

Table of Contents

Executive Summary i

Submitted Information 1

Introduction 2

Purpose of Testing..... 2

Products Evaluated..... 3

New Construction Cleaning 4

 Description of Products Evaluated – New Construction Cleaning 4

 Test Method – New Construction Cleaning 4

 Test Results – New Construction Cleaning 5

 Test Results – Color Uniformity 6

 Photographs – New Construction Cleaning 7

 Photographs – Color Uniformity 8

 Conclusions – New Construction Cleaning 9

 Recommendations – New Construction Cleaning 9

Protective Water Repellents..... 10

 Description of Products Evaluated – Protective Water Repellents 10

 Sample Preparation – Protective Water Repellents..... 10

 Test Methods – Protective Water Repellents..... 11

 Test Results – Protective Water Repellents 12

 Test Results – Protective Water Repellents 13

 Photographs – Protective Water Repellents 14

 Conclusions – Protective Water Repellents 14

 Recommendations – Protective Water Repellents 15

Stain Repellency 16

 Description of Products Evaluated – Stain Repellency 16

 Sample Preparation – Stain Repellency 16

 Test Method – Stain Repellency 17

 Test Results – Surface Beading..... 18

 Test Results – Stain Repellency 19

 Test Results – Stain Repellency 20

 Conclusions – Stain Repellency..... 22

 Recommendations – Stain Repellency 22

Graffiti Control..... 23

 Description of Products Evaluated – Graffiti Control..... 23

 Sample Preparation – Graffiti Control 24

 Test Method – Graffiti Control 24

 Test Results – Graffiti Control 25

 Test Results – Graffiti Control 26

 Photographs – Graffiti Control..... 27

 Conclusions – Graffiti Control 28

 Recommendations – Graffiti Control 28

Attachments

 Technical Services TECH Note RILEM Tube Test Procedures

 Product Data literature for all products evaluated

Submitted Information

For: Mike Dickey
Matt Henderson
Brian Koenings

Subject: Joplin Building Material
Joplin, MO

Date: July 11, 2007

Project: 0705-03 PTP

Samples Submitted: 6 types of "Accent Cast Stone" cast stone

Sample	Color	Integral Water Repellent	Size
"White"	"White"	Beton – Chemie Color - Guard	24" x 7" x 1 ¼"
"Gray 100"	"Gray"	Beton – Chemie Color - Guard	24" x 7" x 1 ¼"
"Mesa 100 S"	"Mesa"	Beton – Chemie Color - Guard	24" x 7" x 1 ¼"
"Limestone 50"	"Yellow"	Beton – Chemie Color - Guard	24" x 7" x 1 ¼"
"Tan 100"	"Tan"	Beton – Chemie Color - Guard	24" x 7" x 1 ¼"
"Buff 100"	"Buff"	Beton – Chemie Color - Guard	24" x 7" x 1 ¼"

Submitted by: David Guthrie
Joplin Building Material

Introduction

Architectural Materials Testing (AMT) Laboratories is a Boyer Industries company that provides laboratory testing and consulting services for the construction industry. Laboratory testing includes evaluating chemical cleaning products and protective treatments for a variety of new and existing architectural materials.

This report includes descriptions of the PROSOCO, Inc. products and test methods that were used. Following test results and conclusions, the report provides recommendations for the most effective products and procedures.

Purpose of Testing

Six types of cast stone were submitted to AMT Laboratories by PROSOCO, Inc. with a request to determine the optimal concentration of cleaner for removal of laboratory applied mortar while leaving the external surface looking most like the uncleaned surface of the cast stone during new construction operations. Additionally, the effectiveness of water repellents, stain repellent products and graffiti control products suitable for cast stone was evaluated.

New Construction Cleaning – Sure Klean® Light Duty Concrete Cleaner and Sure Klean® Vana Trol® were evaluated at various dilutions to determine the optimal concentration of cleaner for removal of laboratory applied mortar while leaving the external surface looking most like the uncleaned surface of the cast stone during new construction operations.

To simulate new construction soiling the samples were placed on a bench with finished surface facing upward. Hollow cylinders measuring 50 mm in diameter and 75 mm tall were positioned on top of each sample and filled with a wet mixture of Type N mortar. The wet, mortar-filled cylinder was allowed to remain in contact with the sample for 10 minutes before removal.

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

Color uniformity was evaluated by comparing aggregate exposure and surface pigment alternation/removal of each cleaned surface compared to the uncleaned surface of the cast stone.

Aggregate Exposure is the visual examination comparing aggregate exposure of the uncleaned surface of the cast stone to surfaces cleaned with the selected product(s) at given dilutions.

Surface Pigment Alteration/Removal is the visual examination comparing the pigmentation of the exterior, uncleaned surface of the cast stone 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 uncleaned surface | 3 – Good match to uncleaned surface |
| 1 – Poor match to uncleaned surface | 4 – Best match to uncleaned surface |
| 2 – Fair match to uncleaned surface | |

Protective Water Repellents – Sure Klean® Weather Seal Siloxane PD, Sure Klean® Weather Seal Siloxane WB Concentrate (1:9), Sure Klean® Weather Seal Blok-Guard® & Graffiti Control, Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II and Stand Off® SLX100 Water & Oil Repellent were evaluated for their ability to provide water repellency to the submitted samples.

Stain Repellency – Stand Off® SLX100 Water & Oil Repellent was evaluated for its ability to repel stains from the submitted samples.

Graffiti Control – Sure Klean® Weather Seal Blok-Guard® & Graffiti Control, Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II and Defacer Eraser® Sacrificial Coating SC-1 were evaluated for their ability to control graffiti on the submitted samples. Sure Klean® Fast Acting Stripper and Defacer Eraser® Graffiti Wipe were evaluated for their ability to remove graffiti from the submitted samples.

Products Evaluated**New Construction Cleaning Products Evaluated**

Sample	Product	Dilution
All Submitted Cast Stone	Sure Klean® Light Duty Concrete Cleaner	(1:2), (1:3)
	Sure Klean® Vana Trol®	(1:6), (1:8)

Protective Water Repellent Products Evaluated

Sample	Product	Dilution
All Submitted Cast Stone	Sure Klean® Weather Seal Siloxane PD	Concentrate
	Sure Klean® Weather Seal Siloxane WB Concentrate	(1:9)
	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Concentrate
	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Concentrate
	Stand Off® SLX100 Water & Oil Repellent	Concentrate

Stain Repellency Products Evaluated

Sample	Product	Dilution
All Submitted Cast Stone	Stand Off® SLX100 Water & Oil Repellent	Concentrate

Graffiti Control Products Evaluated

Sample	Product	Dilution
All Submitted Cast Stone	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Concentrate
	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Concentrate
	Defacer Eraser® Sacrificial Coating SC-1	Concentrate

Graffiti Removal Products Evaluated

Sample	Product	Dilution
All Submitted Cast Stone	Sure Klean® Fast Acting Stripper	Concentrate
	Defacer Eraser® Graffiti Wipe	Concentrate

New Construction Cleaning

These cleaning trials were conducted to determine the optimal cleaning/cure time combination to most efficiently remove Type N mortar from the submitted samples while leaving the external surface looking most like the uncleaned surface of the cast stone during new construction operations.

Type N cementitious mortar was prepared in compliance with the manufacturer's instructions, applied to the cast stone and allowed to cure. Mortar removal was accomplished using chemical assistance and a high-pressure water rinse with pressure rinsing equipment. The removal of Type N cementitious mortar was visually evaluated after 7, 14 and 21 days of curing.

Description of Products Evaluated – New Construction Cleaning

Sure Klean® Light Duty Concrete Cleaner – Removes common construction and atmospheric staining from custom masonry 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. Light Duty Concrete Cleaner adds depth to colors and brightens white matrices and exposed aggregate.

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 4-10 parts water. Apply by brush or low-pressure spray.

Test Method – New Construction Cleaning

Chemical cleaners were evaluated using the following procedure:

1. Pre-wet the surface with water.
2. Apply at the appropriate dilutions.
3. Allow appropriate dwell time, as specified.

Sure Klean® Light Duty Concrete Cleaner	3-5 minutes
Sure Klean® Vana Trol®	3-5 minutes
4. Reapply the product and moderately agitate with a brush.
5. Pressure rinse thoroughly.*
6. Compare the uncleaned surfaces to the cleaned surfaces for the best match.

***Pressure Rinsing Equipment** – Masonry washing equipment generating approximately 700-800 psi with a water flow rate of 8 gallons per minute delivered through a 45 degree fan spray tip was used for rinsing.

Test Results – New Construction Cleaning**Cleaning Effectiveness (% Type N Mortar Removal)**

“White” Cast Stone				
Product	Dilution	7 day	14 day	21 day
Sure Klean® Light Duty Concrete Cleaner	1:2	100%	100%	100%
Sure Klean® Light Duty Concrete Cleaner	1:3	100%	100%	100%
Sure Klean® Vana Trol®	1:6	100%	100%	100%
Sure Klean® Vana Trol®	1:8	100%	100%	100%
“Gray 100” Cast Stone				
Product	Dilution	7 day	14 day	21 day
Sure Klean® Light Duty Concrete Cleaner	1:2	100%	100%	100%
Sure Klean® Light Duty Concrete Cleaner	1:3	100%	100%	100%
Sure Klean® Vana Trol®	1:6	100%	100%	100%
Sure Klean® Vana Trol®	1:8	100%	100%	100%
“Mesa 100 S” Cast Stone				
Product	Dilution	7 day	14 day	21 day
Sure Klean® Light Duty Concrete Cleaner	1:2	100%	100%	100%
Sure Klean® Light Duty Concrete Cleaner	1:3	100%	100%	100%
Sure Klean® Vana Trol®	1:6	100%	100%	100%
Sure Klean® Vana Trol®	1:8	100%	100%	100%
“Limestone 50” Cast Stone				
Product	Dilution	7 day	14 day	21 day
Sure Klean® Light Duty Concrete Cleaner	1:2	100%	100%	100%
Sure Klean® Light Duty Concrete Cleaner	1:3	100%	100%	100%
Sure Klean® Vana Trol®	1:6	100%	100%	100%
Sure Klean® Vana Trol®	1:8	100%	100%	100%
“Tan 100” Cast Stone				
Product	Dilution	7 day	14 day	21 day
Sure Klean® Light Duty Concrete Cleaner	1:2	100%	100%	100%
Sure Klean® Light Duty Concrete Cleaner	1:3	100%	100%	100%
Sure Klean® Vana Trol®	1:6	100%	100%	100%
Sure Klean® Vana Trol®	1:8	100%	100%	100%
“Buff 100” Cast Stone				
Product	Dilution	7 day	14 day	21 day
Sure Klean® Light Duty Concrete Cleaner	1:2	100%	100%	100%
Sure Klean® Light Duty Concrete Cleaner	1:3	100%	100%	100%
Sure Klean® Vana Trol®	1:6	100%	100%	100%
Sure Klean® Vana Trol®	1:8	100%	100%	100%

Test Results – Color Uniformity

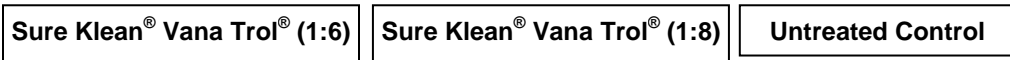
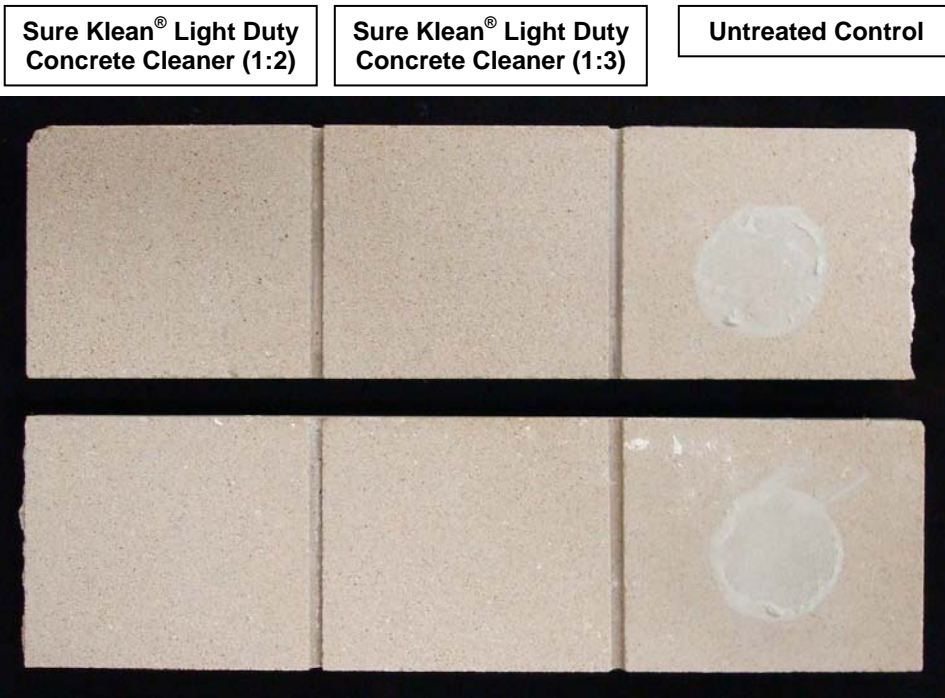
Substrate: Cast Stone		Pigment Color: "White"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Sure Klean® Light Duty Concrete Cleaner	1:2	3	4
Sure Klean® Light Duty Concrete Cleaner	1:3	3	4
Sure Klean® Vana Trol®	1:6	3	4
Sure Klean® Vana Trol®	1:8	4	4
Substrate: Cast Stone		Pigment Color: "Gray 100"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Sure Klean® Light Duty Concrete Cleaner	1:2	3	4
Sure Klean® Light Duty Concrete Cleaner	1:3	3	4
Sure Klean® Vana Trol®	1:6	3	4
Sure Klean® Vana Trol®	1:8	4	4
Substrate: Cast Stone		Pigment Color: "Mesa 100 S"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Sure Klean® Light Duty Concrete Cleaner	1:2	3	4
Sure Klean® Light Duty Concrete Cleaner	1:3	3	4
Sure Klean® Vana Trol®	1:6	3	4
Sure Klean® Vana Trol®	1:8	4	4
Substrate: Cast Stone		Pigment Color: "Limestone 50"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Sure Klean® Light Duty Concrete Cleaner	1:2	3	4
Sure Klean® Light Duty Concrete Cleaner	1:3	3	4
Sure Klean® Vana Trol®	1:6	3	4
Sure Klean® Vana Trol®	1:8	4	4
Substrate: Cast Stone		Pigment Color: "Tan 100"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Sure Klean® Light Duty Concrete Cleaner	1:2	3	4
Sure Klean® Light Duty Concrete Cleaner	1:3	3	4
Sure Klean® Vana Trol®	1:6	3	4
Sure Klean® Vana Trol®	1:8	4	4
Substrate: Cast Stone		Pigment Color: "Buff 100"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Sure Klean® Light Duty Concrete Cleaner	1:2	3	4
Sure Klean® Light Duty Concrete Cleaner	1:3	3	4
Sure Klean® Vana Trol®	1:6	3	4
Sure Klean® Vana Trol®	1:8	4	4

Scale used for reporting results of both categories:

- | | |
|---|--|
| 0 – Worst match to uncleaned surface | 3 – Good match to uncleaned surface |
| 1 – Poor match to uncleaned surface | 4 – Best match to uncleaned surface |
| 2 – Fair match to uncleaned surface | |

Photographs – New Construction Cleaning

“Limestone 50” Cast Stone; 7 Day Cleaning



“Limestone 50” Cast Stone; 14 Day Cleaning



Photographs – New Construction Cleaning

“Limestone 50” Cast Stone; 21 Day Cleaning



Photographs – Color Uniformity

“Limestone 50” Cast Stone



Conclusions – New Construction Cleaning

Based on the test results, all of the PROSOCO, Inc. products tested performed well in removing excess Type N mortar from the submitted samples even after allowing the mortar to remain on the surface of the samples for 21 days.

Use higher concentrations and surface agitation to maximize aggregate exposure. Use low concentration and surface agitation to minimize aggregate exposure.

Recommendations – New Construction Cleaning

Recommendations for cleaning for the cast stone submitted by Joplin Building Material, Joplin, MO are provided in the chart below. Recommendation is based on the optimum dilution for complete removal of mortar while providing the best match for color uniformity when compared to the uncleaned surface of the cast stone.

Sample	New Construction Cleaning (Type N mortar, 21 day cleaning)
All Submitted Cast Stone	Sure Klean® Vana Trol® (1:6) OR (1:8) OR Sure Klean® Light Duty Concrete Cleaner (1:2) OR (1:3)

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

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
-

Description of Products Evaluated – Protective Water Repellents

Sure Klean® Weather Seal Siloxane PD – A ready-to-use, water-based silane/siloxane water repellent for concrete, GFRC, and most masonry and stucco surfaces. Siloxane PD penetrates more deeply than conventional water repellents. It helps masonry resist cracking, spalling, staining and other damage related to water intrusion. Low odor and alkaline stable, Siloxane PD is ideal for field and in-plant application.

Stand Off® SLX100 Water & Oil Repellent – Combines water and oil repellency on most substrates to prevent staining by waterborne and oily substances. This modified “neat” silane system offers invisible protection and low volatility. The small molecular structure of SLX100 allows for maximum penetration at coverage rates higher than that of conventional silanes. Depth of penetration is controlled by the application rate (loading rate). This makes SLX100 ideal for protecting granite and other dense, color-sensitive surfaces.

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control – A clear, solvent-based silicone elastomer formulated to weatherproof concrete block and other porous masonry materials. Blok-Guard® & Graffiti Control protects masonry surfaces from repeated graffiti attacks without altering the natural appearance. Blok-Guard® & Graffiti Control penetrates and fills pores to prevent water penetration through exterior walls exposed to normal weathering. Graffiti removal is fast and easy using Defacer Eraser® Graffiti Wipe. Blok-Guard® & Graffiti Control is easy to apply with low-pressure spray, brush or roller.

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II – A clear-drying, water-based silicone emulsion for weatherproofing concrete block and other porous masonry materials. Blok-Guard® & Graffiti Control II also protects masonry surfaces from graffiti attacks without altering the natural appearance. Blok-Guard® & Graffiti Control II protects exterior walls exposed to normal weathering. Graffiti removal from treated surfaces is fast and easy using Defacer Eraser® Graffiti Wipe. Blok-Guard® & Graffiti Control II is easy to apply with low-pressure spray, brush or roller.

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 ideal for application to dense or porous masonry surfaces.

Sample Preparation – Protective Water Repellents

The submitted cast stone was scored and allowed to dry for 24 hours prior to treatment. All treatments were applied by brush in accordance with the current PROSOCO, Inc. Product Data Sheet application instructions. The treatments were allowed to cure for at least 72 hours prior to testing.

Test Methods – Protective Water Repellents**Water Absorption Tube Test: Horizontal RILEM II.4, 5.0 milliliters, 20 minutes**

The water absorption tube test simulating wind driven and wind blown rain conditions was performed. Tests were run with vertical 5.0-milliliter head pressures. Filled to 5.0 milliliters, a water absorption tube produces a 103 mph dynamic wind pressure. See RILEM II.4 Tech Note for additional information.

The ranking system used to evaluate the effectiveness of the products applied to each submitted sample is as follows:

AA = "Above Average" correlates to less than or equal to 20% of the maximum untreated absorption.

A = "Average" correlates to less than or equal to 50% of the maximum untreated absorption.

BA = "Below Average" correlates to greater than 50% of the maximum untreated absorption.

EXAMPLE: If RILEM tubes applied to an untreated sample result in loss of 5.0 mL of water or more, then:

A rating of **AA** *Above Average* water repellent performance would be reported for treatments which result in a loss of no more than:

$$5.0 \text{ mL} \times 20\% = \mathbf{1.0 \text{ mL}}$$

A rating of **A** *Average* water repellent performance would be reported for treatments which result in a loss of no more than:

$$5.0 \text{ mL} \times 50\% = \mathbf{2.5 \text{ mL}}$$

A rating of **BA** *Below Average* water repellent performance would be reported for treatments which result in a loss of more than:

$$5.0 \text{ mL} \times 50\% = \mathbf{2.5 \text{ mL}}$$

Test Results – Protective Water Repellents**Water Absorption Tube Test: Horizontal RILEM II.4, 5.0 milliliters, 20 minutes****AA = Above Average****A = Average****BA = Below Average**

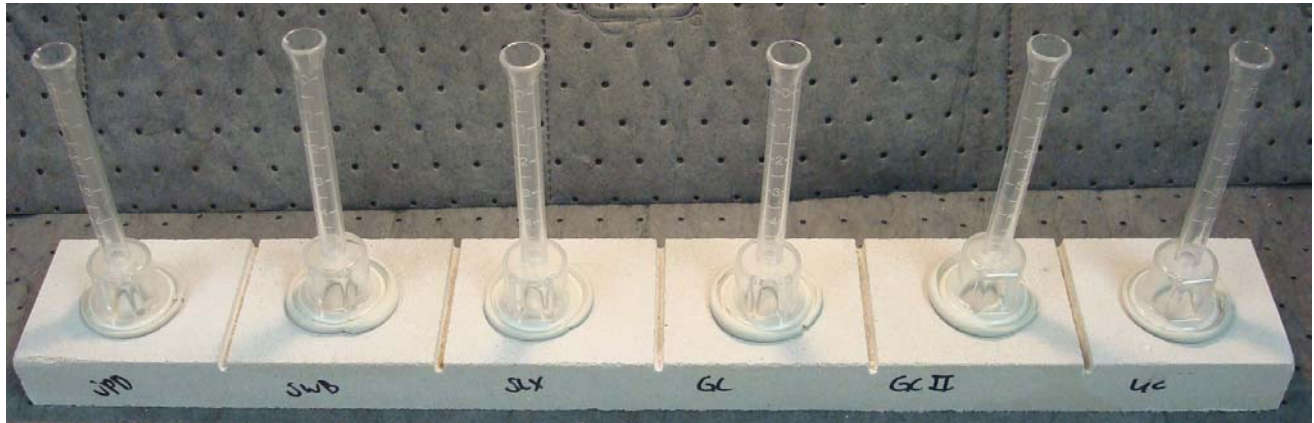
“White”	<u>Results in mL loss</u>	<u>Ranking</u>
Untreated Control	0.0	--
Sure Klean® Weather Seal Siloxane PD	0.0	<u>AA</u>
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0.0	<u>AA</u>
Stand Off® SLX100 Water & Oil Repellent	0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	0.0	<u>AA</u>
“Gray 100”	<u>Results in mL loss</u>	<u>Ranking</u>
Untreated Control	0.0	--
Sure Klean® Weather Seal Siloxane PD	0.0	<u>AA</u>
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0.0	<u>AA</u>
Stand Off® SLX100 Water & Oil Repellent	0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	0.0	<u>AA</u>
“Mesa 100 S”	<u>Results in mL loss</u>	<u>Ranking</u>
Untreated Control	0.0	--
Sure Klean® Weather Seal Siloxane PD	0.0	<u>AA</u>
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0.0	<u>AA</u>
Stand Off® SLX100 Water & Oil Repellent	0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	0.0	<u>AA</u>

Test Results – Protective Water Repellents**Water Absorption Tube Test: Horizontal RILEM II.4, 5.0 milliliters, 20 minutes****AA = Above Average****A = Average****BA = Below Average**

“Limestone 50”	<u>Results in mL loss</u>	<u>Ranking</u>
Untreated Control	0.0	--
Sure Klean® Weather Seal Siloxane PD	0.0	<u>AA</u>
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0.0	<u>AA</u>
Stand Off® SLX100 Water & Oil Repellent	0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	0.0	<u>AA</u>
“Tan 100”	<u>Results in mL loss</u>	<u>Ranking</u>
Untreated Control	0.0	--
Sure Klean® Weather Seal Siloxane PD	0.0	<u>AA</u>
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0.0	<u>AA</u>
Stand Off® SLX100 Water & Oil Repellent	0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	0.0	<u>AA</u>
“Buff 100”	<u>Results in mL loss</u>	<u>Ranking</u>
Untreated Control	0.0	--
Sure Klean® Weather Seal Siloxane PD	0.0	<u>AA</u>
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	0.0	<u>AA</u>
Stand Off® SLX100 Water & Oil Repellent	0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	0.0	<u>AA</u>

Photographs – Protective Water Repellents

“Tan 100” Cast Stone; Horizontal RILEM II.4, 5.0 milliliters, 20 minutes



**Sure Klean®
Weather Seal
Seal
Siloxane PD**

**Sure Klean®
Weather Seal
Siloxane WB
Concentrate
(1:9)**

**Stand Off®
SLX100
Water &
Oil
Repellent**

**Sure Klean®
Weather Seal
Blok-Guard®
& Graffiti
Control**

**Sure Klean®
Weather Seal
Blok-Guard®
& Graffiti
Control II**

**Untreated
Control**

Conclusions – Protective Water Repellents

Based upon laboratory evaluations, Sure Klean® Weather Seal Siloxane PD, Sure Klean® Weather Seal Siloxane WB Concentrate (1:9), Sure Klean® Weather Seal Blok-Guard® & Graffiti Control, Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II and Stand Off® SLX100 Water & Oil Repellent exhibited excellent water repellency on the submitted samples. In addition, all treatments provided a very slight color enhancement to the submitted samples.

Recommendations – Protective Water Repellents

Recommendations for water repellency treatments for the cast stone submitted by Joplin Building Material, Joplin, MO are provided in the chart below. Recommendations are based on the treatment that proved most effective at providing water repellency on all types submitted.

Sample	Protective Water Repellents
All Submitted Cast Stone	Sure Klean® Weather Seal Siloxane PD OR Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) OR Stand Off® SLX100 Water & Oil Repellent OR Sure Klean® Weather Seal Blok-Guard® & Graffiti Control OR Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II

***NOTE:** Sure Klean® Weather Seal Blok-Guard® & Graffiti Control is manufactured and marketed in compliance with USEPA AIM VOC regulations (40 CFR 59.403). This product may not be suitable for sale in states and districts with more restrictive AIM VOC regulations.

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.

Stain Repellency

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

Description of Products Evaluated – Stain Repellency

Stain Repellent Treatments

Stand Off® SLX100 Water & Oil Repellent – Combines water and oil repellency on most substrates to prevent staining by waterborne and oily substances. This modified “neat” silane system offers invisible protection and low volatility. The small molecular structure of SLX100 allows for maximum penetration at coverage rates higher than that of conventional silanes. Depth of penetration is controlled by the application rate (loading rate). This makes SLX100 ideal for protecting granite and other dense, color-sensitive surfaces.

Maintenance Cleaner

Enviro Klean® 2010 All Surface Cleaner – A “next-generation” product for cleaning and degreasing light-to-heavily soiled stone, tile, masonry and much more. Powerful enough for industrial use, flexible enough for jobs around the home, space-saving EK 2010 replaces a host of individual cleaning agents. It is suitable for home-use on windows, bathroom tub and tile, counter tops and more when diluted with water. It's concentrated enough for the toughest industrial cleaning jobs on concrete, metal and many other plant and warehouse surfaces. EK 2010 also removes Paver Kare® Weather Seal Siloxane PD overspray from windows.

Staining Agents Evaluated

<u>Products</u>	<u>Temperature</u>
Coca Cola	ambient (~70°F)
Ketchup	ambient (~70°F)
Mustard	ambient (~70°F)
Red Wine	ambient (~70°F)
Balsamic Vinegar	ambient (~70°F)
Soy Sauce	ambient (~70°F)
Olive Oil	ambient (~70°F)
Wesson Oil	(~250°F)
Coffee	(~120°F)

Sample Preparation – Stain Repellency

The samples were cleaned with Enviro Klean® 2010 All Surface Cleaner diluted with 10 parts water, allowed to dry and absorb atmospheric moisture for 24 hours prior to treatment. Stand Off® SLX100 Water & Oil Repellent was applied by brush in accordance with the instructions in the current PROSOCO, Inc. Product Data Sheet and was allowed to cure for at least 72 hours.

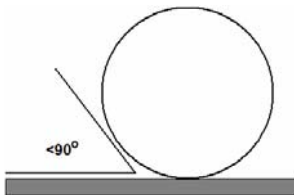
Test Method – Stain Repellency**Surface Beading Evaluation**

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

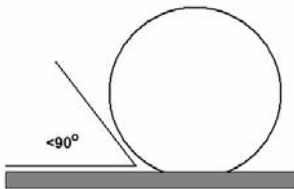
Note: Non-free flowing staining agents such as ketchup and mustard are applied in a globular fashion and therefore are not evaluated for their beading properties.

Rating System (1-5)

1. No wetting of contact area (no darkening); angle less than 90° .



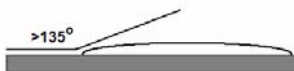
2. Wetting contained to the contact area (slight darkening); angle is less than 90° .



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



4. Wetting beyond the contact area (darkening); angle is greater than 135° .



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

**Stain Removal Evaluation**

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

Test Results – Surface Beading

“White”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	2	-	-	3	3	3	5	5	3
SLX100	1	-	-	1	1	1	2	2	2
“Gray 100”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	2	-	-	3	3	3	5	5	3
SLX100	1	-	-	1	1	1	2	2	2
“Mesa 100 S”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	2	-	-	3	3	3	5	5	3
SLX100	1	-	-	1	1	1	2	2	2
“Limestone 50”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	2	-	-	3	3	3	5	5	3
SLX100	1	-	-	1	1	1	2	2	2
“Tan 100”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	2	-	-	3	3	3	5	5	3
SLX100	1	-	-	1	1	1	2	2	2
“Buff 100”									
	Coco-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	2	-	-	3	3	3	5	5	3
SLX100	1	-	-	1	1	1	2	2	2

Test Results – Stain Repellency

“White”									
Untreated Control									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	90%	50%	30%	60%	70%	70%	30%	30%	80%
4 hour	90%	90%	50%	70%	70%	70%	30%	30%	80%
1 hour	90%	100%	90%	80%	70%	80%	30%	30%	80%
10 min.	90%	100%	90%	90%	80%	80%	30%	30%	90%
Stand Off® SLX100 Water & Oil Repellent									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	95%	50%	80%	95%	95%	70%	70%	90%
4 hour	100%	100%	90%	90%	100%	100%	70%	70%	100%
1 hour	100%	100%	100%	95%	100%	100%	70%	70%	100%
10 min.	100%	100%	100%	95%	100%	100%	80%	80%	100%
“Gray 100”									
Untreated Control									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	90%	90%	30%	70%	90%	90%	30%	30%	90%
4 hour	100%	100%	70%	70%	90%	90%	30%	30%	90%
1 hour	100%	100%	80%	80%	95%	95%	30%	30%	90%
10 min.	100%	100%	90%	95%	95%	95%	30%	30%	95%
Stand Off® SLX100 Water & Oil Repellent									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	90%	50%	90%	100%	100%	80%	80%	95%
4 hour	100%	100%	90%	90%	100%	100%	80%	80%	100%
1 hour	100%	100%	90%	95%	100%	100%	80%	80%	100%
10 min.	100%	100%	95%	100%	100%	100%	80%	80%	100%
“Mesa 100 S”									
Untreated Control									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	95%	95%	30%	70%	95%	95%	30%	30%	80%
4 hour	95%	100%	70%	70%	95%	95%	30%	30%	100%
1 hour	95%	100%	80%	80%	100%	100%	30%	30%	100%
10 min.	100%	100%	100%	95%	100%	100%	30%	30%	100%
Stand Off® SLX100 Water & Oil Repellent									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	90%	90%	100%	100%	90%	90%	95%
4 hour	100%	100%	90%	90%	100%	100%	90%	90%	95%
1 hour	100%	100%	90%	95%	100%	100%	90%	90%	100%
10 min.	100%	100%	100%	100%	100%	100%	90%	90%	100%

*Indicates etching occurred due to the acidic nature of the staining agents.

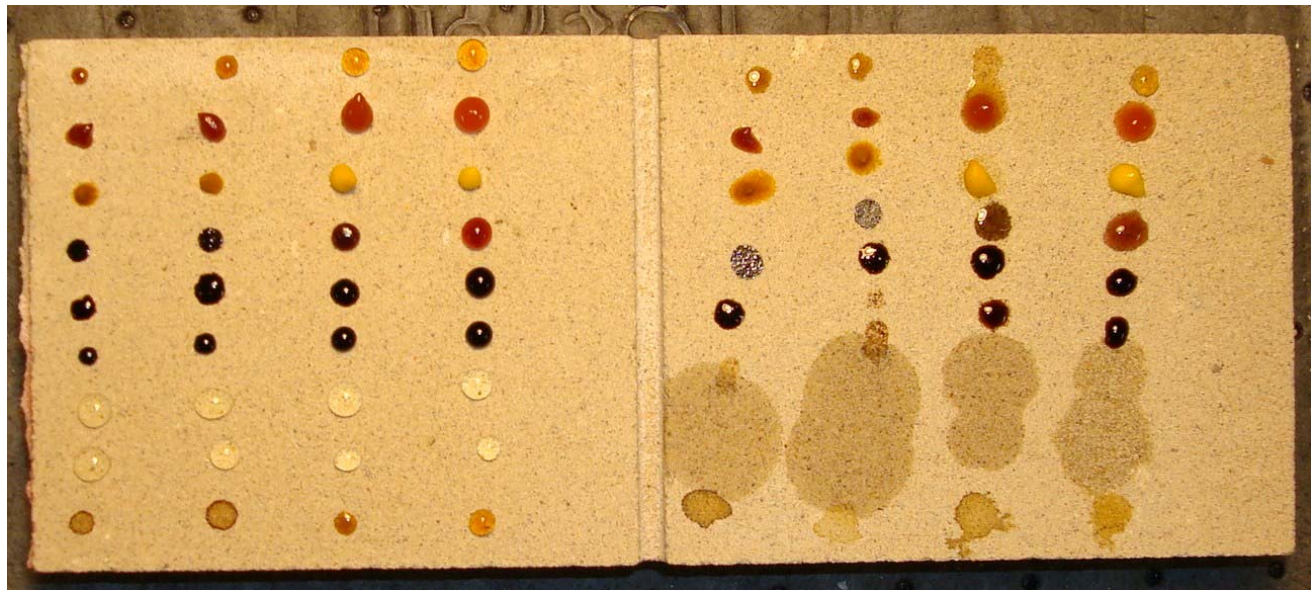
Test Results – Stain Repellency

“Limestone 50”									
Untreated Control									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	95%	30%	70%	90%	90%	30%	30%	90%
4 hour	100%	95%	50%	70%	90%	90%	30%	30%	90%
1 hour	100%	100%	90%	80%	90%	90%	30%	30%	100%
10 min.	100%	100%	95%	95%	95%	95%	30%	30%	100%
Stand Off® SLX100 Water & Oil Repellent									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	95%	50%	90%	100%	100%	90%	90%	100%
4 hour	100%	100%	95%	95%	100%	100%	90%	90%	100%
1 hour	100%	100%	95%	95%	100%	100%	90%	90%	100%
10 min.	100%	100%	100%	100%	100%	100%	90%	90%	100%
“Tan 100”									
Untreated Control									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	95%	100%	30%	70%	100%	95%	30%	30%	80%
4 hour	95%	100%	70%	70%	100%	95%	30%	30%	80%
1 hour	100%	100%	80%	70%	100%	100%	30%	30%	90%
10 min.	100%	100%	95%	95%	100%	100%	30%	30%	
Stand Off® SLX100 Water & Oil Repellent									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	50%	80%	100%	100%	95%	95%	95%
4 hour	100%	100%	90%	90%	100%	100%	95%	95%	100%
1 hour	100%	100%	95%	90%	100%	100%	95%	95%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
“Buff 100”									
Untreated Control									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	50%	70%	90%	90%	30%	30%	95%
4 hour	100%	100%	70%	70%	90%	90%	30%	30%	95%
1 hour	100%	100%	90%	70%	90%	90%	30%	30%	100%
10 min.	100%	100%	100%	95%	100%	100%	30%	30%	100%
Stand Off® SLX100 Water & Oil Repellent									
	Coca-Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%	50%	90%	95%	100%	95%	95%	95%
4 hour	100%	100%	50%	90%	100%	100%	95%	95%	100%
1 hour	100%	100%	100%	95%	100%	100%	95%	95%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%

*Indicates etching occurred due to the acidic nature of the staining agents.

Photographs – Stain Repellency

“Mesa 100 S” Cast Stone; Stains Applied



Stand Off® SLX100 Water & Oil Repellent

Untreated Control

“Mesa 100 S” Cast Stone; Stains Removed



Stand Off® SLX100 Water & Oil Repellent

Untreated Control

Conclusions – Stain Repellency

Based upon laboratory evaluations, Stand Off® SLX100 Water & Oil Repellent improved the surface beading of the samples. In addition, SLX100 was effective in repelling the staining agents, especially the oils, from the submitted samples.

Recommendations – Stain Repellency

Recommendations for stain resistance treatment for the cast stone submitted by Joplin Building Material, Joplin, MO are provided in the chart below. Recommendations are based on the treatments that proved most effective for providing stain repellency on the submitted sample.

Sample	Stain Repellent	Maintenance Cleaner
All Submitted Cast Stone	Stand Off® SLX100 Water & Oil Repellent	Enviro Klean® 2010 All Surface Cleaner (1:10)

The ability of a stain repellent treatment to prevent staining is affected by a variety of factors. Therefore, on-site testing should be carried out for all installations with the recommended systems to ensure job site workmanship yields equivalent results.

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

Graffiti Control

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

Description of Products Evaluated – Graffiti Control

Graffiti Control Treatments

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control – A clear, solvent-based silicone elastomer formulated to weatherproof concrete block and other porous masonry materials. Blok-Guard® & Graffiti Control protects masonry surfaces from repeated graffiti attacks without altering the natural appearance. Blok-Guard® & Graffiti Control penetrates and fills pores to prevent water penetration through exterior walls exposed to normal weathering. Graffiti removal is fast and easy using Defacer Eraser® Graffiti Wipe. Blok-Guard® & Graffiti Control is easy to apply with low-pressure spray, brush or roller.

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II – A clear-drying, water-based silicone emulsion for weatherproofing concrete block and other porous masonry materials. Blok-Guard® & Graffiti Control II also protects masonry surfaces from graffiti attacks without altering the natural appearance. Blok-Guard® & Graffiti Control II protects exterior walls exposed to normal weathering. Graffiti removal from treated surfaces is fast and easy using Defacer Eraser® Graffiti Wipe. Blok-Guard® & Graffiti Control II is easy to apply with low-pressure spray, brush or roller.

Defacer Eraser® Sacrificial Coating SC-1 – A clear, water-based sacrificial coating for control of graffiti on most building surfaces. SC-1 acts as a graffiti barrier, preventing spray paints, crayons and ink from penetrating and staining the underlying surface. Graffiti is removed from protected surfaces by high-pressure hot water, Defacer Eraser® Graffiti Wipe or Sure Klean® Fast Acting Stripper. The coating must then be reapplied to restore the graffiti barrier.

SC-1 allows cost-effective control of chronic graffiti without chemical strippers or abrasives that can damage building surfaces or the surrounding environment. It allows protection of limited areas and spot reapplication without a noticeable change in overall color or appearance. The coating is formulated as a water-thin liquid for spray application to porous and textured surfaces.

Products Evaluated for Graffiti Removal

Sure Klean® Fast Acting Stripper – A thixotropic stripping compound formulated specifically for removal of high strength paints and coatings such as epoxies, polyurethanes, and floor enamels. Additionally, Fast Acting Stripper dissolves most spray paints, marking pens, lacquers and other graffiti.

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

Graffiti Agents

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

Sample Preparation – Graffiti Control

Sections of the cast stone samples were treated with Sure Klean® Weather Seal Blok-Guard® & Graffiti Control, Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II and Defacer Eraser® Sacrificial Coating SC-1 in accordance with the current PROSOCO, Inc. Product Data Sheet application instructions and were then allowed to cure for at least one day. At the end of the 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 no sooner than one day following application of Sure Klean® Weather Seal Blok-Guard® & Graffiti Control, Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II and Defacer Eraser® Sacrificial Coating SC-1. Removal of the graffiti agents was attempted 24 hours after application of the graffiti agents, using Sure Klean® Fast Acting Stripper and Defacer Eraser® Graffiti Wipe.

Test Method – Graffiti Control

Chemical cleaners were evaluated using the following procedure:

1. Apply the product to a dry surface, soiled with graffiti.
2. Allow appropriate dwell time:
 - Fast Acting Stripper.....20 minutes
 - Graffiti Wipe5 minutes
3. Pressure rinse thoroughly until water runs clear.*
4. Allow the surface to dry thoroughly and visually examine to determine effectiveness.

***Pressure Rinsing Equipment** – Masonry washing equipment generating approximately 700-800 psi with a water flow rate of 8 gallons per minute delivered through a 45 degree fan spray tip was used for rinsing.

Test Results – Graffiti Control

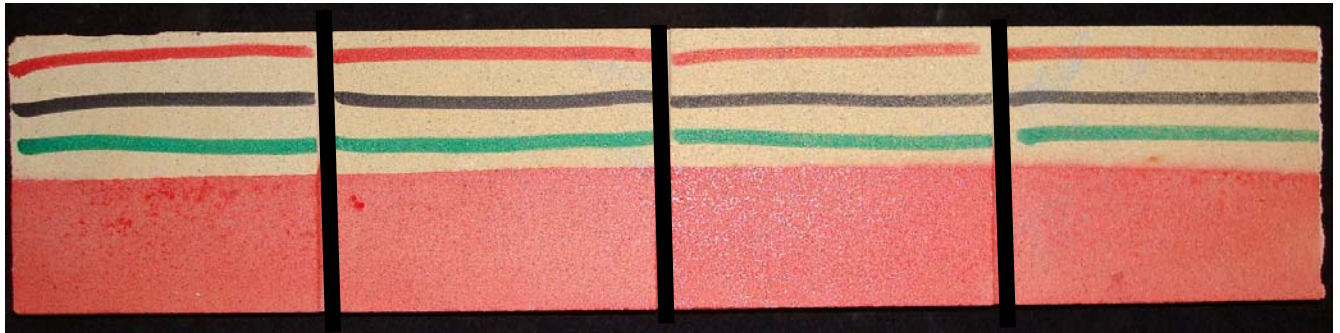
“White” Cast Stone					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	50%	50%	50%	60%
Graffiti Wipe	70%	60%	50%	50%	58%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	99%	95%	95%	95%	96%
Graffiti Wipe	98%	90%	90%	90%	92%
Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	98%	98%	95%	95%	97%
Graffiti Wipe	98%	95%	95%	95%	96%
Defacer Eraser® SC-1	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	95%	90%	90%	93%
Graffiti Wipe	95%	90%	90%	90%	91%
Warm Water (~100°)	5%	5%	5%	5%	5%
“Gray 100” Cast Stone					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	90%	30%	50%	65%
Graffiti Wipe	70%	50%	30%	50%	50%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	90%	70%	70%	81%
Graffiti Wipe	98%	90%	70%	70%	82%
Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	90%	70%	70%	81%
Graffiti Wipe	95%	80%	60%	60%	74%
Defacer Eraser® SC-1	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	100%	90%	70%	60%	80%
Graffiti Wipe	100%	80%	60%	50%	73%
Warm Water (~100°)	5%	5%	5%	5%	5%
“Mesa 100 S” Cast Stone					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	60%	60%	50%	50%	55%
Graffiti Wipe	30%	50%	50%	50%	45%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	90%	80%	90%	88%
Graffiti Wipe	80%	90%	90%	90%	88%
Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	80%	90%	90%	88%
Graffiti Wipe	80%	80%	90%	90%	85%
Defacer Eraser® SC-1	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	90%	90%	80%	88%
Graffiti Wipe	90%	90%	80%	80%	85%
Warm Water (~100°)	5%	5%	5%	5%	5%

Test Results – Graffiti Control

“Limestone 50” Cast Stone					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	70%	90%	50%	60%	68%
Graffiti Wipe	50%	60%	50%	60%	55%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	99%	98%	98%	95%	98%
Graffiti Wipe	98%	95%	95%	95%	96%
Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	98%	98%	95%	95%	97%
Graffiti Wipe	95%	95%	95%	95%	95%
Defacer Eraser® SC-1	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	98%	95%	90%	95%	95%
Graffiti Wipe	95%	70%	80%	90%	84%
Warm Water (~100°)	5%	5%	5%	5%	5%
“Tan 100” Cast Stone					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	60%	60%	90%	80%	73%
Graffiti Wipe	50%	60%	80%	80%	68%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	100%	98%	98%	98%	99%
Graffiti Wipe	98%	98%	98%	98%	98%
Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	95%	95%	95%	95%
Graffiti Wipe	95%	95%	95%	95%	95%
Defacer Eraser® SC-1	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	98%	90%	95%	90%	93%
Graffiti Wipe	98%	90%	90%	90%	92%
Warm Water (~100°)	5%	5%	5%	5%	5%
“Buff 100” Cast Stone					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	50%	80%	70%	80%	70%
Graffiti Wipe	50%	70%	70%	80%	68%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	98%	95%	90%	90%	93%
Graffiti Wipe	98%	95%	90%	90%	93%
Blok-Guard® & Graffiti Control II	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	98%	90%	90%	90%	92%
Graffiti Wipe	95%	90%	90%	90%	91%
Defacer Eraser® SC-1	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	98%	95%	90%	90%	93%
Graffiti Wipe	98%	95%	90%	90%	93%
Warm Water (~100°)	5%	5%	5%	5%	5%

Photographs – Graffiti Control

“Buff 100” Cast Stone; Before Graffiti Removal



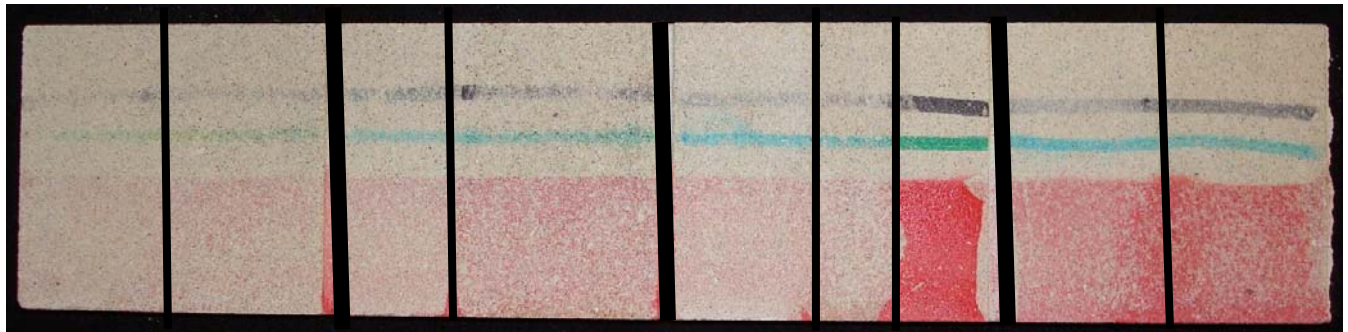
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II

Defacer Eraser® Sacrificial Coating SC-1

Untreated Control

“Buff 100” Cast Stone; After Graffiti Removal



Fast Acting Stripper

Graffiti Wipe

Fast Acting Stripper

Graffiti Wipe

Fast Acting Stripper

Graffiti Wipe

Warm Water (~100°)

Fast Acting Stripper

Graffiti Wipe

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control

Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II

Defacer Eraser® Sacrificial Coating SC-1

Untreated Control

Conclusions – Graffiti Control

Based upon laboratory evaluations, graffiti removal was improved when the submitted samples were treated with Sure Klean® Weather Seal Blok-Guard® & Graffiti Control, Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II, and Defacer Eraser® Sacrificial Coating SC-1 prior to graffiti application. In addition, all treatments provided a very slight color enhancement to the submitted samples.

Recommendations – Graffiti Control

Recommendations for graffiti control treatment for each type of cast stone submitted by Joplin Building Material, Joplin, MO are provided in the chart below. Recommendations are based on the treatment that proved most effective for providing graffiti repellency and the product that was most effective at removing the graffiti on all types submitted.

Sample	Graffiti Repellents	Graffiti Removers
All Submitted Cast stone	* Sure Klean® Weather Seal Blok-Guard® & Graffiti Control OR Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Sure Klean® Fast Acting Stripper OR Defacer Eraser® Graffiti Wipe

***NOTE:** Sure Klean® Weather Seal Blok-Guard® & Graffiti Control is manufactured and marketed in compliance with USEPA AIM VOC regulations (40 CFR 59.403). This product may not be suitable for sale in states and districts with more restrictive AIM VOC regulations.

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. Because the severity of graffiti varies from location to location, on-site testing should be conducted to determine the most appropriate graffiti control product and procedure for a particular project.

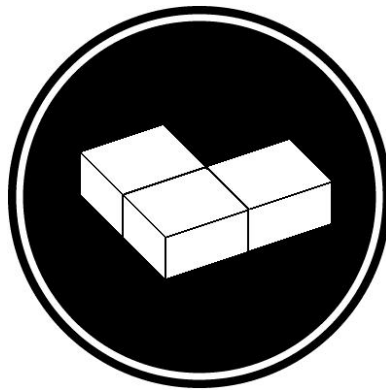


John Lancaster
Project Testing Laboratory Technician



PALLET TAG PROGRAM
Laboratory Report

Joplin Building Material
1021 E 15th St.
Joplin, MO 64804
“Accent Cast Stone”



Project No. 0705-03 PTP

Prepared For:
PROSOCO
SINCE 1939

Prepared By:
AMT Laboratories
July 2007