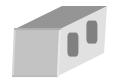


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#### **ATTACHMENTS**

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





Page 3

FOR: David Wheeler cc: Jim Lucas

Perry Surber John Bourne Stephen Dean

**SUBJECT:** Wheeler Corporation

Shelbyville, IN

DATE: November 4, 2002

**PROJECT:** 0209-11 PTP

**SAMPLES SUBMITTED:** Eight split-face concrete block.

<u>Block</u>	<u>Color</u>	<u>Size</u>
(4) Split-face CMU's w/Addiment W-10	"Maroon 2"	8" x 8" X 16"
(4) Split-face CMU's w/Addiment W-10	"Walnut Brown"	8" x 8" X 16"
(4) Split-face CMU's	"FV Red"	8" x 8" X 16"
(4) Split-face CMU's	"Natural Grey"	8" x 8" X 16"
(4) Split-face CMU's w/Addiment W-10	"Patch Pewter"	8" x 8" X 16"
(4) Split-face CMU's w/Addiment W-10	"Roan Black" (course aggregate is limestone)	8" x 8" X 16"
(4) Split-face CMU's w/Addiment W-10	"Duff Buff"	8" x 8" X 16"
(4) Split-face CMU's w/Addiment W-10	"Chestnut Lite"	8" x 8" X 16"





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#### PURPOSE OF TESTING:

Eight integrally colored split-face concrete blocks 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 was 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 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 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.

<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

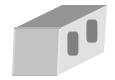
#### \* NOTE: When cleaning integrally colored CMU.

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 and Sure Klean<sup>®</sup> Custom Masonry Sealer were evaluated for their ability to provide water repellency to the submitted samples.
- **D. Graffiti Control** Sure Klean<sup>®</sup> Weather Seal Blok-Guard<sup>®</sup> & Graffiti Control was evaluated for its ability to control graffiti on the submitted samples. Defacer Eraser<sup>®</sup> Fast Acting Stripper and Defacer Eraser<sup>®</sup> Graffiti Wipe were evaluated for their ability to remove graffiti from the submitted samples.





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#### PRODUCTS EVALUATED FOR CLEANING AND COLOR UNIFORMITY

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

#### WATER REPELLENT PRODUCTS EVALUATED

Sample	Product	Dilution
"Roan Black" Only	Sure Klean <sup>®</sup> Weather Seal Siloxane WB Concentrate	1:9, 1:14
All Submitted Split-face CMU's	Sure Klean <sup>®</sup> Custom Masonry Sealer	Concentrate

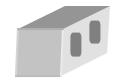
#### **GRAFFITI CONTROL PRODUCTS EVALUATED**

Sample	Product
All submitted Split-face CMU's	Sure Klean <sup>®</sup> Weather Seal Blok-Guard <sup>®</sup> & Graffiti Control

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

Sample	Product
All submitted Split-face	Sure Klean <sup>®</sup> Fast Acting Stripper
CMU's	Defacer Eraser <sup>®</sup> Graffiti Wipe





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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.

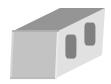
**Sure Klean® Custom Masonry Cleaner** – A general purpose, concentrated acidic cleaner for most custom masonry and colored concrete. Removes concrete splashes, excess mortar, mud, heavy efflorescence and surface soiling, leaving the masonry clean and uniform with no acid burning or streaking. Liquid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

#### **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.
- 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.





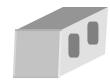
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#### **TEST RESULTS - Cleaning**

#### % removal

	"Maroon 2" split-fac	e block		
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	100%	100%	100%
Custom Masonry Cleaner	1:4	100%	100%	100%
Custom Masonry Cleaner	1:6	100%	100%	100%
	"Walnut Brown" split-f			Т
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	100%	100%	100%
Custom Masonry Cleaner	1:4	100%	100%	100%
Custom Masonry Cleaner	1:6	100%	100%	100%
	(E)			
Doct of	"FV Red" split-face		<b>-</b> 1.	44 1
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	100%	100%	100%
Custom Masonry Cleaner	1:4	100%	100%	100%
Custom Masonry Cleaner	1:6	100%	100%	100%
	"Natural Grey" split-fa	ace block		
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	100%	100%	100%
Custom Masonry Cleaner	1:4	100%	100%	100%
Custom Masonry Cleaner	1:6	100%	100%	100%
-				
	"Patch Pewter" split-fa	ace block		
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	100%	100%	100%
Custom Masonry Cleaner	1:4	100%	100%	100%
Custom Masonry Cleaner	1:6	100%	100%	100%
	"Roan Black" split-fa			Γ
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	100%	100%	100%
Custom Masonry Cleaner	1:4	100%	100%	100%
Custom Masonry Cleaner	1:6	100%	100%	100%





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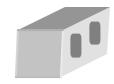
	"Duff Buff" split-fac	e block		
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	100%	100%	100%
Custom Masonry Cleaner	1:4	100%	100%	100%
Custom Masonry Cleaner	1:6	100%	100%	100%
•	"Chestnut Lite" split-f	ace block		
	"Chestnut Lite" split-f		7 day	14 day
Product	Dilution	3 day	7 day	14 day
			7 day 100%	<b>14 day</b> 100%
Product	Dilution	3 day		

#### **CONCLUSIONS - Cleaning**

Based upon the test data, all of the submitted concrete block were efficiently cleaned with each dilution of Sure Klean<sup>®</sup> Custom Masonry Cleaner. 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 tested affected the substrate in a similar manner, removing slight to heavy concentrations of pigmented matrix from the split-face concrete blocks 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**

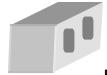
Recommendations for cleaning for each type of CMU submitted by Wheeler Corporation, Shelbyville, IN are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar.

CMU Type	Color	New Construction Cleaning (Type S mortar, 14 day)
Split-face block	"Maroon 2"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Split-face block	"Walnut Brown"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Split-face block	"FV Red"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Split-face block	"Natural Grey"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Split-face block	"Patch Pewter"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Split-face block	"Roan Black"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Split-face block	"Duff Buff""	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Split-face block	"Chestnut Lite"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)

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

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





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#### **SECTION B - COLOR UNIFORMITY:**

#### **DESCRIPTION OF PRODUCTS EVALUATED – Color Uniformity:**

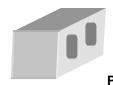
**Sure Klean® Custom Masonry Cleaner** – A general purpose, concentrated acidic cleaner for most custom masonry and colored concrete. Removes concrete splashes, excess mortar, mud, heavy efflorescence and surface soiling, leaving the masonry clean and uniform with no acid burning or streaking. Liquid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

#### **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.
- 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.





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

Substrate: Split-face block	Pigment Col	or: "Maroon 2"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	2	3
Custom Masonry Cleaner	1:4	3	3
Custom Masonry Cleaner	1:6	3	4
Substrate: Split-face block	Pigment Col	or: "Walnut Brown"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	3	4
Custom Masonry Cleaner	1:4	3	4
Custom Masonry Cleaner	1:6	4	4
Substrate: Split-face block	Pigment Col	or: "FV Red"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	3	3
Custom Masonry Cleaner	1:4	3	4
Custom Masonry Cleaner	1:6	4	4
Substrate: Split-face block	Pigment Col	or: "Natural Grey"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	3	4
Custom Masonry Cleaner	1:4	3	4
Custom Masonry Cleaner	1:6	4	4

Scale used for reporting results of both categories

0 – **Worst** match to through-body

3 - Good match to through-body

1 – **Poor** match to through-body

4 – **Best** match to through-body

2 - Fair match to through-body





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

Substrate: Split-face block	Pigment Cole	or: "Patch Pewter"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	4	4
Custom Masonry Cleaner	1:6	3	4
Substrate: Split-face block	Pigment Cold	or: "Roan Black"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	3	3
Custom Masonry Cleaner	1:4	3	4
Custom Masonry Cleaner	1:6	3	4
Substrate: Split-face block	Pigment Col	or: "Duff Buff"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	3	3
Custom Masonry Cleaner	1:4	4	3
Custom Masonry Cleaner	1:6	4	4
Outrates Only for a black	Diama and Oak	"Ol t t l it - "	
Substrate: Split-face block	Pigment Cold	or: "Chestnut Lite"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	3	3
Custom Masonry Cleaner	1:4	3	4
Custom Masonry Cleaner	1:6	4	4

Scale used for reporting results of both categories

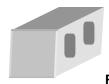
0 – **Worst** match to through-body

3 – **Good** match to through-body

1 – **Poor** match to through-body

4 – **Best** match to through-body

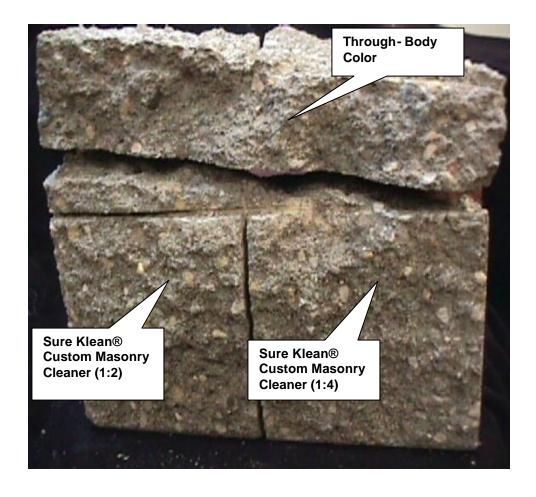
2 - **Fair** match to through-body

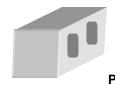


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**PHOTOGRAPH – Color Uniformity** 

### "Natural Grey" Split-face concrete block





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

All dilutions of Sure Klean<sup>®</sup> 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.

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

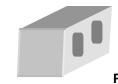
Recommendations for color uniformity for each type of CMU submitted by Wheeler Corporation in Shelbyville, IN are provided in the chart below. Recommendations are based on the optimum dilution that provides the best color uniformity.

CMU Type	Color	Color Uniformity
Split-face block	"Maroon 2"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:6)
Split-face block	"Walnut Brown"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:4)(1:6)
Split-face block	"FV Red"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:4)
Split-face block	"Natural Grey"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:4)
Split-face block	"Patch Pewter"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:4)(1:6)
Split-face block	"Roan Black"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:4)(1:6)
Split-face block	"Duff Buff"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:4)(1:6)
Split-face block	"Chestnut Lite"	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:4)(1:6)

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

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





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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<sup>®</sup> 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.

**Sure Klean<sup>®</sup> Custom Masonry Sealer--** A clear, solvent-based silicone elastomer formulated to weatherproof custom masonry units, cast stone, architectural concrete block, precast concrete, wood, and porous masonry. Custom Masonry Sealer penetrates and fills pores to prevent water penetration through exterior walls expose to normal weathering.

#### **SAMPLE PREPARATION - Protective Water Repellents:**

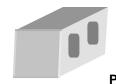
The submitted blocks were scored, allowed to dry, and to reabsorb atmospheric humidity for 24 hours prior to treatment. The treatment method consisted of a wet-on-wet brush application. All treatments were allowed to cure at least 3 days prior to testing.

#### **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 TECHNote RILEM Tube Test Procedures.





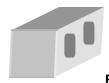
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#### **TEST RESULTS - Protective Water Repellents**

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

	RESULTS
"Maroon 2" split-face	
Untreated Control	< 40 mph
Custom Masonry Sealer	60 mph
"Walnut Brown" split-face	
Untreated Control	< 40 mph
Custom Masonry Sealer	60 mph
"FV Red" split-face	
Untreated Control	< 40 mph
Custom Masonry Sealer	60 mph
"Natural Grey" split-face	
Untreated Control	< 40 mph
Custom Masonry Sealer	60 mph
"Patch Pewter" split-face	
Untreated Control	< 40 mph
Custom Masonry Sealer	60 mph
"Roan Black" split-face	
Untreated Control	<40 mph
Siloxane WB Concentrate (1:9)	60 mph
Siloxane WB Concentrate (1:14)	59 mph
Custom Masonry Sealer	60 mph
"Duff Buff" split-face	
Untreated Control	<40 mph
Custom Masonry Sealer	60 mph
"Chestnut Lite" split-face	
Untreated Control	<40 mph
Custom Masonry Sealer	60 mph





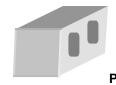
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#### **PHOTOGRAPHS – Protective Water Repellents**

"Natural Grey" Split-face CMU







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

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

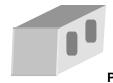
#### **RECOMMENDATIONS - PROTECTIVE WATER REPELLENTS**

Recommendations for water repellency treatment for each type of CMU submitted by Wheeler Corporation in Shelbyville, IN 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	"Maroon 2"	Sure Klean <sup>®</sup> Custom Masonry Sealer
Split-face block	"Walnut Brown"	Sure Klean <sup>®</sup> Custom Masonry Sealer
Split-face block	"FV Red"	Sure Klean <sup>®</sup> Custom Masonry Sealer
Split-face block	"Natural Grey"	Sure Klean <sup>®</sup> Custom Masonry Sealer
Split-face block	"Patch Pewter"	Sure Klean <sup>®</sup> Custom Masonry Sealer
Calit fo so blook	"Roan	Sure Klean <sup>®</sup> Weather Seal Siloxane WB Concentrate (1:9) (1:14)
Split-face block	Black"	Sure Klean <sup>®</sup> Custom Masonry Sealer
Split-face block	"Duff Buff"	Sure Klean <sup>®</sup> Custom Masonry Sealer
Split-face block	"Chestnut Lite"	Sure Klean <sup>®</sup> Custom Masonry Sealer

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**

**Sure Klean<sup>®</sup> Weather Seal Blok-Guard<sup>®</sup> & Graffiti Control** - A clear, solvent-based silicone elastomer formulated to weatherproof concrete block and other porous masonry materials. Blok-Guard<sup>®</sup> & Graffiti Control protects surfaces from repeated graffiti attacks without altering the natural appearance.

#### **Products Evaluated for Graffiti Removal**

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

**Sure Klean<sup>®</sup> Fast Acting Stripper-** A thixotropic stripping compound designed for removing coatings and epoxies from masonry, wood and metal surfaces. It also removes oil, grease, and waxes from concrete decks, tile, and terrazzo floors.

#### **Graffiti Agents**

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

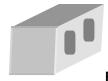
#### SAMPLE PREPARATION - Graffiti Control

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

Sections of the concrete samples were treated with two applications of Sure Klean<sup>®</sup> Weather Seal Blok-Guard<sup>®</sup> & Graffiti Control in accordance with PROSOCO, Inc.'s Product Guide application recommendations and then allowed to cure for a 24 hour period. At the end of the period, a visual adverse effects evaluation was made and the graffiti agents were applied to the substrates.

Spray paint and markers were applied as graffiti agents to all treated surfaces at least 24 hours following application of Sure Klean<sup>®</sup> Weather Seal Blok-Guard<sup>®</sup> & Graffiti Control. Removal of graffiti agents was attempted 24 hours after the application of the graffiti agents with Defacer Eraser<sup>®</sup> Graffiti Wipe and Sure Klean<sup>®</sup> Fast Acting Stripper.





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#### **TEST METHOD – Graffiti Control**

Chemical cleaners were evaluated using the following procedure:

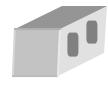
- 1. Apply the product to a dry surface, soiled with graffiti.
- 2. Allow appropriate dwell time:

- 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.

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

"Maroon 2" split-face block					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	98%	90%	90%	95%	93.25%
Graffiti Wipe	95%	90%	90%	85%	90.0%
Blok-Guard <sup>®</sup> & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	100%	95%	100%	97.5%
Graffiti Wipe	95%	90%	90%	100%	93.75%
"Walnut Brown" split-face block					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	98%	90%	90%	92%
Graffiti Wipe	95%	85%	85%	90%	88.75%
Blok-Guard <sup>®</sup> & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	100%	100%	97.5%
Graffiti Wipe	95%	100%	95%	95%	96.25%
"FV Red" split-face block					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	96%	90%	90%	92.75%
Graffiti Wipe	90%	90%	90%	85%	88.75%
Blok-Guard <sup>®</sup> & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	100%	100%	100%	98%	99.5%
Graffiti Wipe	100%	95%	95%	95%	96.25%





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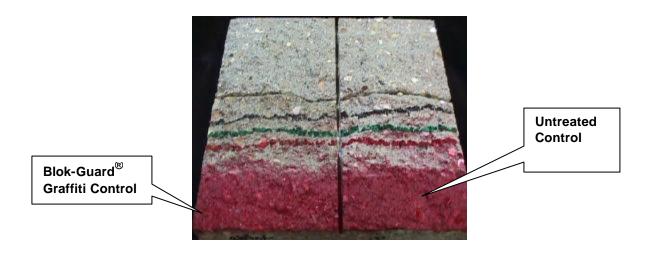
	"Natural Grey	y" split-face b	lock		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	85%	85%	85%	86.25%
Graffiti Wipe	92%	80%	80%	92%	86%
Blok-Guard <sup>®</sup> & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	95%	90%	90%	92.5%
Graffiti Wipe	98%	98%	95%	95%	96.5%
	"Patch Pewte	r" split-face b	lock		
Untreated Control	Red	Black	Green	Red	% Avg.
Unitieated Control	Paint	Marker	Marker	Marker	Removal
Fast Acting Stripper	90%	95%	90%	90%	91.25%
Graffiti Wipe	75%	80%	80%	85%	
Blok-Guard <sup>®</sup> & Graffiti Control	Red	Black	Green	Red	% Avg.
Blok-Guard & Grannii Control	Paint	Marker	Marker	Marker	Removal
Fast Acting Stripper	85%	95%	90%	90%	90%
Graffiti Wipe	80%	85%	85%	88%	84.5%
"Roan Black" split-face block					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	90%	85%	90%	88.75%
Graffiti Wipe	90%	80%	80%	80%	82.5%
Blok-Guard <sup>®</sup> & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	85%	100%	100%	100%	96.25%
Graffiti Wipe	90%	100%	95%	98%	95.75%
	"Duff Buff"	split-face blo	ck		
Untreated Control	Red	Black	Green	Red	% Avg.
	Paint	Marker	Marker	Marker	Removal
Fast Acting Stripper	85%	85%	90%	90%	87.5%
Graffiti Wipe	80%	70%	70%	65%	71.25%
Blok-Guard <sup>®</sup> & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	85%	100%	9*5%	100%	95%
Graffiti Wipe	96%	95%	90%	95%	94%
"Chestnut Lite" split-face block					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	90%	95%	93.75%
Graffiti Wipe	90%	85%	90%	85%	87.5%
Blok-Guard <sup>®</sup> & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	98%	95%	95%	94.5%
Graffiti Wipe	98%	98%	90%	95%	95.25%

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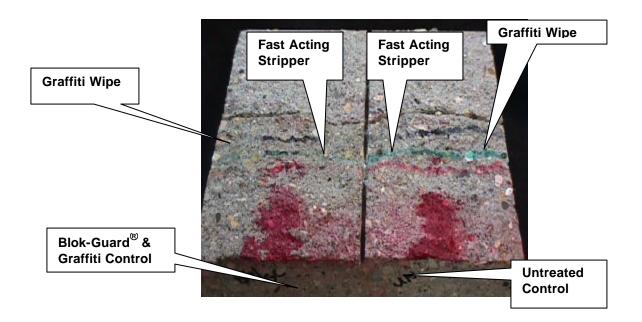
#### PHOTOGRAPHS - Graffiti Control

"Natural Grey" Split-face CMU

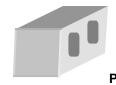
#### **Before Graffiti Removal**



#### After Graffiti Removal







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#### **CONCLUSIONS – Graffiti Control**

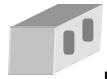
Based upon laboratory evaluations, Sure Klean<sup>®</sup> Fast Acting Stripper was most effective at removing graffiti from the submitted samples. Graffiti removal was improved when the submitted samples were treated with Sure Klean<sup>®</sup> Blok-Guard<sup>®</sup> Graffiti Control prior to graffiti application.

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

Recommendations for graffiti control treatment for each type of CMU submitted by Wheeler Corporation Shelbyille, IN. Recommendations are based on the treatment that proved most effective for providing graffiti repellency and the product that most effectively removed the graffiti on the sample types submitted.

CMU Type	Graffiti Repellents	Graffiti Removers	
"Maroon 2"	Sure Klean <sup>®</sup> Weather Seal Blok-	Sure Klean <sup>®</sup> Fast Acting Stripper	
Split-face block	Guard <sup>®</sup> & Graffiti Control	Defacer Eraser <sup>®</sup> Graffiti Wipe	
"Walnut Brown"	Sure Klean <sup>®</sup> Weather Seal Blok- Guard <sup>®</sup> & Graffiti Control	Sure Klean <sup>®</sup> Fast Acting Stripper	
Split-face block		Defacer Eraser <sup>®</sup> Graffiti Wipe	
"FV Red"	Sure Klean <sup>®</sup> Weather Seal Blok-	Sure Klean <sup>®</sup> Fast Acting Stripper	
Split-face block	Guard <sup>®</sup> & Graffiti Control	Defacer Eraser <sup>®</sup> Graffiti Wipe	
"Natural Grey" Split-face block	Sure Klean <sup>®</sup> Weather Seal Blok- Guard <sup>®</sup> & Graffiti Control	Sure Klean <sup>®</sup> Fast Acting Stripper	
		Defacer Eraser <sup>®</sup> Graffiti Wipe	
"Patch Pewter" Split-face block	Sure Klean <sup>®</sup> Weather Seal Blok- Guard <sup>®</sup> & Graffiti Control	Sure Klean <sup>®</sup> Fast Acting Stripper	
"Roan Black" Split-face block	Sure Klean <sup>®</sup> Weather Seal Blok- Guard <sup>®</sup> & Graffiti Control	Sure Klean <sup>®</sup> Fast Acting Stripper	
		Defacer Eraser <sup>®</sup> Graffiti Wipe	
"Duff Buff" Split-face block	Sure Klean <sup>®</sup> Weather Seal Blok- Guard <sup>®</sup> & Graffiti Control	Sure Klean <sup>®</sup> Fast Acting Stripper	
		Defacer Eraser <sup>®</sup> Graffiti Wipe	
"Chestnut Lite"	Sure Klean <sup>®</sup> Weather Seal Blok-	Sure Klean <sup>®</sup> Fast Acting Stripper	
Split-face block	Guard <sup>®</sup> & Graffiti Control	Defacer Eraser <sup>®</sup> Graffiti Wipe	





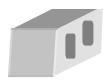
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Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate graffiti control product and procedure for a particular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

M. charl Maglerne

Michael Meglemre Technical Analyst

MM/



### Laboratory Report

### **Pallet Tag Program Evaluation**

# Wheeler Corporation Shelbyville, IN

Project No. 0209-11 PTP

Prepared For:

**David Wheeler** 

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Prepared By:



PROSOCO, Inc. November 2002