Custom Masonry Cleaner	1:6	4	3
Burnished Custom Masonry Cleaner	1:2	4	3
Burnished Custom Masonry Cleaner	1:3	4	2
Substrate: White concrete brick	**Pigment Color:** #4 Rough Faced Solid "White and Black Mixed"		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	3
Custom Masonry Cleaner	1:4	4	4
Custom Masonry Cleaner	1:6	4	3
Burnished Custom Masonry Cleaner	1:2	4	3
Burnished Custom Masonry Cleaner	1:3	4	2

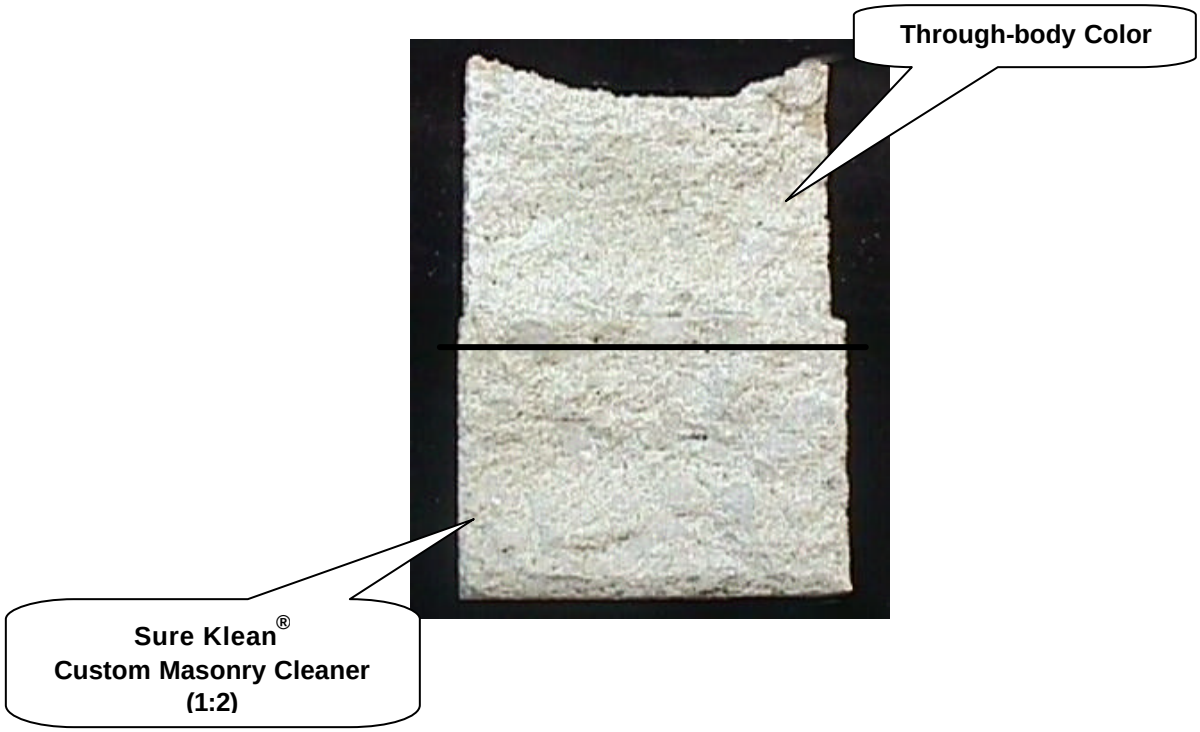
Scale used for reporting results of both categories

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

PHTOTOGRAPHS – Color Uniformity

#2 B50 Rough Faced Modular Solid "Solid White"

AFTER
21 day cleaning



CONCLUSIONS – Color Uniformity

All dilutions of Sure Klean® Custom Masonry Cleaner and Sure Klean® Burnished Custom Masonry Cleaner tested affected the substrate in a similar manner. Higher concentrations of cleaner removed moderate to heavy concentrations of pigmented matrix, exposing small and large aggregate. Lower concentrations of cleaner removed slight to moderate concentrations of pigmented matrix, exposing small and large aggregate. All dilutions enhanced the natural appearance of the integrally colored CMU.

RECOMMENDED PRODUCTS AND DILUTIONS – Color Uniformity

Product recommendations for limiting surface alterations for each type of concrete brick submitted by Claytons Masonry Centers, Freehold, NJ are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar while limiting surface alterations.

Sample	Color Uniformity
#1 B50 Rough Faced Modular Cored "Solid White"	Sure Klean® Custom Masonry Cleaner (1:2)
#2 B50 Rough Faced Modular Solids "Solid White"	Sure Klean® Custom Masonry Cleaner (1:2)
#3 MC-4 Rough Faced Cored "White and Black Mixed"	Sure Klean® Custom Masonry Cleaner (1:4)
#4 MC-4 Rough Faced Solids "White and Black Mixed"	Sure Klean® Custom Masonry Cleaner (1:4)

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 application and product information.

SECTION C - 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

DESCRIPTIONS OF PRODUCTS EVALUATED - Protective Water Repellents:

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 which is ideal for application to either dense or porous masonry surfaces.

SAMPLE PREPARATION - Protective Water Repellents:

The submitted concrete brick were cut, oven dried and allowed to reabsorb atmospheric humidity for 24 hours prior to treatment. The treatment method consisted of two 10-second immersions with a 20-second absorption period between immersions to simulate a wet-on-wet application. All treatments were allowed to cure for at least 3 days prior to testing.

TEST METHODS - Protective Water Repellents:

Water Absorption: ASTM C 140, Immersion

Water absorption was determined by comparing the dry weight of the sample with its weight after immersion in water at 10-minute, 30-minute, 60-minute and 24-hour intervals. See ASTM C 140 for additional information.

Reduced water absorption values – reported as effectiveness – measure the effectiveness of selected treatments in protecting samples from water penetration and water related decay mechanisms. Generally a reduction of approximately 80% is required to provide resistance to water intrusion under normal exposure conditions.

TEST RESULTS – Protective Water Repellents

Water Absorption: ASTM C 140, Immersion

#1 B50 Cored "Solid White"	% Absorption	% Effectiveness
Untreated Control	5.55	---
Weather Seal Siloxane WB (1:9)	0.79	85.8%
Weather Seal Siloxane WB (1:14)	0.83	85.0%
#2 B50 Solid "Solid White"	**% Absorption**	**% Effectiveness**
Untreated Control	4.85	---
Weather Seal Siloxane WB (1:9)	0.45	91%
Weather Seal Siloxane WB (1:14)	0.55	89%
#3 MC-4 Cored "White and Black Mixed"	**% Absorption**	**% Effectiveness**
Untreated Control	5.21	---
Weather Seal Siloxane WB (1:9)	0.65	88%
Weather Seal Siloxane WB (1:14)	0.58	89%
#4 MC-4 Solid "White and Black Mixed"	**% Absorption**	**% Effectiveness**
Untreated Control	6.26	---
Weather Seal Siloxane WB (1:9)	0.73	88%
Weather Seal Siloxane WB (1:14)	0.95	85%

CONCLUSIONS - Protective Water Repellents:

Based upon laboratory evaluations, Sure Klean® Weather Seal Siloxane WB Concentrate diluted with both nine and fourteen parts fresh water exhibited above average water repellency on all submitted concrete brick.

RECOMMENDATIONS - Protective Water Repellents:

Recommendations for water repellent treatments for each type of concrete brick submitted by Claytons Masonry Centers, Freehold, NJ are provided in the chart below. Recommendations are based on the treatments that proved most effective by results and can provide water repellency on all types submitted if possible.

Sample	Water Repellent
#1 B50 Rough Faced Modular Cored “Solid White”	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) or (1:14)
#2 B50 Rough Faced Modular Solid “Solid White”	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) or (1:14)
#3 MC-4 Rough Faced Cored “White and Black Mixed”	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) or (1:14)
#4 MC-4 Rough Faced Solid “White and Black Mixed”	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) or (1:14)

It must be pointed out that in any installation, the brick are a single component of the masonry facade. The ability of a water repellent treatment to prevent the ingress of water is affected by a variety of other factors. Therefore, on-site testing should be carried out for all installations with the recommended systems to ensure job site workmanship yields equivalent results.

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

SECTION D – GRAFFITI CONTROL

DESCRIPTION OF PRODUCTS EVALUATED
These trials were conducted to determine the optimal graffiti control treatment.

Graffiti Control Treatments

Defacer Eraser® Graffiti Barrier S – A clear, water-based sacrificial coating for control of graffiti on most building surfaces. Easy-to-apply Graffiti Barrier S stops spray paints, crayons, and ink from penetrating and staining the underlying surface.

Products Evaluated for Graffiti Removal

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

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 removed a variety of graffiti stains from most smooth masonry, wood, and metal surfaces.

Graffiti Agents

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

SAMPLE PREPARATION – Graffiti Control

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

Sections of the concrete samples were treated with one coat of Defacer Eraser® Graffiti Barrier S in accordance with PROSOCO, Inc.'s Product Guide application recommendations and then allowed to cure for at least 3 days. At the end of the three-day 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 at least 3 days following application of Defacer Eraser® Graffiti Barrier S. Removal of the graffiti agents was attempted 24 hours after application of the graffiti agents, using Defacer Eraser® Graffiti Release and Defacer Eraser® Graffiti Wipe.

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:
   Graffiti Release..... 15 minutes
   Graffiti Wipe ..... 20 minutes
3. Pressure rinse thoroughly until water runs clear. *
4. Allow the surface to dry thoroughly and visually examine to determine effectiveness.

*Pressure rinsing was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.

TEST RESULTS – Graffiti Control

#1 B50 Cored "Solid White"					
Untreated Control	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Wipe	30%	30%	30%	30%	**30%**
Graffiti Release	50%	30%	30%	30%	**35%**
Graffiti Barrier S	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Wipe	95%	50%	50%	50%	**62%**
Graffiti Release	80%	50%	50%	50%	**58%**
#2 B50 Solids "Solid White"					
Untreated Control	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Wipe	70%	30%	30%	30%	**35%**
Graffiti Release	70%	30%	30%	30%	**35%**
Graffiti Barrier S	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Wipe	98%	50%	50%	50%	**62%**
Graffiti Release	80%	50%	50%	50%	**58%**
#3 MC-4 Cored "White and Black Mixed"					
Untreated Control	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Wipe	50%	30%	30%	30%	**35%**
Graffiti Release	50%	30%	30%	30%	**35%**
Graffiti Barrier S	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Wipe	99%	100%	90%	80%	**93%**
Graffiti Release	50%	100%	95%	95%	**85%**
#4 MC-4 Solids "White and Black Mixed"					
Untreated Control	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Wipe	60%	30%	30%	30%	**38%**
Graffiti Release	60%	30%	30%	30%	**38%**
Graffiti Barrier S	**Red Paint**	**Black Marker**	**Green Marker**	**Red Marker**	**% Avg. Removal**
Graffiti Wipe	98%	100%	80%	75%	**88%**
Graffiti Release	80%	100%	75%	80%	**84%**

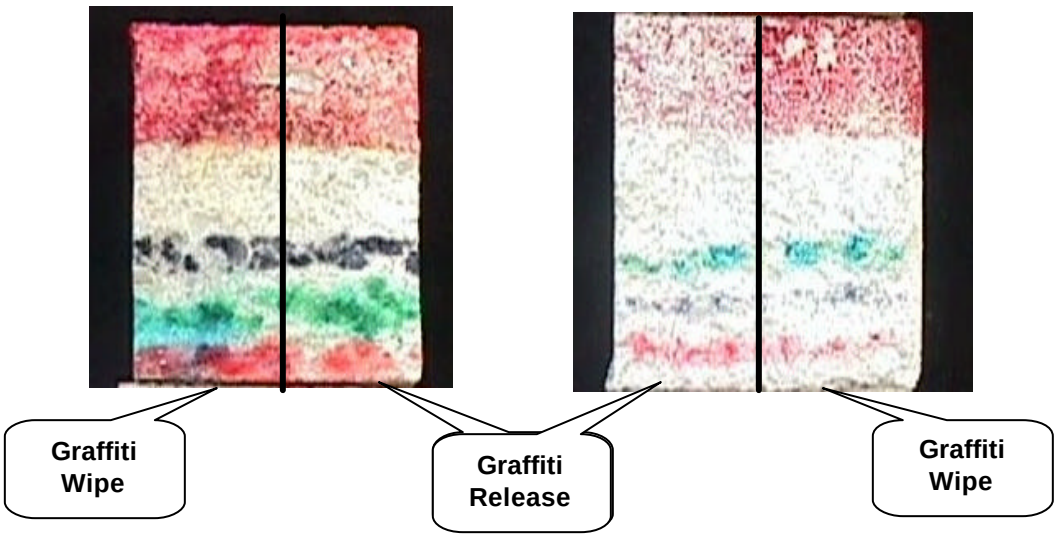
PHOTOGRAPHS – Graffiti Control

#1 B50 Rough Faced Modular Cored "Solid White"

AFTER
Graffiti Removal

Untreated Control

Graffiti Barrier S



CONCLUSIONS – Graffiti Control

Based upon laboratory evaluations, Defacer Eraser® Graffiti Wipe most effective at removing graffiti from the submitted samples. Graffiti removal was improved when the submitted samples were treated with Defacer Eraser® Graffiti Barrier S prior to graffiti application.

RECOMMENDATIONS – GRAFFITI CONTROL

Recommendations for graffiti control treatment for each type of concrete brick submitted by Claytons Masonry Centers 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
#1 B50 Rough Faced Modular Cored "Solid White"	Defacer Eraser® Graffiti Barrier S	Defacer Eraser® Graffiti Wipe
#2 B50 Rough Faced Modular Solids "Solid White"	Defacer Eraser® Graffiti Barrier S	Defacer Eraser® Graffiti Wipe
#3 MC-4 Rough Faced Cored "White and Black Mixed"	Defacer Eraser® Graffiti Barrier S	Defacer Eraser® Graffiti Wipe
#4 MC-4 Rough Faced Solids "White and Black Mixed"	Defacer Eraser® Graffiti Barrier S	Defacer Eraser® Graffiti Wipe

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 graffiti control product and procedure for a particular project. See product literature for application and product information.

Carmen M. Niven
Project Testing Coordinator

CMN/

Laboratory Report

Pallet Tag Program Evaluation

Claytons Masonry Centers
Freehold, NJ

Project No. **0206-21 PTP**

Prepared For:

Craig MacFarlane

Claytons Masonry Centers
225 Throckmorton Street
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Prepared By:

PROSOCO, Inc.
September 2002