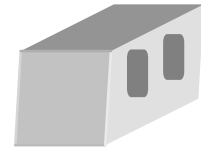




# PALLET CARD PROGRAM LABORATORY REPORT



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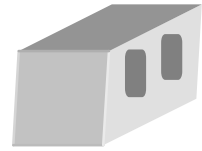
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## ATTACHMENTS

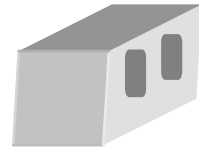
Technical Services TECH Note RILEM Test Method No. II.4

Product Data literature for all products evaluated

Material Safety Data Sheets for all products evaluated



# PALLET CARD PROGRAM LABORATORY REPORT



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**FOR:** Richard Mirowski  
cc: Mike Dickey

**SUBJECT:** Basalite Block  
605 Industrial Way  
Dixon, CA 95620

**DATE:** June 16, 2000

**PROJECT:** 0006-03PC

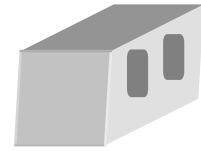
**SAMPLES SUBMITTED:**

<u>Block</u>	<u>Color</u>	<u>Size</u>
(A) Split Face w/ dry block	Dark Gray	15 1/2 x 7 3/4 x 7 5/8"
(B) Split Face	Dark Gray	15 1/2 x 7 3/4 x 7 5/8"
(C) Split Face w/ dry block	Yellow	15 1/2 x 7 3/4 x 7 5/8"
(D) Split Face	Yellow	15 1/2 x 7 3/4 x 7 5/8"
(E) Split Face	Gray	15 1/2 x 7 3/4 x 7 5/8"
(F) Split Face	Brown	15 1/2 x 7 3/4 x 7 5/8"

**Submitted by:** Richard Mirowski



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## PURPOSE OF TESTING:

The submitted concrete blocks, four integrally colored concrete blocks with large, small and fine aggregate and two integrally colored concrete blocks with dry block are to be tested using PROSOCO'S new construction cleaning and water repellent products to determine their effectiveness.

**A. Cleaning Integrally Colored CMUs-** Integrally colored (CMUs) frequently have high amounts of pigments concentrated on the surface of the cured concrete unit. Variation of surface pigment concentrations from one CMU to the next creates a blotchy appearance in the completed wall. Allowed to remain on the surface of the CMU, the weakly bound pigment will weather and streak, further detracting from the appearance of the completed CMU wall.

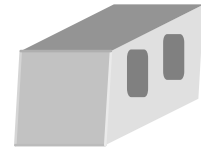
In addition to removing excess mortar and construction related soiling, the goal of any cleaning operation undertaken on integrally colored CMU should include removal of unnaturally high concentrations of surface pigment. By revealing the natural through-body color of the integrally colored unit, the overall color uniformity and weathering resistance of the completed CMU wall is improved.

**B. Adverse Effects-** Sure Klean® Custom Masonry Cleaner, was tested at various dilutions to determine if they would produce any adverse effects during the cleaning process. Adverse effects were evaluated visually and were based upon damage to the decorative brick surface coating, discoloration or erosion/etching of the masonry unit.

**C. Protective Water Repellents-** Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) and Sure Klean® Custom Masonry Sealer (concentrate) were evaluated for their ability to provide water repellency to the submitted samples.



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## CLEANING PRODUCTS EVALUATED

BLOCK TYPE	Custom Masonry Cleaner
All Submitted Block Types	1:2
	1:4
	1:6

## ADVERSE EFFECTS PRODUCTS EVALUATED

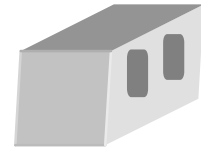
BLOCK TYPE	Custom Masonry Cleaner
All Submitted Block Types	1:2
	1:4
	1:6

## WATER REPELLENT PRODUCTS EVALUATED

Block Type	Custom Masonry Sealer	Siloxane WB Concentrate
All Submitted Block Types	Concentrate	1:9



# PALLET CARD PROGRAM LABORATORY REPORT



## 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:

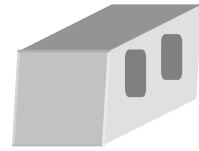
1. Prewet the surface with water.
2. Apply the cleaner.
3. Allow the appropriate dwell time, as specified.  
     Custom Masonry Cleaner(1:2, 1:4, 1:6)..... 2-3 minutes
4. Pressure rinse thoroughly.

### Test Results - Cleaning

Block Type	Cleaner	Dilution	Effectiveness
All Submitted Block Type	Custom Masonry Cleaner	1:2	100%
		1:4	100%
		1:6	100%



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## CONCLUSIONS - Cleaning:

Based on the test data, several conclusions can be made about the use of PROSOCO, Inc.'s products on the submitted integrally colored concrete blocks. In terms of cleaners, all dilutions of Sure Klean® Custom Masonry Cleaner tested affected the substrate in a similar manner, removing heavy concentrations of pigmented matrix from the block face, 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:

Based on these evaluations, all of the dilutions of Custom Masonry Cleaner tested can be recommended for job site testing. They all are effective in removing excess mortar, and they all assist in improving the color and uniformity of these concrete blocks. 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.

Note: If it is desirable to remove excess mortar while minimizing aggregate exposure and color enhancement, clean within 7-14 days of completion using Custom Masonry Cleaner diluted with 6 parts fresh water.

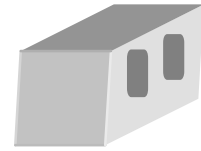
## SECTION B - ADVERSE EFFECTS:

### DESCRIPTION OF PRODUCTS EVALUATED - Adverse Effects:

**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.



# PALLET CARD PROGRAM LABORATORY REPORT



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## TEST METHOD - Adverse Effects:

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

Sure Klean<sup>®</sup> Custom Masonry Cleaner evaluated at dilution 1:2, 1:4, and 1:6. The following procedure was used:

1. Prewet the surface with water.
2. Apply each cleaner at the appropriate dilutions.
3. Allow 3-5 minute exposure time.
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 1850 psi with a warm water flow rate of 1.5 gallons per minute.

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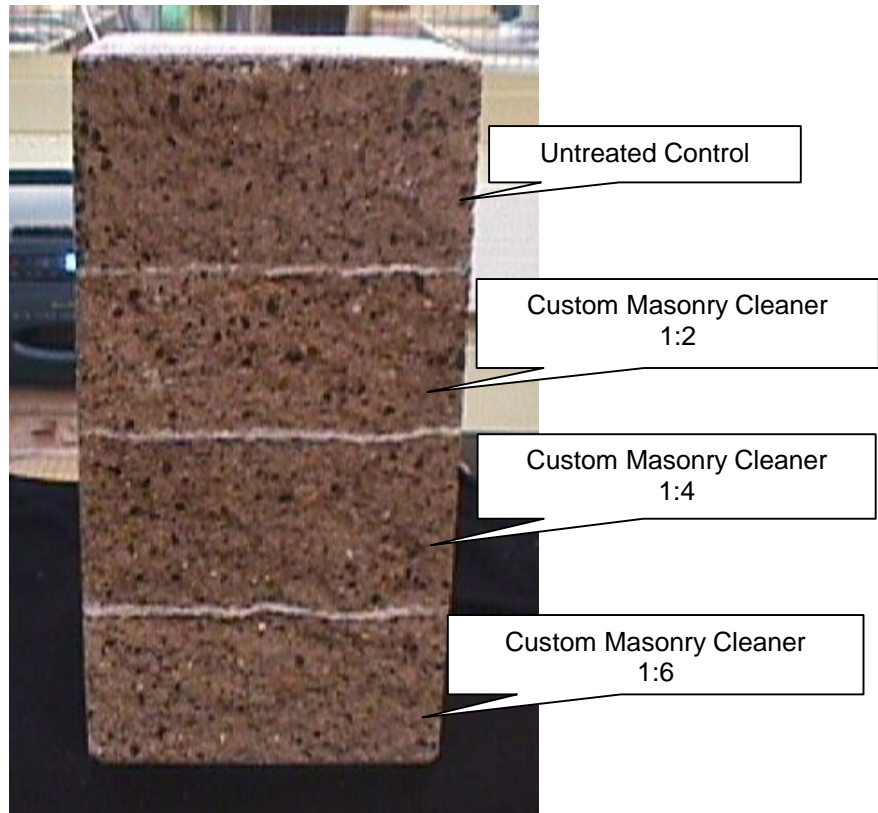
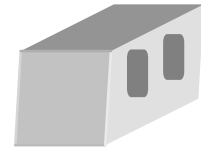
## TEST RESULTS - Adverse Effects Evaluation:

Cleaner	Adverse Effects
Custom Masonry Cleaner (1:2)	Moderate exposure of aggregate/ Darkening of matrix
Custom Masonry Cleaner (1:4)	Slight exposure of aggregate/ Darkening of matrix
Custom Masonry Cleaner (1:6)	Very slight exposure of aggregate/ Darkening of matrix



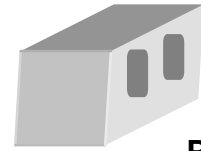


# PALLET CARD PROGRAM LABORATORY REPORT





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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

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### **DESCRIPTIONS OF PRODUCTS EVALUATED - Protective Water Repellents:**

**Sure Klean® Custom Masonry Sealer-** A clear, solvent-based silicone elastomer formulated to weatherproof custom masonry units, cast stone, and concrete block without altering the natural appearance. Custom Masonry Sealer penetrates and fills pores to prevent water penetration through exterior walls exposed to normal weathering as well as long-lasting protection against many types of graffiti.

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

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

The submitted blocks were allowed to dry and to reabsorb atmospheric humidity for 24 hours prior to treatment. The treatment method consisted of a wet-on-wet application. All treatments were allowed to cure for 7 days prior to testing.

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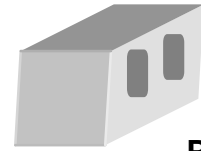
### **TEST METHODS - Protective Water Repellents:**

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

The water absorption tube test simulating wind driven and wind blown rain conditions was also performed. The water absorption tube produces a 60 mph dynamic wind pressure.



# PALLET CARD PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

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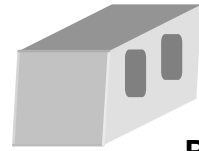
**TEST RESULTS - Protective Water Repellents:**

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

	Results
<b>(A) Dark Gray w/ dry block</b>	
Untreated Control	50mph
Custom Masonry Sealer	60mph
Siloxane WB	60mph
<b>(B) Dark Gray</b>	
Untreated Control	<40mph
Custom Masonry Sealer	60mph
Siloxane WB	60mph
<b>(C) Yellow w/ dry block</b>	
Untreated Control	50mph
Custom Masonry Sealer	60mph
Siloxane WB	60mph
<b>(D) Yellow</b>	
Untreated Control	<40mph
Custom Masonry Sealer	60mph
Siloxane WB	60mph
<b>(E) Gray</b>	
Untreated Control	<40mph
Custom Masonry Sealer	60mph
Siloxane WB	60mph
<b>(F) Brown</b>	
Untreated Control	<40mph
Custom Masonry Sealer	60mph
Siloxane WB	60mph



# PALLET CARD PROGRAM LABORATORY REPORT



PROSOCO, Inc.

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## CONCLUSIONS - Protective Water Repellents:

Based upon laboratory evaluations, all of the submitted CMU exhibited above average water repellency when treated with Sure Klean® Custom Masonry Sealer or Weather Seal® Siloxane WB Concentrate (diluted 1:9) with fresh water

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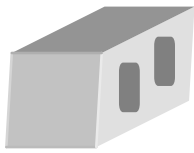
## RECOMMENDATIONS - Protective Water Repellents:

Based on evaluations, both Sure Klean® Custom Masonry Sealer or Siloxane WB Concentrate (1:9) can be recommended for job-site to provide water repellency. For added graffiti protection and ease of removal, Custom Masonry Sealer can be recommended.

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.

Carmen M. Hupp  
Technical Services Analyst

CMH/csm



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**Laboratory Report**

**Pallet Card Evaluation**

**Basalite Block  
Dixon, CA**

**Project No. 0006-03**

***Prepared For:***

**Richard Mirowski**

***Prepared By:***



***PROSOCO, Inc.  
June 2000***