



PALLET CARD PROGRAM LABORATORY REPORT

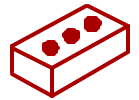


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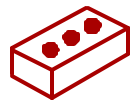
ATTACHMENTS

- SOP TEC014-1 ASTM C 67, C 97, C 140 Water Absorption
- SOP TEC015-1 Rilem Tube Testing
- Rilem II.4 Tech Note - Water Absorption Tube Test



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ProSoCo, Inc.

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FOR: Mr. Paul Miller
Richards Brick Co.
234 Springer Avenue
Edwardsville, Illinois

cc: Mike Dickey
Jack Sykes

SUBJECT: Richards Brick Co.
Edwardsville, Illinois

DATE: February 24, 1997

PROJECT: 9611-03 PC

SAMPLES SUBMITTED:

- Five new 1W55 "Autumn Rose" brick
Size: 2 1/4" x 3 1/2" x 8"
- Five new 1W49 "Saturn" brick
Size: 2 1/4" x 3 1/2" x 8"
- Five new 1W61 "Chateau" brick
Size: 2 1/4" x 3 1/2" x 8"
- Five new 1579 "New-Used" brick
Size: 2 1/4" x 3 1/2" x 8"
- Five new 1546 "Chesterfield"
Size: 2 1/4" x 3 1/2" x 8"
- Five new 1575 "Richtone" brick
Size: 2 1/4" x 3 1/2" x 8"
- Five new 1988 "Sandstone" brick
Size: 2 1/4" x 3 1/2" x 8"
- Five new 1B72 "Rustictone" brick
Size: 2 1/4" x 3 1/2" x 8"
- Five new 1204 "Smooth" brick
Size: 2 1/4" x 3 1/2" x 8"
- Five new 1064 "Flagstaff" brick
Size: 2 1/4" x 3 1/2" x 8"
- Five new 1K71 "Earthtone" brick
Size: 2 1/4" x 3 1/2" x 8"
- Five new 1675 "Smooth Sanded" brick
Size: 2 1/4" x 3 1/2" x 8"
- Five new 1N91 "Goshen" brick
Size: 2 1/4" x 3 1/2" x 8"
- Five new 1V75 "Vertical Score" brick
Size: 2 1/4" x 3 1/2" x 8"
- Five new 1704 "Mellowtone"
Size: 2 1/4" x 3 1/2" x 8"

Submitted by: Mr. Paul Miller
Richards Brick Co.
234 Springer Avenue
Edwardsville, Illinois



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PURPOSE OF TEST:

Samples of brick units were submitted to ProSoCo's Testing Laboratory with a request to identify and evaluate the effects and effectiveness of suitable cleaners and the performance of surface treatments.

- A. New Construction Cleaning** - Sure Klean[®] New Construction Cleaners were evaluated for removal of laboratory applied mortar.

To simulate new construction soiling, the ability of each cleaner to remove hardened deposits of Blue Circle Type N cementitious mortar was evaluated and is reported below. Mortar was applied by placing the units face down in a smooth trowelled tray of mortar for 10 minutes. The mortar was cured at 75% +/- 5% RH and 70°F +/- 5°F before any cleaning tests were attempted. Sure Klean[®] 600 Detergent, Sure Klean[®] 101 Lime Solvent and Sure Klean[®] Vana Trof[®] were tested for removal of Type N masonry cement mortar after 7, 14, and 21 days of curing.

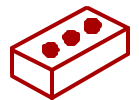
- B. Protective Water Repellents** - ProSoCo's Weather Seal Siloxane and Weather Seal Siloxane PD were evaluated for their ability to provide weather resistance on the submitted brick samples.

- C. Graffiti Control** - Defacer Eraser[®] SC-1 and Defacer Eraser[®] Graffiti Control were evaluated to determine their effectiveness in preventing the penetration of and simplifying the removal of graffiti staining.

This evaluation compares the effectiveness in preventing staining of blue, red and black "Sanford" permanent markers and red and black "Weekend" enamel spray paint. Removal was attempted 24 hours after application of the graffiti agents using Defacer Eraser[®] Graffiti Wipe diluted 1:1 with water.



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CLEANING PRODUCTS EVALUATED

BRICK TYPE	600 Detergent 1:6, 1:8	101 Lime Solvent 1:6, 1:8	Vana Trol® 1:4, 1:6,
Autumn Rose	√	√	
Saturn	√	√	
Chateau	√	√	
New-Used		√	√
Chesterfield	√	√	
Richtone	√	√	
Sandstone		√	√
Rustictone	√	√	
Smooth	√	√	
Flagstaff	√	√	
Earthtone	√	√	
Smooth Sanded	√	√	
Goshen	√	√	
Vertical Score	√	√	
Mellowtone	√	√	

WATER REPELLENT PRODUCTS EVALUATED

BRICK TYPE	Weather Seal Siloxane	Weather Seal Siloxane PD
All Types	√	√

GRAFFITI CONTROL PRODUCTS EVALUATED

BRICK TYPE	Defacer Eraser® SC-1	Defacer Eraser® Graffiti Control
All Types	√	√



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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 Blue Circle type N mortar from the submitted units. The removal of the mortar was evaluated after a 7, 14 or 21 day cure.

Blue Circle cementitious mortar was prepared in compliance with the manufacturers instructions, applied to the test surface and allowed to cure for 7, 14 and 21 days prior to removal with high pressure water rinse using 800 psi and 2.1 gpm pressure rinsing equipment and chemical assist.

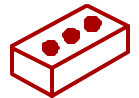
Sure Klean® 600 Detergent - A general purpose, concentrated acidic cleaner for brick, tile and concrete surfaces. Dissolves mortar smears and construction dirt quickly, leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 4-25 parts water. Apply by brush or low-pressure spray.

Sure Klean® 101 Lime Solvent - A general purpose, concentrated acidic cleaner for dark-colored brick, tile and concrete surfaces. Dissolves mortar smears and construction dirt quickly, leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 4-10 parts water. Apply by brush or low-pressure spray.

Sure Klean® Vana Trol® - A concentrated acidic cleaner for new masonry surfaces that are subject to vanadium, manganese and other metallic stains. Use on: gray, brown, white and most light-colored brick; natural stone; cast stone. Dissolves mortar smears and construction dirt quickly, leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 4-25 parts water. Apply by brush or low-pressure spray.



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TEST METHOD - New Construction Cleaning

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

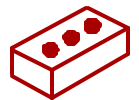
1. Prewet the surface with water.
2. Apply the cleaner.
3. Allow an appropriate exposure time:

600 Detergent (1:6 dilution)	5 minutes
600 Detergent (1:8 dilution)	5 minutes
101 Lime Solvent (1:6 dilution)	5 minutes
101 Lime Solvent (1:8 dilution)	5 minutes
Vana Trof [®] (1:4 dilution)	5 minutes
Vana Trof [®] (1:6 dilution)	5 minutes
4. Reapply the product and agitate with a stiff brush.
5. Pressure rinse thoroughly.*
6. Allow the surface to dry for at least 18 hours and visually examine.

* Pressure water rinsing was conducted at approximately 800 psi with a cold water flow rate of 2.1 gallons per minute.



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TEST RESULTS - New Construction Cleaning

% Removal Visual Analysis Type N Masonry Cement Residue

	<u>7 days</u>	<u>14 days</u>	<u>21 days</u>
Autumn Rose			
600 Detergent (1:6)	95%	80%	85%
600 Detergent (1:8)	90%	85%	85%
101 Lime Solvent (1:6)	95%	95%	90%
101 Lime Solvent (1:8)	95%	85%	95%
Saturn			
600 Detergent (1:6)	90%	90%	85%
600 Detergent (1:8)	90%	90%	90%
101 Lime Solvent (1:6)	90%	90%	85%
101 Lime Solvent (1:8)	90%	90%	85%
Chateau			
600 Detergent (1:6)	85%	90%	85%
600 Detergent (1:8)	85%	90%	90%
101 Lime Solvent (1:6)	85%	90%	85%
101 Lime Solvent (1:8)	85%	90%	90%
New-Used			
101 Lime Solvent (1:6)	98%	98%	98%
101 Lime Solvent (1:8)	98%	98%	98%
Vana Trol [®] (1:4)	98%	95%	98%
Vana Trol [®] (1:6)	98%	98%	95%
Chesterfield			
600 Detergent (1:6)	85%	90%	80%
600 Detergent (1:8)	90%	90%	80%
101 Lime Solvent (1:6)	85%	90%	80%
101 Lime Solvent (1:8)	90%	80%	80%



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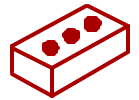


TEST RESULTS - New Construction Cleaning (cont'd.)

	<u>7 days</u>	<u>14 days</u>	<u>21 days</u>
Richtone			
600 Detergent (1:6)	85%	75%	85%
600 Detergent (1:8)	85%	75%	85%
101 Lime Solvent (1:6)	90%	80%	90%
101 Lime Solvent (1:8)	90%	75%	90%
Sandstone			
101 Lime Solvent (1:6)	90%	90%	95%
101 Lime Solvent (1:8)	95%	95%	95%
Vana Trol [®] (1:4)	90%	95%	95%
Vana Trol [®] (1:6)	85%	95%	95%
Rustictone			
600 Detergent (1:6)	95%	90%	85%
600 Detergent (1:8)	95%	85%	85%
101 Lime Solvent (1:6)	95%	95%	95%
101 Lime Solvent (1:8)	95%	90%	95%
Smooth			
600 Detergent (1:6)	95%	95%	95%
600 Detergent (1:8)	95%	95%	95%
101 Lime Solvent (1:6)	95%	95%	95%
101 Lime Solvent (1:8)	95%	95%	95%
Flagstaff			
600 Detergent (1:6)	95%	90%	90%
600 Detergent (1:8)	95%	95%	90%
101 Lime Solvent (1:6)	95%	95%	85%
101 Lime Solvent (1:8)	95%	90%	90%



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TEST RESULTS - New Construction Cleaning (cont'd.)

	<u>7 days</u>	<u>14 days</u>	<u>21 days</u>
Earthtone			
600 Detergent (1:6)	90%	90%	95%
600 Detergent (1:8)	95%	90%	90%
101 Lime Solvent (1:6)	80%	90%	90%
101 Lime Solvent (1:8)	85%	90%	95%
Smooth Sanded			
600 Detergent (1:6)	85%	85%	80%
600 Detergent (1:8)	90%	90%	85%
101 Lime Solvent (1:6)	85%	85%	90%
101 Lime Solvent (1:8)	85%	90%	90%
Goshen			
600 Detergent (1:6)	90%	85%	90%
600 Detergent (1:8)	85%	85%	90%
101 Lime Solvent (1:6)	85%	85%	90%
101 Lime Solvent (1:8)	90%	85%	90%
Vertical Score			
600 Detergent (1:6)	45%	50%	40%
600 Detergent (1:8)	45%	50%	35%
101 Lime Solvent (1:6)	50%	50%	35%
101 Lime Solvent (1:8)	50%	50%	35%
Mellowtone			
600 Detergent (1:6)	85%	80%	90%
600 Detergent (1:8)	80%	90%	90%
101 Lime Solvent (1:6)	80%	90%	90%
101 Lime Solvent (1:8)	90%	90%	90%



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CONCLUSIONS - New Construction Cleaning:

The following table summarizes the probable times within which cleaning should be undertaken with Type N mortar for the various cleaners and brick types. As can be seen these times vary with brick type and will further vary with mortar strength, ambient relative humidity during curing and strength of the cleaning solution used.

BRICK TYPE	600 Detergent 1:6, 1:8	101 Lime Solvent 1:6, 1:8	Vana Trof® 1:4, 1:6,
Autumn Rose	7 days	21+ days	N/A
Saturn	21+ days	14 days	N/A
Chateau	14-21 days	14-21 days	N/A
New-Used	N/A	21+ days	21+ days
Chesterfield	14 days	14 days	N/A
Richtone	<7 days	21+ days	N/A
Sandstone	N/A	21+ days	21+ days
Rustictone	14 days	21+ days	N/A
Smooth	21+ days	21+ days	N/A
Flagstaff	21+ days	14-21 days	N/A
Earhtone	21+ days	21+ days	N/A
Smooth Sanded	7-14 days	21 days	N/A
Goshen	21+ days	21+ days	N/A
Vertical Score	<7 days	<7 days	N/A
Mellowtone	21+ days	21+ days	N/A

Testing revealed that 101 Lime Solvent was especially effective in removing the Blue Circle Type N mortar from the units. A notable exception was the vertical scored unit where removal efficiencies were not acceptable. Mortar residues on this unit should be promptly removed (within 7 days) and a more concentrated dilution of cleaner should be tested.

RECOMMENDATIONS - New Construction Cleaning:

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.



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RECOMMENDATIONS - New Construction Cleaning (cont'd.)

New construction soiling - Removal of excess mortar, grout, job dirt and related soiling should be accomplished through use of **Sure Klean[®] 101 Lime Solvent**. To minimize potential for surface erosion remove excess mortar, grout or similar cementitious staining as soon as practical with Sure Klean[®] 101 Lime Solvent diluted 1 part concentrated cleaner with up to 10 parts fresh water (1:10). Apply the prepared cleaner in a gentle scrubbing manner using a soft fibered masonry washing brush. Avoid repeated application.

Removal of heavy concrete splashes, surface retarders, heavy efflorescence and similar staining may require use of Sure Klean[®] 101 Lime Solvent diluted 1 part concentrated cleaner to 4 parts fresh water (1:4).

General Soiling - Removal of atmospheric staining, rust, mud, oil, and related soiling should be accomplished through use of **Sure Klean[®] Light Duty Concrete Cleaner** diluted 1 part concentrated cleaner to 2 parts fresh water (1:2).



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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 - A clear, oligomeric alkylalkoxy siloxane penetrating water repellent for use on concrete, brick and clay tile surfaces. Treatment with Weather Seal Siloxane provides superior protection against moisture intrusion and resulting efflorescence, leaching, mildew and atmospheric staining, and freeze/thaw spalling.

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 solvent-based water repellents. Low odor and alkaline stable, Siloxane PD is ideal for field or in-plant application to color-sensitive concrete, GFRC, most masonry and stucco surfaces. Application equipment, window glass and areas affected from overspray are easily cleaned with soap and water. Weather Seal Siloxane PD Volatile Organic Compound (VOC) content is less than 200 grams/liter.



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SAMPLE PREPARATION - Protective Water Repellents

Submitted samples were cut into cubes, oven dried and allowed to reabsorb atmospheric humidity for 24 hours prior to treatment.

Method of Application - In an effort to simulate field application rates, all samples were immersed in the designated surface treatment for two, 10-second immersions. This treatment has been proven to simulate a "wet-on-wet" field application.

Data derived in this section was obtained from two sample averages.

TEST METHODS - Protective Water Repellents

Water Absorption: ASTM C 67, Immersion, 24 Hours

Water absorption is determined by comparing the dry weight of the sample with its weight after immersion in water for 24 hours.

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 75-80% or greater is required to provide resistance to water intrusion under normal exposure conditions.

Water Absorption Tube Test: Rilem II.4, 5.0 ml, 20 minutes

The water absorption tube test simulating wind driven and wind blown rain conditions was also performed. Tests were run with 5.0 milliliter head pressures which simulates a 98 mph dynamic wind pressure.

See ASTM C 67, Rilem II.4, and attached copy of Rilem II.4 Tech Note for additional information.



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TEST RESULTS - Protective Water Repellents

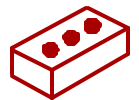
Water Absorption: ASTM C 67, Immersion, 24 Hours
Water Absorption Tube Test: Rilem II.4, 5.0 ml, 20-Minutes

	<u>% Weight Increase</u>	<u>% Reduced Water Absorption</u>	<u>Tube Test Milliliters</u>
Autumn Rose			
Untreated Control	5.46%	...	0.3
Weather Seal Siloxane	0.36%	93%	0.0
Weather Seal Siloxane PD	0.55%	90%	0.0
Saturn			
Untreated Control	5.94%	...	0.3
Weather Seal Siloxane	0.43%	93%	0.1
Weather Seal Siloxane PD	0.62%	90%	0.0
Chateau			
Untreated Control	6.16%	...	1.1
Weather Seal Siloxane	0.42%	93%	0.4
Weather Seal Siloxane PD	0.46%	93%	0.1
New-Used			
Untreated Control	4.19%	...	0.1
Weather Seal Siloxane	0.26%	94%	0.0
Weather Seal Siloxane PD	0.30%	93%	0.0
Chesterfield			
Untreated Control	3.64%	...	0.0
Weather Seal Siloxane	0.27%	93%	0.0
Weather Seal Siloxane PD	0.4%	88%	0.0
Richtone			
Untreated Control	1.12%	...	>5.0*
Weather Seal Siloxane	0.35%	69%	3.7*
Weather Seal Siloxane PD	0.41%	63%	2.9*

* An effective seal could not be maintained around the tube because of the surface texture.



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TEST RESULTS - Protective Water Repellents (cont'd.)

	<u>% Weight Increase</u>	<u>% Reduced Water Absorption</u>	<u>Tube Test Milliliters</u>
Sandstone			
Untreated Control	4.98%	...	0.1
Weather Seal Siloxane	4.41%	11%	0.0
Weather Seal Siloxane PD	1.23%	75%	0.0
Rustictone			
Untreated Control	2.65%	...	0.0
Weather Seal Siloxane	0.78%	70%	0.0
Weather Seal Siloxane PD	0.68%	74%	0.0
Smooth			
Untreated Control	8.44%	...	1.8
Weather Seal Siloxane	3.81%	55%	0.0
Weather Seal Siloxane PD	0.83%	90%	0.0
Flagstaff			
Untreated Control	4.24%	...	1.4
Weather Seal Siloxane	0.35%	92%	0.0
Weather Seal Siloxane PD	0.59%	86%	0.0
Earhtone			
Untreated Control	6.16%	...	2.2**
Weather Seal Siloxane	1.29%	79%	0.0**
Weather Seal Siloxane PD	2.16%	65%	2.2**
Smooth Sanded			
Untreated Control	4.37%	...	0.0
Weather Seal Siloxane	0.31%	93%	0.0
Weather Seal Siloxane PD	0.52%	88%	0.0
Goshen			
Untreated Control	1.75%	...	0.0
Weather Seal Siloxane	0.31%	83%	0.0
Weather Seal Siloxane PD	0.50%	71%	0.0

** A crack was noticed on the face of the brick when the tubes were run.



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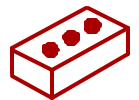
TEST RESULTS - Protective Water Repellents (cont'd.)

	<u>% Weight Increase</u>	<u>% Reduced Water Absorption</u>	<u>Tube Test Milliliters</u>
		Vertical Score	
Untreated Control	3.56%	...	>5.0*
Weather Seal Siloxane	0.37%	90%	>5.0*
Weather Seal Siloxane PD	0.41%	88%	>5.0*
		Mellowtone	
Untreated Control	3.59%	...	5.0*
Weather Seal Siloxane	0.33%	91%	3.7*
Weather Seal Siloxane PD	0.65%	82%	3.6*

* An effective seal could not be maintained around the tube because of the surface texture.

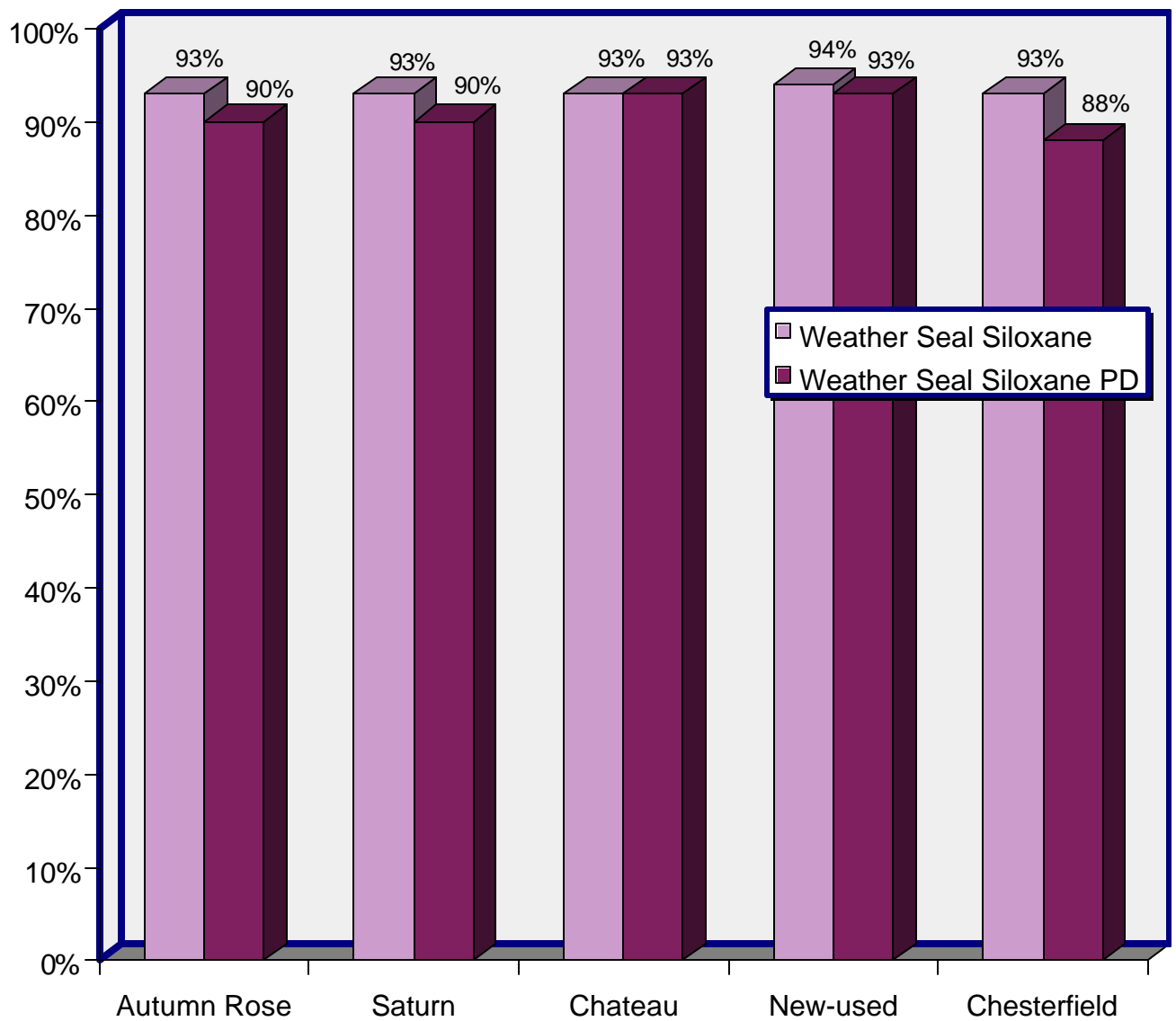


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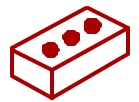
% REDUCED WATER ABSORPTION

Test Procedure: ASTM C 67



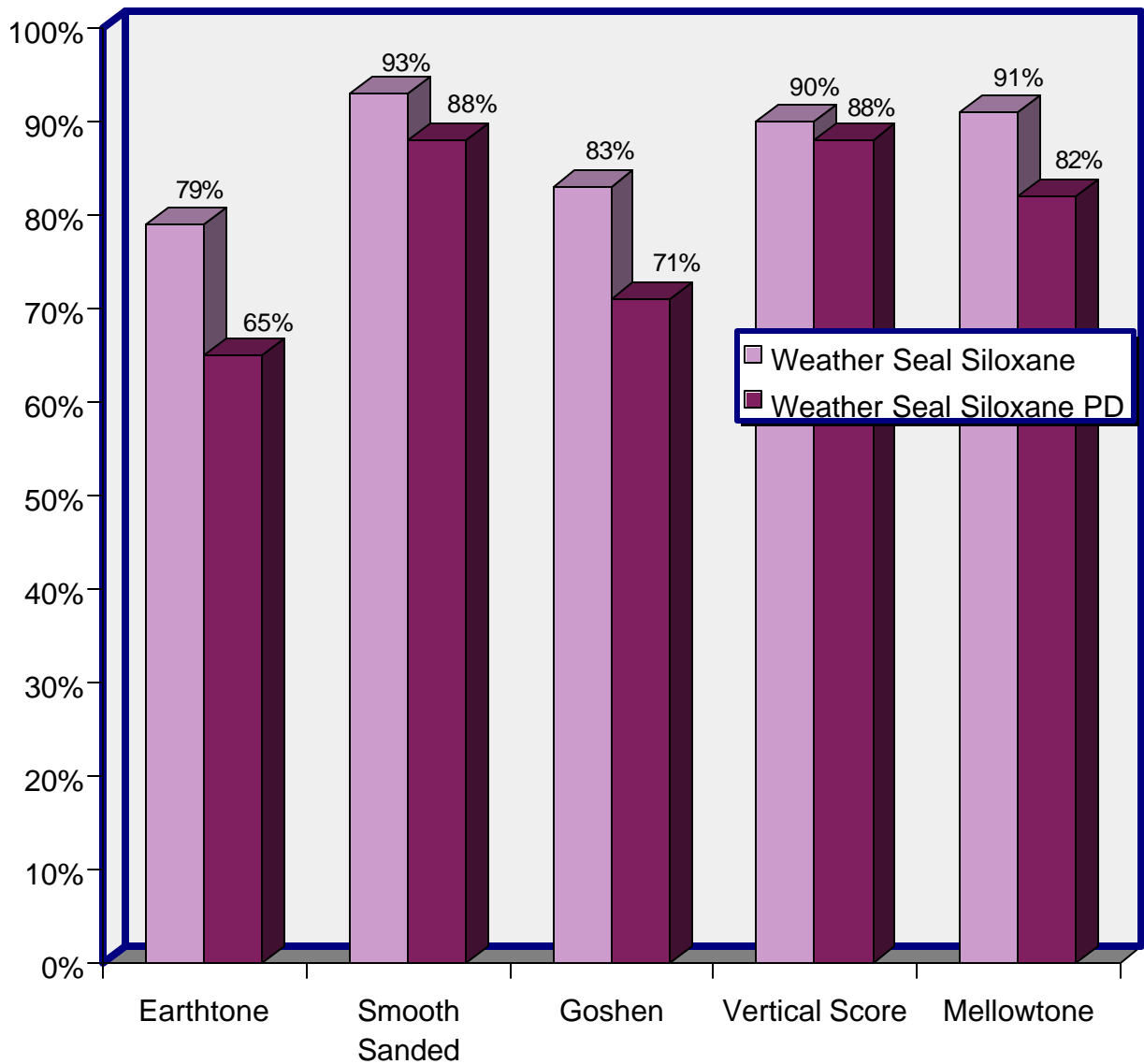


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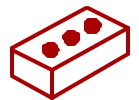
% REDUCED WATER ABSORPTION

Test Procedure: ASTM C 67



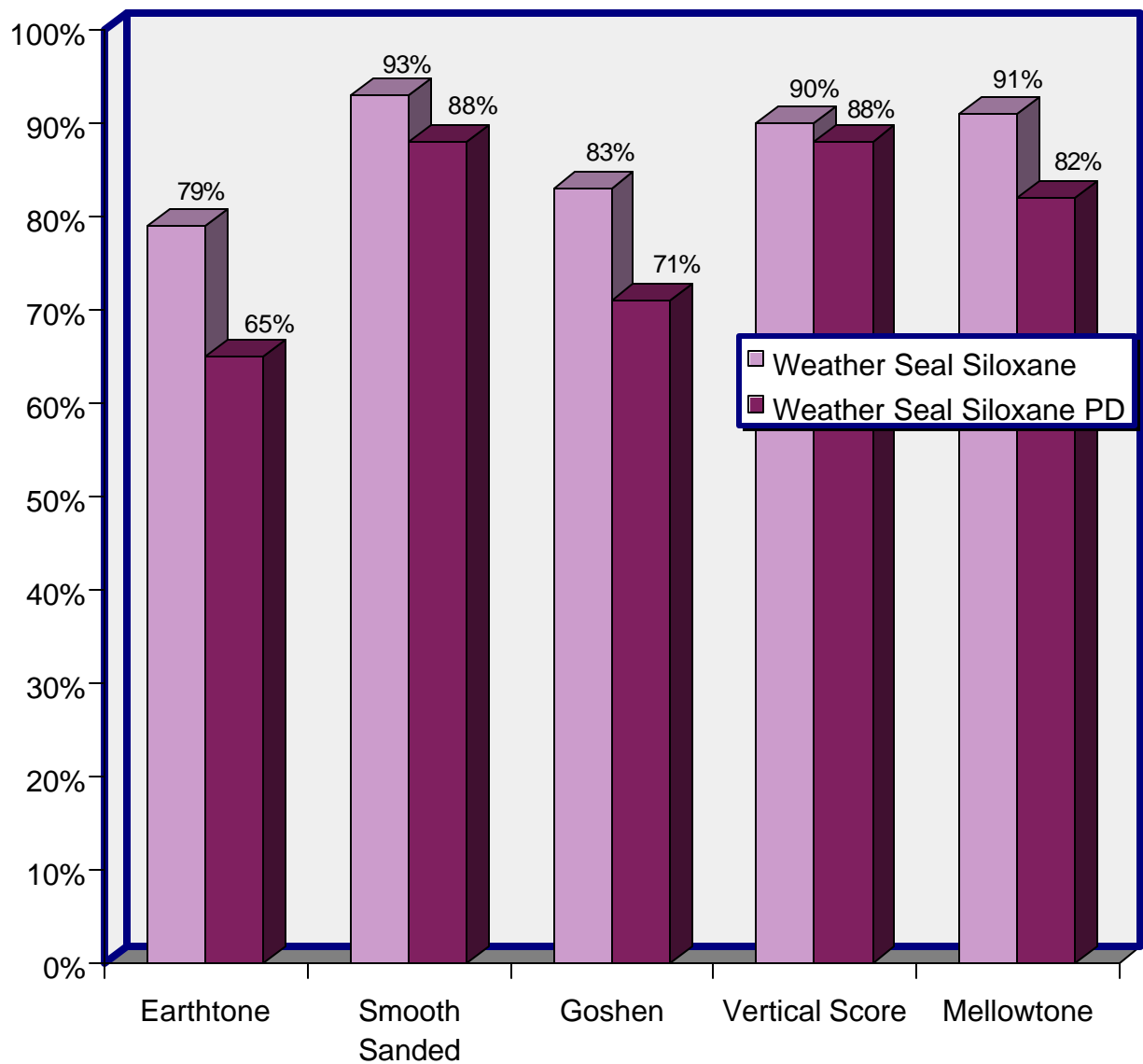


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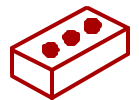
% REDUCED WATER ABSORPTION

Test Procedure: ASTM C 67





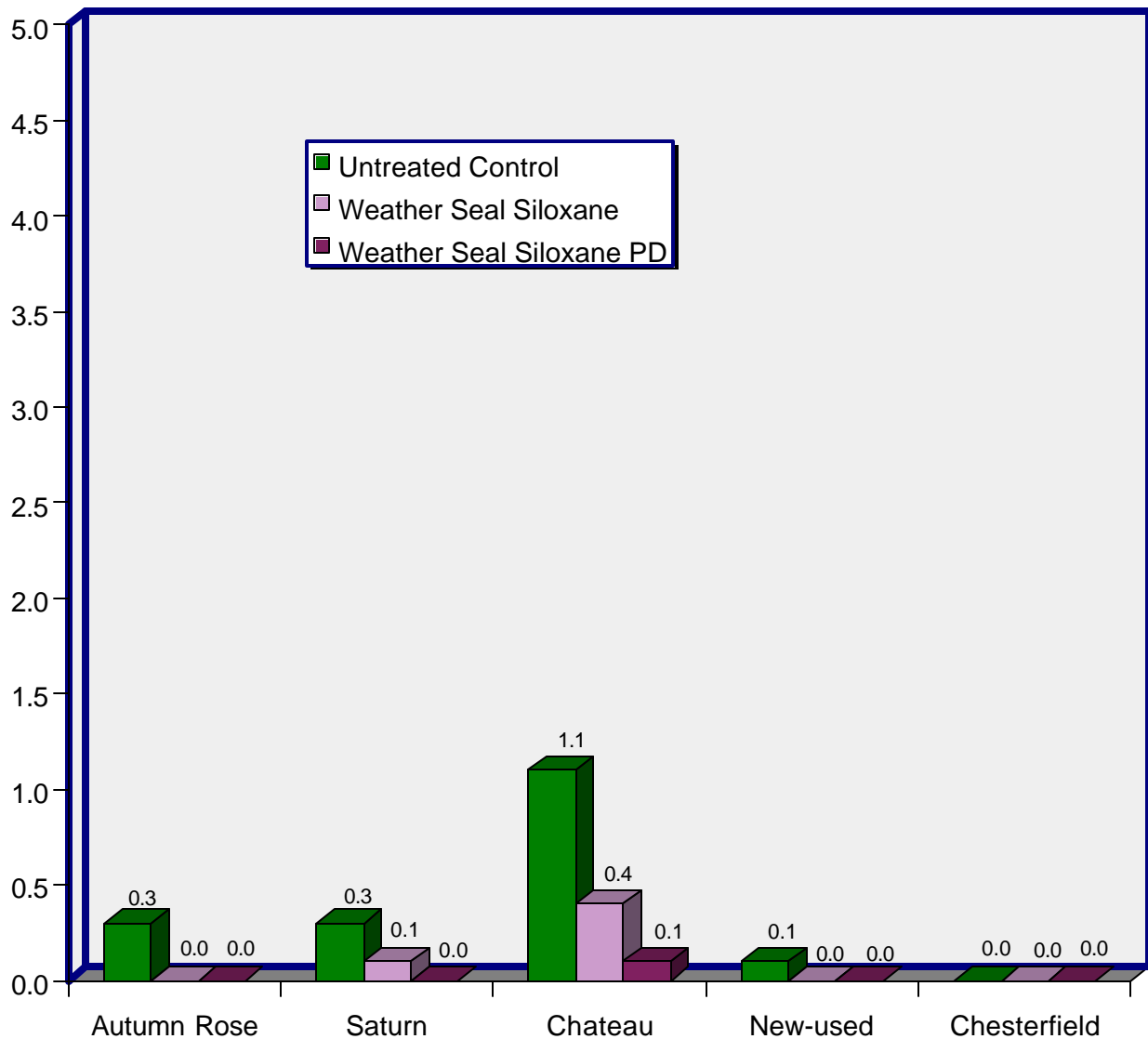
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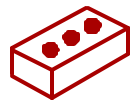


WATER ABSORPTION TUBE TEST:

Rilem 11.4, 5.0 Milliliters, 20 Minutes

Millimeters

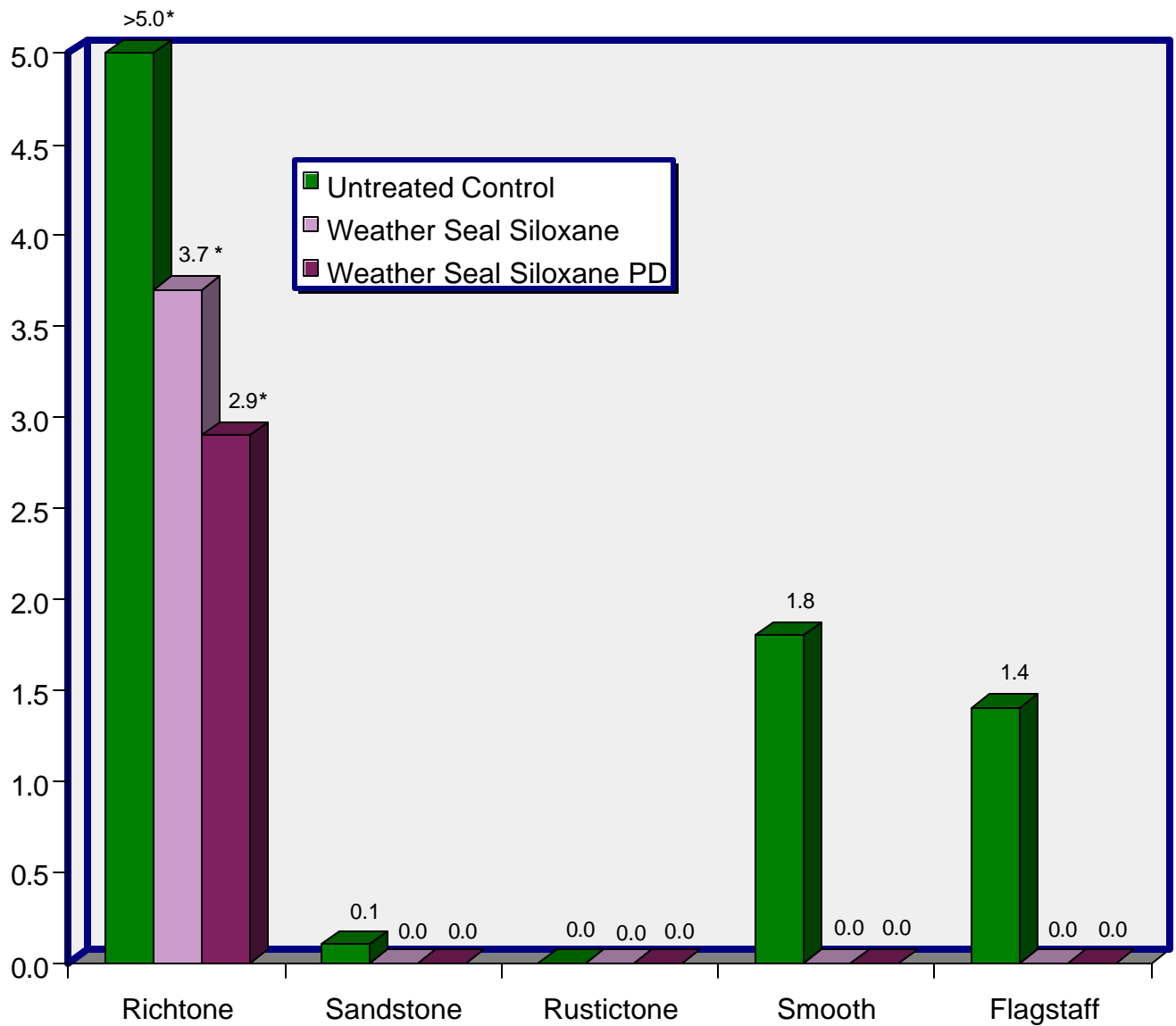




WATER ABSORPTION TUBE TEST:

Rilem 11.4, 5.0 Milliliters, 20 Minutes

Millimeters



* An effective seal could not be maintained around the tube because of the surface texture.



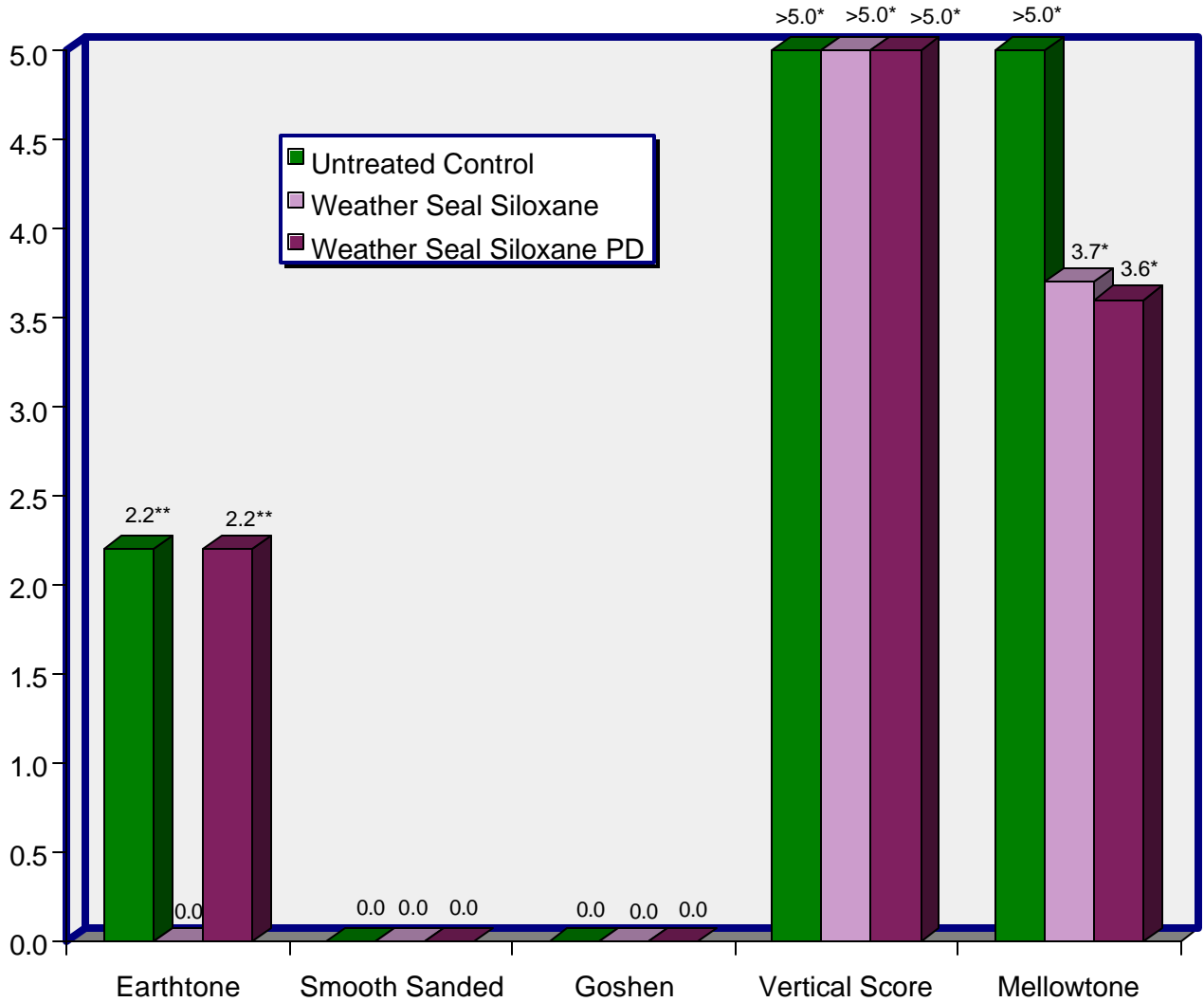
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WATER ABSORPTION TUBE TEST:

Rilem 11.4, 5.0 Milliliters, 20 Minutes

Millimeters

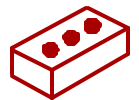


* An effective seal could not be maintained around the tube because of the surface texture.

** A crack was noticed on the face of the brick when the tubes were run



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CONCLUSIONS - Protective Water Repellents

The following table summarizes the above data for the systems under test. Generally a 75-80% reduction in water absorption is required for adequate water repellent protection.

BRICK TYPE	Weather Seal Siloxane	Weather Seal Siloxane PD
Autumn Rose	√	√
Saturn	√	√
Chateau	√	√
New-Used	√	√
Chesterfield	√	√
Richtone*	√	√
Sandstone		√
Rustictone		√
Smooth		√
Flagstaff	√	√
Earthtone	√	
Smooth Sanded	√	√
Goshen	√	
Vertical Score	√	√
Mellowtone	√	√

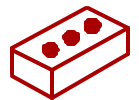
* The low water absorption rate of the untreated brick result in a less than 75% reduction in water absorption rate. We would expect the water repellent treatment to perform adequately on this substrate.

RECOMMENDATIONS - Water Repellents

Select the most appropriate product for each brick type from the above table and apply all products in accordance with recommendations provided on container labels and product data sheets.



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SECTION C - ANTI-GRAFFITI PROTECTION

The purpose of this test was to determine the effectiveness of Defacer Eraser[®] treatments in preventing the penetration of and simplifying the removal of graffiti staining.

DESCRIPTIONS OF PRODUCTS EVALUATED - Anti-Graffiti Protection

Defacer Eraser[®] Graffiti Control - A clear, one-component silicone elastomer formulated to protect against repeated graffiti attacks and to also provide some water repellent protection. Defacer Eraser[®] Graffiti Control penetrates and fills pores to form a durable, invisible barrier that prevents penetration of most graffiti and rainwater.

Defacer Eraser[®] SC-1 - A clear, water-based sacrificial coating for control of graffiti on most building surfaces. SC-1 acts as a graffiti barrier by preventing spray paints, crayons and ink from penetrating and staining the underlying surface. Graffiti is removed from protected surfaces by high-pressure hot water only. The coating must then be reapplied to restore the graffiti barrier. Defacer Eraser SC-1 Volatile Organic Compound (VOC) content is less than 10 grams/liter.

SAMPLE PREPARATION - Anti-Graffiti Protection

The Defacer Eraser Graffiti Control was applied as single saturating brush application, Defacer Eraser SC-1 was applied in two saturating applications with the first coat allowed to dry to the touch before the second application.

Spray paint and permanent marking pens were applied as graffiti agents to all treated surfaces one week following application of the products. Removal was attempted 24 hours after application of the graffiti agents.

TEST METHOD - Anti-Graffiti Protection

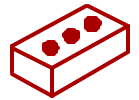
Defacer Eraser Graffiti Wipe (1:1) was evaluated using the following procedure:

1. Apply the product to a dry surface.
2. Allow a 5-minute dwell time.
3. Pressure rinse thoroughly using approximately 600 psi with a cold water flow rate of 2.1 gallons per minute.
4. Allow the surface to dry thoroughly and visually examine.



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TEST RESULTS - Graffiti Control

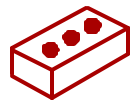
Appearance Change - Visual Analysis

	<u>Black Spray Paint</u>	<u>Red Spray Paint</u>	<u>Black Marking Pen</u>	<u>Blue Marking Pen</u>	<u>Red Marking Pen</u>	<u>Overall Average Score</u>
Autumn Rose						
Untreated Control	90%	70%	15%	20%	20%	43%
Defacer Eraser [®] SC-1	98%	90%	98%	93%	98%	95%
Defacer Eraser [®] Graffiti Control	85%	90%	85%	90%	95%	89%
Saturn						
Untreated Control	0%	20%	5%	5%	5%	7%
Defacer Eraser [®] SC-1	75%	65%	15%	10%	15%	36%
Defacer Eraser [®] Graffiti Control	50%	70%	75%	80%	45%	64%
Chateau						
Untreated Control	0%	45%	0%	0%	0%	9%
Defacer Eraser [®] SC-1	90%	90%	70%	10%	30%	58%
Defacer Eraser [®] Graffiti Control	20%	75%	50%	15%	5%	33%
New-Used						
Untreated Control	90%	95%	100%	100%	100%	97%
Defacer Eraser [®] SC-1	98%	95%	95%	95%	98%	96%
Defacer Eraser [®] Graffiti Control	98%	95%	90%	90%	100%	95%
Chesterfield						
Untreated Control	70%	90%	98%	90%	90%	88%
Defacer Eraser [®] SC-1	98%	95%	95%	95%	98%	96%
Defacer Eraser [®] Graffiti Control	80%	90%	98%	100%	90%	92%
Richtone						
Untreated Control	95%	98%	95%	100%	100%	98%
Defacer Eraser [®] SC-1	100%	95%	100%	100%	100%	99%
Defacer Eraser [®] Graffiti Control	95%	100%	100%	100%	100%	99%



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TEST RESULTS - Graffiti Control (cont'd.)

	<u>Black Spray Paint</u>	<u>Red Spray Paint</u>	<u>Black Marking Pen</u>	<u>Blue Marking Pen</u>	<u>Red Marking Pen</u>	<u>Overall Average Score</u>
Sandstone						
Untreated Control	90%	85%	60%	95%	100%	86%
Defacer Eraser [®] SC-1	85%	98%	100%	100%	100%	97%
Defacer Eraser [®] Graffiti Control	85%	90%	90%	98%	98%	92%
Rustictone						
Untreated Control	85%	92%	70%	80%	100%	85%
Defacer Eraser [®] SC-1	98%	92%	100%	100%	100%	98%
Defacer Eraser [®] Graffiti Control	90%	98%	88%	98%	100%	95%
Smooth						
Untreated Control	93%	95%	60%	75%	95%	84%
Defacer Eraser [®] SC-1	92%	95%	100%	100%	100%	97%
Defacer Eraser [®] Graffiti Control	93%	100%	80%	90%	98%	92%
Flagstaff						
Untreated Control	70%	98%	90%	85%	100%	89%
Defacer Eraser [®] SC-1	80%	98%	98%	95%	100%	94%
Defacer Eraser [®] Graffiti Control	75%	100%	98%	98%	100%	94%
Earthtone						
Untreated Control	20%	90%	25%	85%	85%	61%
Defacer Eraser [®] SC-1	90%	90%	85%	90%	98%	91%
Defacer Eraser [®] Graffiti Control	35%	100%	85%	90%	95%	81%
Smooth Sanded						
Untreated Control	80%	95%	20%	99%	95%	78%
Defacer Eraser [®] SC-1	100%	95%	99%	100%	100%	99%
Defacer Eraser [®] Graffiti Control	90%	98%	85%	95%	98%	93%



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TEST RESULTS - Graffiti Control (cont'd.)

	<u>Black Spray Paint</u>	<u>Red Spray Paint</u>	<u>Black Marking Pen</u>	<u>Blue Marking Pen</u>	<u>Red Marking Pen</u>	<u>Overall Average Score</u>
Goshen						
Untreated Control	60%	95%	75%	98%	100%	86%
Defacer Eraser [®] SC-1	90%	95%	90%	98%	100%	95%
Defacer Eraser [®] Graffiti Control	75%	98%	80%	98%	100%	90%
Vertical Score						
Untreated Control	93%	98%	80%	100%	100%	94%
Defacer Eraser [®] SC-1	98%	98%	100%	100%	100%	99%
Defacer Eraser [®] Graffiti Control	98%	100%	100%	100%	100%	100%
Mellowtone						
Untreated Control	85%	100%	80%	90%	100%	91%
Defacer Eraser [®] SC-1	100%	98%	100%	100%	100%	100%
Defacer Eraser [®] Graffiti Control	90%	98%	90%	95%	100%	95%



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CONCLUSIONS - Graffiti Control

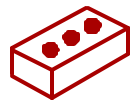
The following table summarizes the above data and provides recommendations for the products that should be applied. Superior performance should be obtained if hot water, high pressure rinsing is used for graffiti removal with Defacer Eraser[®] SC-1.

BRICK TYPE	Defacer Eraser [®] SC-1	Defacer Eraser [®] Graffiti Control
Autumn Rose	√	√
Saturn		√ (2 Applications)
Chateau	√ (Poor Performance)	
New-Used	Not Required	Not Required
Chesterfield	√	
Richtone	Not Required	Not Required
Sandstone	√	
Rustictone	√	√
Smooth	√	
Flagstaff	√	√
Earthtone	√	
Smooth Sanded	√	√
Goshen	√	
Vertical Score	√	√
Mellowtone	√	√



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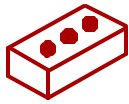
RECOMMENDATIONS - Graffiti Control

Where required, apply the product indicated above to those areas that have a high probability of receiving graffiti agents.

Apply all products in accordance with recommendations provided on container labels and product data sheets.

Patrick McGreal
Laboratory Manager

PM/lt



Laboratory Report

Pallet Card Evaluation

**RICHARDS BRICK CO.
EDWARDSVILLE, ILLINOIS**

Project No. 9611-03 PC

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