

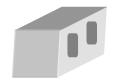
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#### **ATTACHMENTS**

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





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FOR: Guy Delia cc: Joe Talecki

John Bourne Stephen Dean

**SUBJECT:** Glenwood Masonry Supply

Brooklyn, NY

DATE: September 10, 2002

**PROJECT:** 0205-08 PTP

SAMPLES SUBMITTED: Five types of split-face concrete block and three types of split-face concrete brick all

with W.R. Grace Dry Block.

Block	Color	Size
(4) Split-face CMU's	"Red"	16" x 8" x 8"
(4) Split-face CMU's	"Glenwood White"	16" x 8" x 8"
(4) Split-face CMU's	"Natural Glenwood"	16" x 8" x 8"
(4) Split-face CMU's	"Beige"	16" x 8" x 8"
(4) Split-face CMU's	"White B Grade"	16" x 8" x 8"
(5) Split-face concrete bricks	"White"	8" x 3¾" x 2½"
(5) Split-face concrete bricks	"Mustard"	8" x 3¾" x 2½"
(5) Split-face concrete bricks	"Pink"	8" x 3¾" x 2½"

Submitted by: Joe Talecki





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#### PURPOSE OF TESTING:

Five integrally colored split-face concrete blocks and three integrally colored split-face concrete bricks with large, small and fine aggregate were submitted for testing using PROSOCO's new construction cleaning, water repellent products, and graffiti control products.

**A.** Cleaning Concrete Masonry Units: Sure Klean<sup>®</sup> Custom Masonry Cleaner and Sure Klean<sup>®</sup> Concrete Brick Cleaner\* were evaluated for removal of laboratory applied mortar.

To simulate new construction soiling, all CMU's are placed on a bench with finished surface facing upward. Hollow cylinders measuring 50 mm in diameter and 75 mm tall are positioned on top of each CMU and filled with a wet mixture of Ash Grove<sup>®</sup> Type S mortar. The wet, mortar-filled cylinder is allowed to remain in contact with the CMU for 10 minutes before removal.

Heavy deposits of mortar are removed with dry scraping after 24 hours. Prepared cleaning solutions are then evaluated for their effectiveness in removing residual Ash Grove<sup>®</sup> Type S mortar staining after 3 days, 7 days, and 14 days of curing.

**B. Color Uniformity Testing -** Sure Klean<sup>®</sup> Custom Masonry Cleaner and Sure Klean<sup>®</sup> Concrete Brick 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.

<u>Aggregate Exposure</u> 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.

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

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

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

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

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<sup>®</sup> Weather Seal Siloxane WB Concentrate was evaluated for their ability to provide water repellency to the submitted samples.
- **D. Graffiti Control** Defacer Eraser<sup>®</sup> Graffiti Barrier S was evaluated for its ability to control graffiti on the submitted samples. Defacer Eraser<sup>®</sup> Graffiti Release was evaluated for their ability to remove graffiti from the submitted samples.

\*In the original report, this product was called Sure Klean® Burnished Custom Masonry Cleaner. This report was revised when the product name was changed.





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#### PRODUCTS EVALUATED FOR CLEANING AND COLOR UNIFORMITY

Sample	Product	Dilution
All Submitted Split-face CMU's and Split-face	Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:2, 1:4, 1:6
Concrete Bricks	Sure Klean <sup>®</sup> Concrete Brick Cleaner	1:2, 1:3

#### WATER REPELLENT PRODUCTS EVALUATED

Sample	Product	Dilution
All Submitted Split-face CMU's and Split-face Concrete Bricks	Sure Klean <sup>®</sup> Weather Seal Siloxane WB Concentrate	1:9, 1:14

#### **GRAFFITI CONTROL PRODUCTS EVALUATED**

Sample	Product	Dilution
All Submitted Split-face CMU's and Split-face Concrete Bricks	Defacer Eraser <sup>®</sup> Graffiti Barrier S	1:9, 1:14

#### **GRAFFITI REMOVAL PRODUCTS EVALUATED**

Sample	Product	Dilution
All Submitted Split-face CMU's and Split-face Concrete Bricks	Defacer Eraser <sup>®</sup> Graffiti Release	1:9, 1:14





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#### SECTION A - CLEANING INTEGRALLY COLORED CMU's

#### **DESCRIPTION OF PRODUCTS EVALUATED**

These cleaning trials were conducted to determine the optimal cleaning/cure time combination.

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

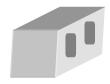
**Sure Klean® Concrete Brick Cleaner** – Removes common construction and atmospheric staining from concrete brick and other architectural concrete surfaces. This general-purpose, non-etching, acidic cleaner removes rust, mud, oil, atmospheric dirt, mortar smears and other stains without altering the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

#### **TEST METHOD – Cleaning**

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 for each cleaner:
- 4. Reapply the products and moderately agitate with a brush.
- 5. Pressure rinse thoroughly.\*
- 6. Allow the surface to dry for at least 18 hours and visually examine.
- \* Pressure rinsing was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.





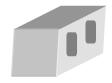
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#### **TEST RESULTS - Cleaning**

% removal

	'Red" split-f	face block		
Product	Dilution	3 day	7 day	14 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean <sup>®</sup> Concrete Brick Cleaner	1:3	100%	100%	100%
"Glany	vood White"	' split-face block	<u> </u>	
Product	Dilution	3 day	7 day	14 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%
	-			
"Natura	l Glenwood	" split-face bloc	k	
Product	Dilution	3 day	7 day	14 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean <sup>®</sup> Concrete Brick Cleaner	1:3	100%	100%	100%
£ £	Beige" split	-face block		
Product	Dilution	3 day	7 day	14 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%
		split-face block		44.
Product	Dilution	3 day	7 day	14 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%





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#### **TEST RESULTS – Cleaning Continued**

% removal

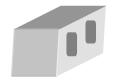
"White" split-face concrete brick				
Product	Dilution	3 day	7 day	14 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%
"Mustai	rd" split-fac	ce concrete brick	(	
Product	Dilution	3 day	7 day	14 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%
"Pink	" split-face	concrete brick		
Product	Dilution	3 day	7 day	14 day
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%

#### **CONCLUSIONS - Cleaning**

Based upon the test data, all of the submitted concrete block and 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<sup>®</sup> Custom Masonry Cleaner and Sure Klean<sup>®</sup> Concrete Brick Cleaner tested affected the substrate in a similar manner, removing slight to heavy concentrations of pigmented matrix from the split-face concrete blocks and split-face concrete brick faces, exposing small and large aggregate, and enhancing the natural appearance of the integrally colored concrete masonry unit.





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#### **RECOMMENDED PRODUCTS AND DILUTIONS - CLEANING**

Recommendations for cleaning for each type of CMU and concrete brick submitted by Glenwood Masonry Supply, Brooklyn, NY are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar.

CMU Type	Color	New Construction Cleaning (Type S mortar, 14 day)
Split-face block	"Red"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Spiit-lace block	Red	Sure Klean <sup>®</sup> Concrete Brick Cleaner (1:3)
Split-face block	"Glenwood	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Spiit-lace block	White"	Sure Klean <sup>®</sup> Concrete Brick Cleaner (13)
Split-face block	"Natural	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Spiit-lace block	Glenwood"	Sure Klean <sup>®</sup> Concrete Brick Cleaner (1:3)
Split food blook	"Daire"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Split-face block	"Beige"	Sure Klean <sup>®</sup> Concrete Brick Cleaner (1:3)
Split-face block	"White B	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Split-lace block	Grade"	Sure Klean <sup>®</sup> Concrete Brick Cleaner (1:3)
Split-face	"White"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Concrete brick	vviiite	Sure Klean <sup>®</sup> Concrete Brick Cleaner (1:3)
Split-face	"Muotord"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Concrete brick	"Mustard" -	Sure Klean <sup>®</sup> Concrete Brick Cleaner (1:3)
Split-face	Split-face "B: L"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Concrete brick	"Pink"	Sure Klean <sup>®</sup> Concrete Brick Cleaner (1:3)

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

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





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#### **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® Concrete Brick Cleaner** – Removes common construction and atmospheric staining from concrete brick and other architectural concrete surfaces. This general-purpose, non-etching, acidic cleaner removes rust, mud, oil, atmospheric dirt, mortar smears and other stains without altering the surface texture. Concrete Brick Cleaner adds depth to colors and brightens white matrices and exposed aggregate.

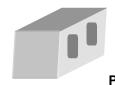
#### **TEST METHOD – Color Uniformity Testing:**

Dilution ratios refer to mixtures of concentrated cleaner: fresh water.

- 1. Prewet the surface with water.
- 2. Apply each cleaner at the appropriate dilutions.
- 3. Allow appropriate dwell time, as specified.
- 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.

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





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#### **TEST RESULTS – Color Uniformity**

Substrate: Split-face block	Pigment Col	or: "Red"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Sure Klean® Custom Masonry Cleaner	1:2	2	3
Sure Klean® Custom Masonry Cleaner	1:4	3	3
Sure Klean® Custom Masonry Cleaner	1:6	3	4
Sure Klean® Concrete Brick Cleaner	1:2	3	4
Sure Klean® Concrete Brick Cleaner	1:3	4	4
Substrate: Split-face block	Pigment Col	or: "Glenwood White"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:2	4	4
Sure Klean® Custom Masonry Cleaner	1:4	4	4
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	3	4
Sure Klean <sup>®</sup> Concrete Brick Cleaner	1:2	4	4
Sure Klean® Concrete Brick Cleaner	1:3	3	4
Substrate: Split-face block	Pigment Col	or: "Natural Glenwood"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:2	3	4
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:4	3	4
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	4	3
Sure Klean <sup>®</sup> Concrete Brick Cleaner	1:2	4	3
Sure Klean® Concrete Brick Cleaner	1:3	4	4
Substrate: Split-face block	Pigment Col	or: "Beige"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:2	3	4
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:4	4	4
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	3	4
Sure Klean <sup>®</sup> Concrete Brick Cleaner	1:2	4	3
Sure Klean® Concrete Brick Cleaner	1:3	4	3

Scale used for reporting results of both categories

0 – **Worst** match to through-body

3 – **Good** match to through-body

1 – **Poor** match to through-body

4 - **Best** match to through-body

2 – **Fair** match to through-body





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#### **TEST RESULTS – Color Uniformity Continued**

Substrate: Split-face block	Pigment Co	lor: "White B Grade"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Sure Klean® Custom Masonry	1:2	4	4
Sure Klean® Custom Masonry	1:4	4	4
Sure Klean® Custom Masonry	1:6	3	4
Sure Klean <sup>®</sup> Concrete Brick Cleaner	1:2	4	4
Sure Klean <sup>®</sup> Concrete Brick Cleaner	1:3	3	4
Substrate: Split-face brick	Pigment Co	lor: "White"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Sure Klean® Custom Masonry	1:2	4	4
Sure Klean <sup>®</sup> Custom Masonry	1:4	4	3
Sure Klean® Custom Masonry	1:6	4	3
Sure Klean® Concrete Brick Cleaner	1:2	4	3
Sure Klean <sup>®</sup> Concrete Brick Cleaner	1:3	4	3
Substrate: Split-face brick	Pigment Co	lor: "Mustard"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Sure Klean <sup>®</sup> Custom Masonry	1:2	4	4
Sure Klean <sup>®</sup> Custom Masonry	1:4	3	4
Sure Klean <sup>®</sup> Custom Masonry	1:6	3	3
Sure Klean® Concrete Brick Cleaner	1:2	3	4
Sure Klean <sup>®</sup> Concrete Brick Cleaner	1:3	3	3
Substrate: Split-face brick	Pigment Co	lor: "Pink"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Sure Klean <sup>®</sup> Custom Masonry	1:2	4	4
Sure Klean <sup>®</sup> Custom Masonry	1:4	3	4
Sure Klean <sup>®</sup> Custom Masonry	1:6	3	3
Sure Klean® Concrete Brick Cleaner	1:2	3	4
Sure Klean® Concrete Brick Cleaner	1:3	3	3

Scale used for reporting results of both categories

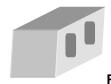
0 – **Worst** match to through-body

3 - Good match to through-body

1 - **Poor** match to through-body

4 - Best match to through-body

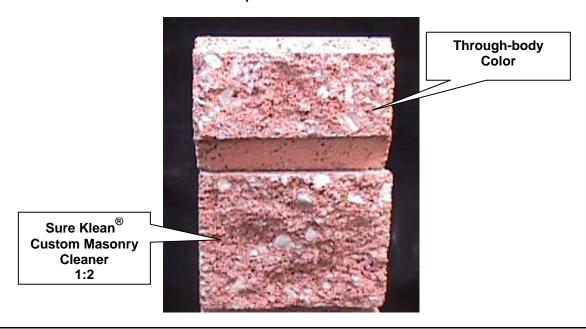
2 - Fair match to through-body



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#### **PHOTOGRAPHS – Color Uniformity**

"Pink" Split-face concrete brick



#### **CONCLUSIONS - COLOR UNIFORMITY:**

All dilutions of Sure Klean<sup>®</sup> Custom Masonry Cleaner and Sure Klean<sup>®</sup> Concrete Brick 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.





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#### **RECOMMENDATIONS - COLOR UNIFORMITY**

Recommendations for color uniformity for each type of CMU submitted by Glenwood Masonry Supply, Brooklyn, NY are provided in the chart below. Recommendations are based on the optimum dilution that provides the best color uniformity.

CMU Type	Color	Color Uniformity
Split-face block	"Red"	Sure Klean <sup>®</sup> Concrete Brick Cleaner (1:3)
Split-face block	"Glenwood	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:2; 1:6)
Split-lace block	White"	Sure Klean <sup>®</sup> Concrete Brick Cleaner (1:2)
Split-face block	"Natural Glenwood"	Sure Klean <sup>®</sup> Concrete Brick Cleaner (1:3)
Split-face block	"Beige"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:4)
Split face block	ce block "White B Grade"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:2; 1:4)
Spiil-lace block		Grade"
Split-face Concrete brick	"White"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:2)
Split-face Concrete brick	"Mustard"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:2)
Split-face Concrete brick	"Pink"	Sure Klean <sup>®</sup> 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 additional application and product information.





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#### **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 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.

#### **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 3 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.



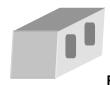


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#### **TEST RESULTS - Protective Water Repellents**

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

	RESULTS			
"Red" split-face				
Untreated Control	< 40 mph			
Siloxane WB Concentrate (1:9)	60 mph			
Siloxane WB Concentrate (1:14)	57 mph			
"Glenwood White" split-fac	ce			
Untreated Control	< 40 mph			
Siloxane WB Concentrate (1:9)	59 mph			
Siloxane WB Concentrate (1:14)	60 mph			
"Natural Glenwood" split-fa	ce			
Untreated Control	< 40 mph			
Siloxane WB Concentrate (1:9)	59 mph			
Siloxane WB Concentrate (1:14)	59 mph			
"Beige" split-face				
Untreated Control	< 40 mph			
Siloxane WB Concentrate (1:9)	60 mph			
Siloxane WB Concentrate (1:14)	58 mph			
"White B grade" split-face	)			
Untreated Control	< 40 mph			
Siloxane WB Concentrate (1:9)	59 mph			
Siloxane WB Concentrate (1:14)	60 mph			
"White" split-face brick				
Untreated Control	54 mph			
Siloxane WB Concentrate (1:9)	58 mph			
Siloxane WB Concentrate (1:14)	58 mph			



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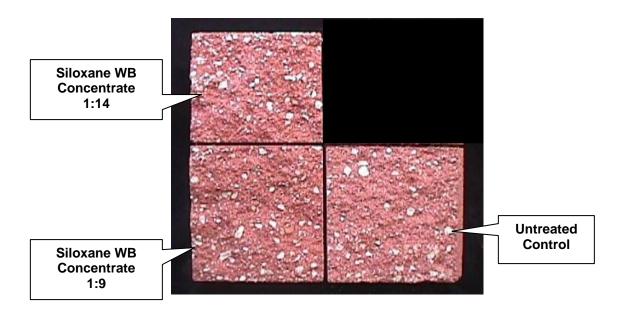
#### **TEST RESULTS - Protective Water Repellents Continued**

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

	RESULTS		
"Mustard" split-face brick			
Untreated Control	58 mph		
Siloxane WB Concentrate (1:9)	59 mph		
Siloxane WB Concentrate (1:14)	59 mph		
"Pink" split-face brick			
Untreated Control	< 40 mph		
Siloxane WB Concentrate (1:9)	59 mph		
Siloxane WB Concentrate (1:14)	58 mph		

#### **PHOTOGRAPHS – Protective Water Repellents**

#### "Red" Split-face CMU





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#### **CONCLUSIONS - Protective Water Repellents**

Based upon laboratory evaluations, Sure Klean<sup>®</sup> Weather Seal Siloxane WB Concentrate diluted with nine and fourteen parts fresh water provided above average water repellency to all of the submitted samples.

#### **RECOMMENDATIONS - PROTECTIVE WATER REPELLENTS**

Recommendations for water repellency treatment for each type of CMU submitted by Glenwood Masonry Supply, Brooklyn, NY 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.

CMU Type	Color	Water Repellent
Split-face block	"Red"	Sure Klean <sup>®</sup> Weather Seal Siloxane WB Concentrate (1:9) 1:14)
Split-face block	"Glenwood White"	Sure Klean <sup>®</sup> Weather Seal Siloxane WB Concentrate (1:9) 1:14)
Split-face block	"Natural Glenwood"	Sure Klean <sup>®</sup> Weather Seal Siloxane WB Concentrate (1:9) 1:14)
Split-face block	"Beige"	Sure Klean <sup>®</sup> Weather Seal Siloxane WB Concentrate (1:9) 1:14)
Split-face block	"White B Grade"	Sure Klean <sup>®</sup> Weather Seal Siloxane WB Concentrate (1:9) 1:14)
Split-face Concrete brick	"White"	Sure Klean <sup>®</sup> Weather Seal Siloxane WB Concentrate (1:9) 1:14)
Split-face Concrete brick	"Mustard"	Sure Klean <sup>®</sup> Weather Seal Siloxane WB Concentrate (1:9) 1:14)
Split-face Concrete brick	"Pink"	Sure Klean <sup>®</sup> Weather Seal Siloxane WB Concentrate (1:9) 1:14)

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





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#### **SECTION D - GRAFFITI CONTROL**

#### **DESCRIPTION OF PRODUCTS EVALUATED**

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

#### **Graffiti Control Treatments**

**Defacer Eraser**<sup>®</sup> **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<sup>®</sup> 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.

#### **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<sup>®</sup> 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<sup>®</sup> Graffiti Barrier S. Removal of the graffiti agents was attempted 24 hours after application of the graffiti agents, using Defacer Eraser<sup>®</sup> Graffiti Release.

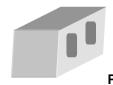
#### TEST METHOD - Graffiti Control

Chemical cleaners were evaluated using the following procedure:

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

- 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.



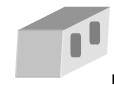


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#### **TEST RESULTS - Graffiti Control**

"Red" split-face block						
Untreated Control	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal	
Graffiti Release	95%	90%	85%	85%	89%	
Graffiti Barrier S	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal	
Graffiti Release	100%	97%	85%	85%	92%	
	"Glenwood Wh	ite" split-face	block			
Untreated Control	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal	
Graffiti Release	50%	40%	30%	30%	38%	
Graffiti Barrier S	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal	
Graffiti Release	99%	99%	80%	80%	90%	
"	Natural Glenwo	od" split-face	e block			
Untreated Control	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal	
Graffiti Release	90%	40%	50%	50%	58%	
Graffiti Barrier S	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal	
Graffiti Release	100%	100%	50%	50%	75%	
	"Beige" split-face block					
Untreated Control	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal	
Graffiti Release	100%	90%	90%	90%	93%	
Graffiti Barrier S	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal	
Graffiti Release	99%	99%	98%	98%	99%	
	"White B Grad	e" split-face l	block			
Untreated Control	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal	
Graffiti Release	90%	50%	40%	40%	55%	
Graffiti Barrier S	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal	
Graffiti Release	95%	99%	60%	60%	57%	
	"White" split-face brick					
Untreated Control	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal	
Graffiti Release	10%	20%	20%	20%	17%	
Graffiti Barrier S	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal	
Graffiti Release	30%	100%	85%	85%	75%	



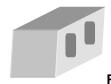


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#### **TEST RESULTS – Graffiti Control Continued**

"Mustard" split-face brick					
Untreated Control	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Graffiti Release	20%	30%	30%	30%	27%
Graffiti Barrier S	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Graffiti Release	80%	98%	85%	95%	89%
"Pink" split-face brick					
Untreated Control	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Graffiti Release	80%	50%	50%	50%	57%
Granni Nelease	00%	3076	5	30 70	31 /0
Graffiti Barrier S	Black Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal





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#### **PHOTOGRAPHS - Graffiti Control**

#### "Red" Split-face CMU

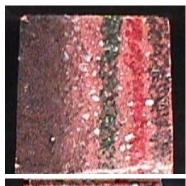
Untreated Control BEFORE





**AFTER** 

Graffiti Barrier S BEFORE





**AFTER** 

#### **CONCLUSIONS - Graffiti Control**

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





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#### **RECOMMENDATIONS – GRAFFITI CONTROL**

Recommendations for graffiti control treatment for each type of CMU submitted by Glenwood Masonry Supply, Brooklyn, NY 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.

CMU Type	Graffiti Repellents	Graffiti Removers		
"Red" Split-face block	Defacer Eraser <sup>®</sup> Graffiti Barrier S	Defacer Eraser <sup>®</sup> Graffiti Release		
"Glenwood White" Split-face block	Defacer Eraser <sup>®</sup> Graffiti Barrier S	Defacer Eraser <sup>®</sup> Graffiti Release		
"Natural Glenwood" Split-face block	Defacer Eraser <sup>®</sup> Graffiti Barrier S	Defacer Eraser <sup>®</sup> Graffiti Release		
"Beige" Split-face block	Defacer Eraser <sup>®</sup> Graffiti Barrier S	Defacer Eraser <sup>®</sup> Graffiti Release		
"White B Grade" Split-face block	Defacer Eraser <sup>®</sup> Graffiti Barrier S	Defacer Eraser <sup>®</sup> Graffiti Release		
"White" Split-face Concrete brick	Defacer Eraser <sup>®</sup> Graffiti Barrier S	Defacer Eraser <sup>®</sup> Graffiti Release		
"Mustard" Split-face Concrete brick	Defacer Eraser <sup>®</sup> Graffiti Barrier S	Defacer Eraser <sup>®</sup> Graffiti Release		
"Pink" Split-face Concrete brick	Defacer Eraser <sup>®</sup> Graffiti Barrier S	Defacer Eraser <sup>®</sup> Graffiti Release		

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 additional application and product information.

Carmen M. Niven

**Project Testing Coordinator** 

ainer M. Viren

CMN/



### Laboratory Report

### **Pallet Tag Program Evaluation**

# Glenwood Masonry Supply Brooklyn, NY

Project No. 0205-08 PTP

Prepared For:

**Guy Delia** 

Glenwood Masonry Supply 4100 Glenwood Road Brooklyn, NY 11210

Prepared By:



PROSOCO, Inc. September 2002