



# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

Page 1

## TABLE OF CONTENTS

<b>SAMPLES SUBMITTED .....</b>	<b>2</b>
<b>PURPOSE OF TEST .....</b>	<b>3</b>
<b>PRODUCTS EVALUATED .....</b>	<b>4-5</b>

### **SECTION A – NEW CONSTRUCTION CLEANING**

DESCRIPTION OF PRODUCTS EVALUATED .....	6
TEST METHOD .....	6
TEST RESULTS .....	7
PHOTOGRAPHS .....	8-9
CONCLUSIONS .....	10
RECOMMENDATIONS .....	10

### **SECTION B – LIMITING SURFACE ALTERATIONS**

DESCRIPTION OF PRODUCTS EVALUATED .....	11
TEST METHOD .....	11
TEST RESULTS .....	12-14
RECOMMENDATIONS .....	15

### **SECTION C – GRAFFITI CONTROL**

DESCRIPTION OF PRODUCTS EVALUATED .....	16
TEST METHODS .....	17
TEST RESULTS .....	18-19
PHOTOGRAPHS .....	20
CONCLUSIONS .....	21
RECOMMENDATIONS .....	21

### **SECTION D- WATER REPELLENCY**

DESCRIPTION OF PRODUCTS EVALUATED .....	22
TEST METHODS .....	22
TEST RESULTS .....	23
PHOTOGRAPHS .....	24
CONCLUSIONS .....	25
RECOMMENDATIONS .....	25

### **SECTION E – COLOR ENHANCEMENT**

DESCRIPTION OF PRODUCTS EVALUATED .....	26
TEST METHODS .....	26
TEST RESULTS .....	27
PHOTOGRAPHS .....	28-31
RECOMMENDATIONS .....	32

### **ATTACHMENTS**

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



# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

Page 2

**FOR:** Bill Walker  
**cc:** Jim Lucas  
Brian Koenings  
John Bourne

**SUBJECT:** ProLine Stone  
Allenton, WI

**DATE:** August 21, 2003 (REVISED)

**PROJECT:** 0305-04 PTP

**SAMPLES SUBMITTED:**

Sample	Number	Color	Size
Manufactured Stone	Various	"Wisconsin River Rock"	Various
Manufactured Stone		"Hillside Splitrock"	
Manufactured Stone		"Chardonnay"	

Submitted by: Bill Walker



# PALLET TAG PROGRAM LABORATORY REPORT



PROSOCO, Inc.

Page 3

## PURPOSE OF TESTING:

Three types of manufactured stone were submitted to PROSOCO, Inc.'s Testing Laboratory with a request to determine if application of the products evaluated would produce any surface alteration during new construction cleaning operations. Additionally, the effectiveness of water and graffiti repellents and products for color enhancement, suitable for manufactured stone, was evaluated.

**A. New Construction Cleaning** – Sure Klean® Manufactured Stone Cleaner\*, Enviro Klean® Safety Klean, and Sure Klean® Vana Trol® were evaluated at various dilutions for removal of laboratory applied mortar.

To simulate new construction soiling, all 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 tile and filled with a wet mixture of Ash Grove® Type N cementitious mortar. The wet, mortar-filled cylinder was allowed to remain in contact with the tile for 10 minutes before removal. Soiled samples are allowed to dry before test cleaning.

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

**B. Limiting Surface Alterations Testing** – Sure Klean® Manufactured Stone Cleaner, Enviro Klean® Safety Klean, and Sure Klean® Vana Trol® were evaluated at various dilutions to determine if a cleaning program implemented to remove excess mortar and related new construction soiling would otherwise alter the appearance of cleaned surfaces. Surface Alteration was evaluated visually based upon perceived discoloration or erosion/etching of the masonry unit.

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

Surface Pigment Alteration/Removal is the visual examination of the tile comparing the surface pigmentation of the untreated control to surfaces cleaned with selected product(s) at given dilutions.

Matrix Erosion is the visual examination comparing the untreated control surface to surfaces cleaned with selected products at given dilutions looking for any potential erosion/digestion of the cementitious matrix of the tile.

Staining is the visual examination for changes that are the result of a chemical reaction that leaves a staining precipitate.

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

0 – no change	3 – heavy
1 – slight	4 – excessive
2 – moderate	

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

**D. Water Repellency** - Sure Klean® Custom Masonry Sealer, Sure Klean® Weather Seal Siloxane PD, Sure Klean® Siloxane WB Concentrate, and Sure Klean® Weather Seal Natural Stone Treatment were evaluated for their ability to repel water.

**E. Color Enhancement** – Sure Klean® Blok-Guard® & Graffiti Control and Stand Off® Gloss N' Guard were evaluated for their ability to enhance the natural color of each manufactured stone.

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



# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

**Page 4**

## PRODUCTS EVALUATED

### CLEANING AND LIMITING SURFACE ALTERATIONS PRODUCTS EVALUATED

SAMPLE	PRODUCT	DILUTION*
All submitted manufactured stone	Sure Klean® Manufactured Stone Cleaner	1:2, 1:3
	Enviro Klean® Safety Klean	1:3
	Sure Klean® Vana Trol®	1:8, 1:10

### GRAFFITI CONTROL PRODUCTS EVALUATED

SAMPLE	Product
All submitted manufactured stone	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control
	Defacer Eraser® Sacrificial Coating SC-1

### GRAFFITI REMOVAL PRODUCTS EVALUATED

SAMPLE	Product
All submitted manufactured stone	Sure Klean® Fast Acting Stripper
	Defacer Eraser® Graffiti Wipe
	Defacer Eraser® Graffiti Release

### WATER REPELLENCY PRODUCTS EVALUATED

SAMPLE	Product
All submitted manufactured stone	Sure Klean® Custom Masonry Sealer
	Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)
	Sure Klean® Weather Seal Natural Stone Treatment
	Sure Klean™ Weather Seal Siloxane PD

### COLOR ENHANCEMENT PRODUCTS EVALUATED

SAMPLE	Product
All submitted cast-stone	Stand Off® Gloss N' Guard
	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control



# PALLET TAG PROGRAM LABORATORY REPORT



PROSOCO, Inc.

Page 5

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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 Ash Grove® Type N mortar from the submitted cast stone.

Ash Grove® Type N cementitious mortar was prepared in compliance with the manufacturers instructions, applied to the cast stone and allowed to cure for 7, 14 and 21 days prior to removal with high pressure water rinse using pressure rinsing equipment and chemical assist. The removal of gray Ash Grove® Type N cementitious masonry cement mortar after 7, 14 and 21 days of curing was visually evaluated.

**Sure Klean® Manufactured Stone Cleaner** – Removes common construction and atmospheric staining from manufactured stone 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. Manufactured Stone Cleaner adds depth to colors and brightens white matrices and exposed aggregate.

**Enviro Klean® Safety Klean** – An effective, safe alternative to acidic compounds for cleaning brick, tile, and concrete surfaces. Safety Klean rids new masonry construction of excess mortar, dirt, and other common job site soiling. It's ideal for projects where traditional acidic cleaners are not allowed. Non-fuming Safety Klean contains no hydrochloric or other traditional inorganic acids and is safe for use on and around metal surfaces. Liquid concentrate for dilution with up to three parts fresh water. Apply by brush, roller, 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 the appropriate dwell time, as specified.

Manufactured Stone Cleaner .....	3-5 minutes
Safety Klean .....	3 minutes
Vana Trol® .....	3-5 minutes
4. Pressure rinse thoroughly.\*

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



# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

Page 6

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## TEST RESULTS – New Construction Cleaning

### % Removal

#### “Wisconsin River Rock” Manufactured Stone

	<u>7 day</u>	<u>14 day</u>	<u>21 day</u>
Manufactured Stone Cleaner (1:2)	95%	100%	100%
Manufactured Stone Cleaner (1:3)	95%	100%	100%
Safety Klean (1:3)	95%	95%	100%
Vana Trol <sup>®</sup> (1:8)	100%	100%	100%
Vana Trol <sup>®</sup> (1:10)	100%	100%	100%

#### “Hillside Splitrock” Manufactured Stone

	<u>7 day</u>	<u>14 day</u>	<u>21 day</u>
Manufactured Stone Cleaner (1:2)	95%	90%	90%
Manufactured Stone Cleaner (1:3)	95%	90%	90%
Safety Klean (1:3)	95%	95%	95%
Vana Trol <sup>®</sup> (1:8)	95%	95%	100%
Vana Trol <sup>®</sup> (1:10)	95%	90%	95%

#### “Chardonnay” Manufactured Stone

	<u>7 day</u>	<u>14 day</u>	<u>21 day</u>
Manufactured Stone Cleaner (1:2)	95%	90%	90%
Manufactured Stone Cleaner (1:3)	90%	90%	90%
Safety Klean (1:3)	90%	90%	90%
Vana Trol <sup>®</sup> (1:8)	90%	90%	90%
Vana Trol <sup>®</sup> (1:10)	90%	90%	90%



# PALLET TAG PROGRAM LABORATORY REPORT

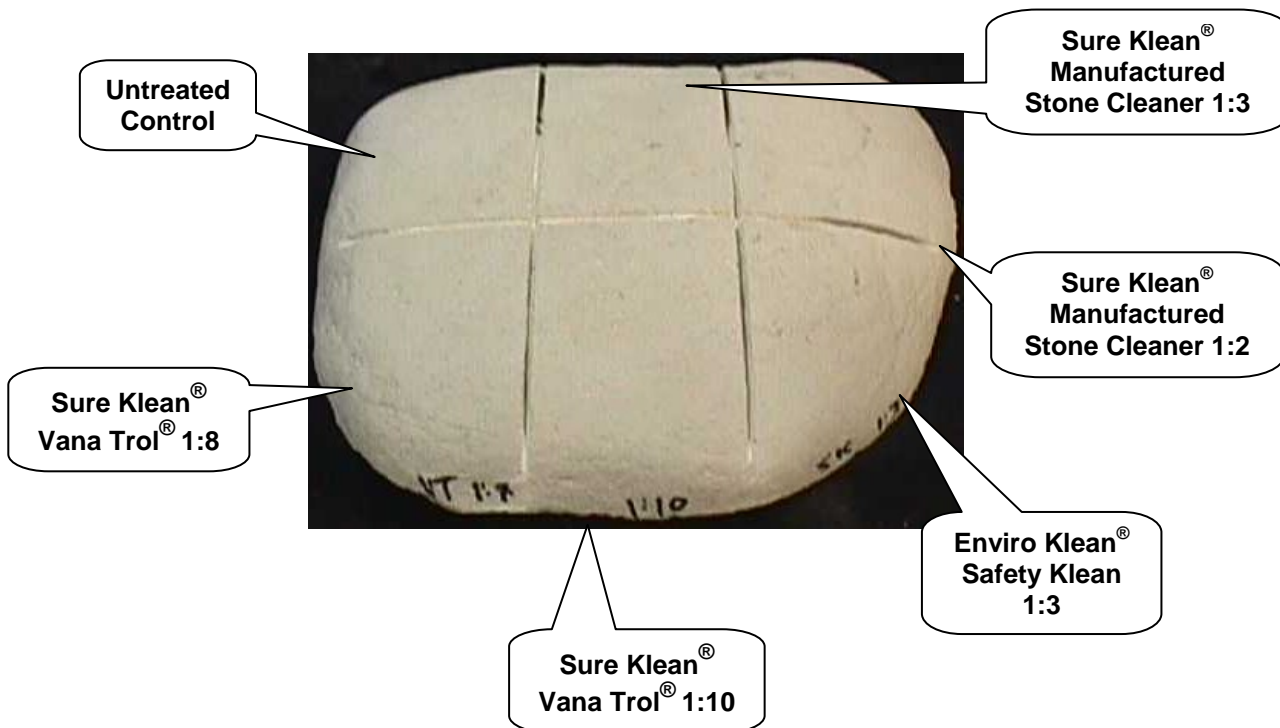


PROSOCO, Inc.

Page 7

## PHOTOGRAPHS- New Construction Cleaning

### "Wisconsin River Rock" 7 day Cleaning







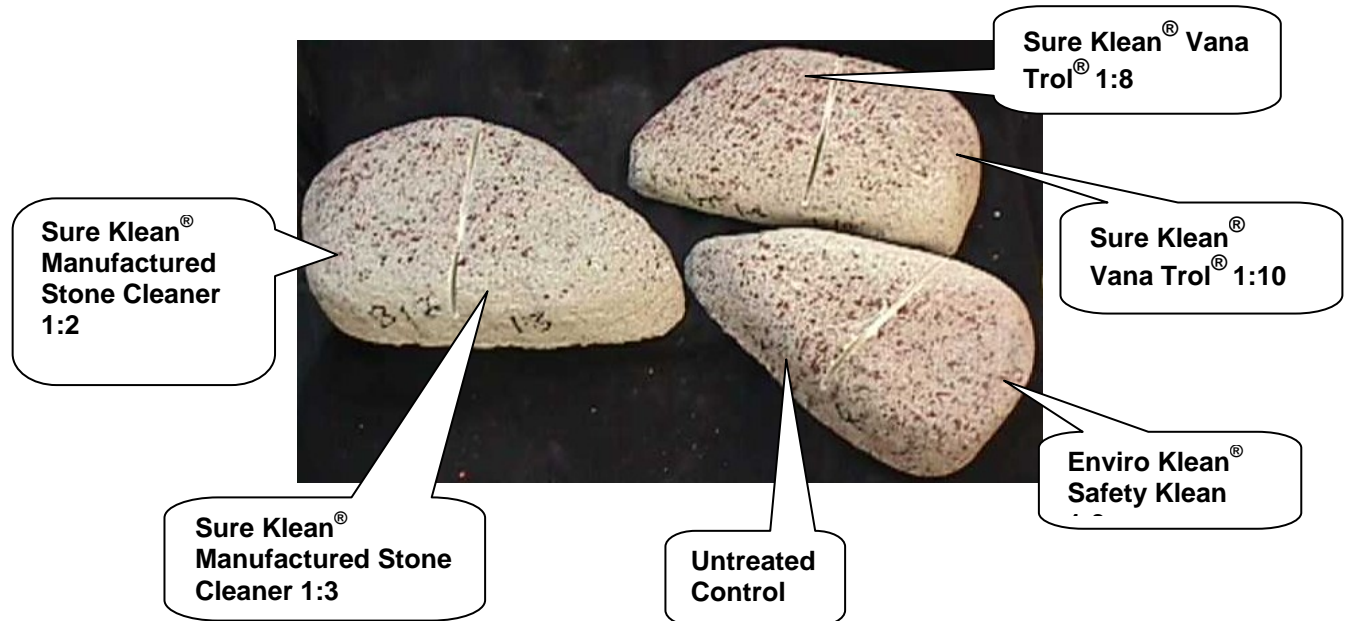
# PALLET TAG PROGRAM LABORATORY REPORT



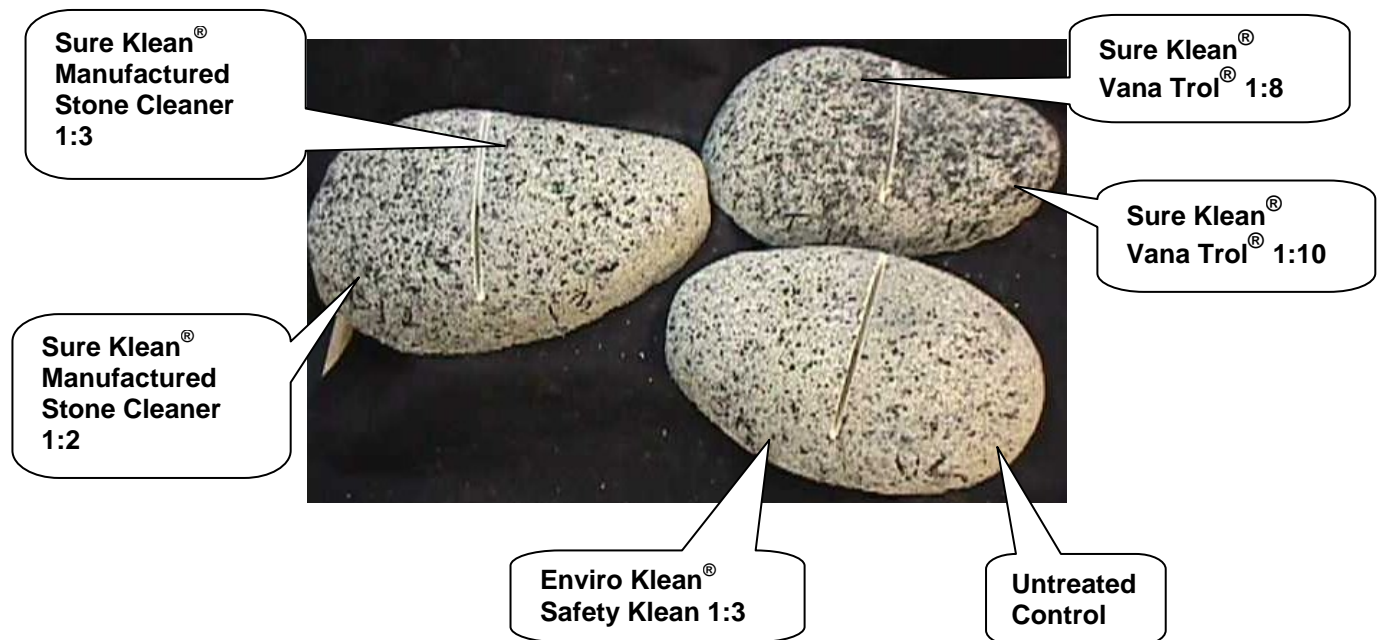
PROSOCO, Inc.

Page 8

## "Wisconsin River Rock" 14 day Cleaning



## "Wisconsin River Rock" 21 day Cleaning







# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

**Page 9**

## **CONCLUSIONS – New Construction Cleaning**

Based on the test results, all cleaners and all dilutions performed well in removing excess mortar smears on the submitted cast stone. The cleaners performed well in removing the mortar soils even after allowing the mortar to remain on the surface of the manufactured stone for 21 days under ideal curing conditions.

It is also recommended that the selected cleaners always be used in the lowest possible concentration, typically a 1:3 dilution for Sure Klean® Manufactured Stone Cleaner, a 1:3 dilution for Enviro Klean® Safety Klean, and a 1:10 dilution of Sure Klean® Vana Trol®. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential adverse affect on the manufactured stone, clean within 7 days of construction.

## **RECOMMENDATIONS – New Construction Cleaning**

Recommendations for cleaning for the manufactured stone submitted by ProLine Stone, Allenton, WI are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar.

<b>Sample</b>	<b>New Construction Cleaning (Type N mortar, 14 day cleaning)</b>
“Wisconsin River Rock” Manufactured stone	Sure Klean® Vana Trol® (1:10)
“Hillside Splitrock” Manufactured stone	Sure Klean® Vana Trol® (1:8) OR (1:10) OR Sure Klean® Manufactured Stone Cleaner (1:3) OR Sure Klean® Safety Klean (1:3)
“Chardonnay” Manufactured stone	Sure Klean® Vana Trol® (1:8) OR Sure Klean® Manufactured Stone Cleaner (1:2)

The most appropriate cleaner and dilution should be determined on the specific job-site, and will be dependent primarily on the nature and severity of soiling present at that location. Rinsing with garden-hose pressure spray is 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 cleaning product and procedures for a particular project. See product literature for additional application and product information.



# PALLET TAG PROGRAM LABORATORY REPORT



PROSOCO, Inc.

Page 10

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## **SECTION B – LIMITING SURFACE ALTERATIONS**

### **DESCRIPTION OF PRODUCTS EVALUATED – Limiting Surface Alterations**

**Sure Klean® Manufactured Stone Cleaner** – Removes common construction and atmospheric staining from manufactured stone 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. Manufactured Stone Cleaner adds depth to colors and brightens white matrices and exposed aggregate.

**Enviro Klean® Safety Klean** – An effective, safe alternative to acidic compounds for cleaning brick, tile, and concrete surfaces. Safety Klean rids new masonry construction of excess mortar, dirt, and other common job site soiling. It's ideal for projects where traditional acidic cleaners are not allowed. Non-fuming Safety Klean contains no hydrochloric or other traditional inorganic acids and is safe for use on and around metal surfaces. Liquid concentrate for dilution with up to three parts fresh water. Apply by brush, roller, 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 – Limiting Surface Alterations**

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 the appropriate dwell time, as specified.

Manufactured Stone Cleaner .....	3-5 minutes
Safety Klean .....	3 minutes
Vana Trol® .....	3-5 minutes
4. Pressure rinse thoroughly.\*

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



# PALLET TAG PROGRAM LABORATORY REPORT



PROSOCO, Inc.

Page 11

## TEST RESULTS – Limiting Surface Alterations

<b>Substrate:</b> "Wisconsin River Rock"		<b>Pigment Color:</b> White			
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	0	0	0	0
Manufactured Stone Cleaner	1:3	0	0	0	0
Safety Klean	1:3	0	0	0	0
Vana Trol <sup>®</sup>	1:8	0	0	0	0
Vana Trol <sup>®</sup>	1:10	0	0	0	0
<b>Substrate:</b> "Wisconsin River Rock"		<b>Pigment Color:</b> Red Speckled			
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	0	0	0	0
Manufactured Stone Cleaner	1:3	0	0	0	0
Safety Klean	1:3	0	0	0	0
Vana Trol <sup>®</sup>	1:8	0	0	0	0
Vana Trol <sup>®</sup>	1:10	0	0	0	0
<b>Substrate:</b> "Wisconsin River Rock"		<b>Pigment Color:</b> Black Speckled			
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	0	0	0	0
Manufactured Stone Cleaner	1:3	0	0	0	0
Safety Klean	1:3	0	0	0	0
Vana Trol <sup>®</sup>	1:8	0	0	0	0
Vana Trol <sup>®</sup>	1:10	0	0	0	0

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

0 – no change	3 – heavy
1 – slight	4 – excessive
2 – moderate	



# PALLET TAG PROGRAM LABORATORY REPORT



PROSOCO, Inc.

Page 12

## TEST RESULTS – Limiting Surface Alterations (continued)

<b>Substrate:</b> "Hillside Splitrock"		<b>Pigment Color:</b> Beige			
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	1	0	0	0
Manufactured Stone Cleaner	1:3	1	0	0	0
Safety Klean	1:3	1	0	0	0
Vana Trol®	1:8	0	0	0	0
Vana Trol®	1:10	0	0	0	0
<b>Substrate:</b> "Hillside Splitrock"		<b>Pigment Color:</b> Black			
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	1	0	0	0
Manufactured Stone Cleaner	1:3	0	0	0	0
Safety Klean	1:3	1	0	0	0
Vana Trol®	1:8	1	0	0	0
Vana Trol®	1:10	0	0	0	0
<b>Substrate:</b> "Hillside Splitrock"		<b>Pigment Color:</b> Green			
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	0	0	0	0
Manufactured Stone Cleaner	1:3	0	0	0	0
Safety Klean	1:3	0	0	0	0
Vana Trol®	1:8	0	0	0	0
Vana Trol®	1:10	0	0	0	0
<b>Substrate:</b> "Hillside Splitrock"		<b>Pigment Color:</b> Light Red			
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	0	0	0	0
Manufactured Stone Cleaner	1:3	0	0	0	0
Safety Klean	1:3	0	0	0	0
Vana Trol®	1:8	0	0	0	0
Vana Trol®	1:10	0	0	0	0

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

0 – no change

1 – slight

3 – heavy

4 – excessive



# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

**Page 13**

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2 – moderate	
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# PALLET TAG PROGRAM LABORATORY REPORT



PROSOCO, Inc.

Page 14

## TEST RESULTS – Limiting Surface Alterations (continued)

<b>Substrate:</b> "Chardonnay"		<b>Pigment Color:</b> White			
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	0	0	0	0
Manufactured Stone Cleaner	1:3	0	0	0	0
Safety Klean	1:3	0	0	0	0
Vana Trol®	1:8	0	0	0	0
Vana Trol®	1:10	0	0	0	0
<b>Substrate:</b> "Chardonnay"		<b>Pigment Color:</b> Green			
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	1	0	0	0
Manufactured Stone Cleaner	1:3	1	0	0	0
Safety Klean	1:3	2	0	0	0
Vana Trol®	1:8	2	0	0	0
Vana Trol®	1:10	0	0	0	0
<b>Substrate:</b> "Chardonnay"		<b>Pigment Color:</b> Red			
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Manufactured Stone Cleaner	1:2	0	0	0	0
Manufactured Stone Cleaner	1:3	0	0	0	0
Safety Klean	1:3	2	0	0	0
Vana Trol®	1:8	2	0	0	0
Vana Trol®	1:10	1	0	0	0

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

0 – no change	3 – heavy
1 – slight	4 – excessive
2 – moderate	



# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

**Page 15**

## RECOMMENDATIONS – Limiting Surface Alterations

Recommendations for limiting surface alterations for the submitted manufactured stone by ProLine Stone, Allenton, WI are provided in the chart below. Recommendations are based on the optimum dilution for removal of mortar while limiting surface alterations.

Sample	Color	Product
"Wisconsin River Rock" manufactured stone	White	Enviro Klean® Safety Klean 1:3 OR Sure Klean® Vana Trol® 1:10 OR Sure Klean® Manufactured Stone Cleaner 1:3
	Red Speckled	
	Black Speckled	
"Hillside Splitrock" manufactured stone	Black	Sure Klean® Vana Trol® 1:10 OR Sure Klean® Manufactured Stone Cleaner 1:3
	Beige	Sure Klean® Vana Trol® 1:8, 1:10
	Green	Enviro Klean® Safety Klean 1:3 OR Sure Klean® Vana Trol® 1:10 OR Sure Klean® Manufactured Stone Cleaner 1:3
	Light Red	
"Chardonnay" manufactured stone	White	Enviro Klean® Safety Klean 1:3 OR Sure Klean® Vana Trol® 1:10 OR Sure Klean® Manufactured Stone Cleaner 1:3
	Red	Sure Klean® Manufactured Stone Cleaner 1:2, 1:3
	Green	Sure Klean® Vana Trol® 1:10

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. Using garden hose strength water pressure may help to minimize these surface alterations.

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





# PALLET TAG PROGRAM LABORATORY REPORT



PROSOCO, Inc.

Page 16

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## SECTION C – GRAFFITI CONTROL

### DESCRIPTION OF PRODUCTS EVALUATED

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

#### 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.

**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.

#### Products Evaluated for Graffiti Removal

**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, wood and metal surfaces.

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

**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.

#### Graffiti Agents

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



# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

**Page 17**

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## **SAMPLE PREPARATION – Graffiti Control**

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

Sections of the cast-stone samples were treated with one coat of Sure Klean® Weather Seal Blok-Guard® & Graffiti Control and Defacer Eraser® Sacrificial Coating SC-1 in accordance with PROSOCO, Inc.'s Product Guide application recommendations and then allowed to cure for at least one day. At the end of the one-day cure period, a visual adverse effects evaluation was made and then the graffiti agents were applied to the substrates.

Spray paint and markers were applied as graffiti agents to all treated surfaces no sooner than one day following application of Sure Klean® Weather Seal Blok-Guard® & Graffiti Control and Defacer Eraser® Sacrificial Coating SC-1. Removal of the graffiti agents was attempted 24 hours after application of the graffiti agents, using either Defacer Eraser® Graffiti Wipe, Defacer Eraser® Graffiti Release or Sure Klean® Fast Acting Stripper.

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## **TEST METHOD – Graffiti Control**

Chemical cleaners were evaluated using the following procedure:

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

Graffiti Wipe .....	5 minutes
Graffiti Release .....	15 minutes
Fast Acting Stripper .....	20 minutes
3. Pressure rinse thoroughly until water runs clear. \*
4. Allow the surface to dry thoroughly and visually examine to determine effectiveness.

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



# PALLET TAG PROGRAM LABORATORY REPORT



PROSOCO, Inc.

Page 18

## TEST RESULTS – Graffiti Control

“Wisconsin River Rock”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	20%	80%	50%	60%	53%
Graffiti Wipe	60%	50%	50%	50%	58%
Graffiti Release	20%	40%	50%	50%	40%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	100%	95%	95%	95%	96%
Graffiti Wipe	100%	95%	95%	95%	96%
Graffiti Release	95%	85%	85%	85%	88%
Sacrificial Coating SC-1	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	70%	70%	70%	70%	70%
Graffiti Wipe	90%	75%	80%	80%	81%
Graffiti Release	90%	80%	60%	60%	73%
“Hillside Splitface”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	60%	90%	70%	70%	73%
Graffiti Wipe	10%	75%	70%	70%	56%
Graffiti Release	70%	70%	70%	70%	70%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	100%	100%	95%	98%
Graffiti Wipe	95%	100%	100%	100%	99%
Graffiti Release	95%	100%	100%	95%	98%
Sacrificial Coating SC-1	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	70%	95%	95%	95%	89%
Graffiti Wipe	95%	70%	70%	70%	76%
Graffiti Release	95%	90%	85%	85%	89%



# PALLET TAG PROGRAM LABORATORY REPORT



PROSOCO, Inc.

Page 19

## TEST RESULTS – Graffiti Control (continued)

“Chardonnay”					
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	50%	90%	60%	70%	68%
Graffiti Wipe	20%	50%	50%	50%	43%
Graffiti Release	80%	70%	70%	70%	73%
Blok-Guard® & Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	100%	100%	100%	99%
Graffiti Wipe	100%	100%	100%	100%	100%
Graffiti Release	95%	95%	100%	95%	96%
Sacrificial Coating SC-1	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	75%	90%	90%	90%	86%
Graffiti Wipe	100%	90%	90%	90%	98%
Graffiti Release	95%	90%	90%	90%	91%



# PALLET TAG PROGRAM LABORATORY REPORT



PROSOCO, Inc.

Page 20

## PHOTOGRAPHS – Graffiti Control

“Chardonnay” Graffiti Applied



“Chardonnay” After Graffiti Removal



1. 2. 3. | 1. 2. 3. | 1. 2. 3.

1. Sure Klean® Fast Acting Stripper
2. Defacer Eraser® Graffiti Release
3. Defacer Eraser® Graffiti Wipe



# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

**Page 21**

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## CONCLUSIONS – Graffiti Control

Based upon laboratory evaluations, graffiti removal was improved dramatically when the submitted samples were treated with Sure Klean<sup>®</sup> Weather Seal Blok-Guard<sup>®</sup> & Graffiti Control or Defacer Eraser<sup>®</sup> Sacrificial Coating SC-1 prior to graffiti application.

---

## RECOMMENDATIONS – GRAFFITI CONTROL

Recommendations for graffiti control treatment for each type of CMU submitted by ProLine Stone, Allenton, WI, 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.

Block Type	Graffiti Repellents	Graffiti Removers
"Wisconsin River Rock"	Sure Klean <sup>®</sup> Weather Seal Blok-Guard <sup>®</sup> & Graffiti Control	Sure Klean <sup>®</sup> Fast Acting Stripper OR Defacer Eraser <sup>®</sup> Graffiti Wipe OR Defacer Eraser <sup>®</sup> Graffiti Release
"Hillside Splitrock"		
"Chardonnay"		

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. See product literature for additional application and product information.



# PALLET TAG PROGRAM LABORATORY REPORT



PROSOCO, Inc.

Page 22

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## SECTION D- 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® Custom Masonry Sealer** – A clear, solvent-based silicone elastomer formulated to weatherproof custom masonry units, cast stone, architectural concrete block, precast concrete, wood and porous masonry. Custom Masonry Sealer penetrates and fills pores to prevent water penetration through exterior walls exposed to normal weathering.

**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.

**Sure Klean® Weather Seal Natural Stone Treatment** - A modified siloxane water repellent developed for limestone, marble and most other traditional masonry surfaces. Natural Stone Treatment penetrates deeply to provide long-lasting protection without altering the natural appearance of the substrate.

**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.

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### SAMPLE PREPARATION - Protective Water Repellents:

The submitted blocks were scored, allowed to dry, and to reabsorb atmospheric humidity for 24 hours prior to treatment. The treatment method consisted of a wet-on-wet brush application. All treatments were allowed to cure at least 72 hours prior to testing.

---

### TEST METHODS - Protective Water Repellents:

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

The water absorption tube test simulating wind driven rain conditions was performed. This test simulates 60 mile per hour wind driven rain conditions for a period of 20 minutes. See Technical Services TECH Note RILEM Tube Test Procedures.





# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

**Page 23**

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**TEST RESULTS - Protective Water Repellents:**

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

<b>RESULTS</b>	
<b>"Chardonnay"</b>	
Untreated Control	54 mph
Custom Masonry Sealer	59 mph
Siloxane WB 1:9	60 mph
Natural Stone Treatment	59 mph
Siloxane PD	57 mph
<b>"River Rock"</b>	
Untreated Control	< 40 mph
Custom Masonry Sealer	58 mph
Siloxane WB 1:9	58 mph
Natural Stone Treatment	57 mph
Siloxane PD	57 mph
<b>"Hillside"</b>	
Untreated Control	55 mph
Custom Masonry Sealer	59 mph
Siloxane WB 1:9	60 mph
Natural Stone Treatment	59 mph
Siloxane PD	59 mph



# PALLET TAG PROGRAM LABORATORY REPORT

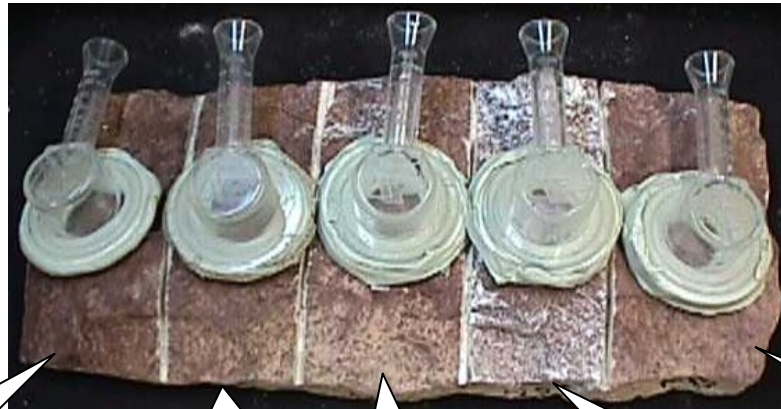


PROSOCO, Inc.

Page 24

## PHOTOGRAPHS – Protective Water Repellents

### “Chardonnay” Red- RILEM testing



Sure Klean®  
Custom Masonry  
Sealer

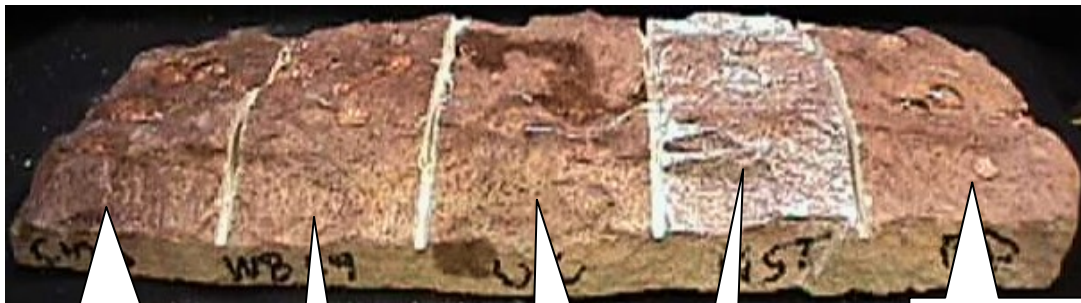
Sure Klean®  
Weather Seal  
Siloxane WB 1:9

Untreated  
Control

Sure Klean®  
Weather Seal  
Natural Stone  
Treatment

Sure Klean®  
Weather Seal  
Siloxane PD

### “Chardonnay” Red- Surface Beading



Sure Klean®  
Custom Masonry  
Sealer

Untreated  
Control

Sure Klean®  
Weather Seal  
Siloxane PD

Sure Klean®  
Weather Seal  
Siloxane WB 1:9

Sure Klean®  
Weather Seal  
Natural Stone  
Treatment



# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

**Page 25**

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## CONCLUSIONS - Protective Water Repellents

Based upon laboratory evaluations, all of the products of PROSOCO, Inc., provided above average water repellency to each of the submitted samples. However, Sure Klean<sup>®</sup> Weather Seal Natural Stone Treatment is NOT recommended for any of the submitted cast-stone because it left an undesirable white residue on all of the tested surfaces.

---

## RECOMMENDATIONS - PROTECTIVE WATER REPELLENTS

Recommendations for water repellency treatment for each type of cast-stone submitted by ProLine Stone, Allenton, WI are provided in the chart below. Recommendations are based on the treatment that proved most effective and can provide water repellency on all types submitted.

Block Type	Water Repellents
All submitted cast-stone	Sure Klean <sup>®</sup> Custom Masonry Sealer OR Sure Klean <sup>®</sup> Weather Seal Siloxane WB (1:9) OR Sure Klean <sup>®</sup> Weather Seal Siloxane PD

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.



# PALLET TAG PROGRAM LABORATORY REPORT



PROSOCO, Inc.

Page 26

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## **SECTION E – COLOR ENHANCEMENT:**

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

**Sure Klean® Weather Seal Blok-Guard® & Graffiti Control** – A clear, solvent-based silicone elastomer formulated to weatherproof concrete block and other porous masonry materials.

**Stand Off® Gloss 'N Guard** - A highly durable protective coating for tile, pavers, terrazzo and other polished and unpolished masonry. Gloss 'N Guard dries to a high-gloss finish which enhances the natural beauty of treated surfaces.

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### **TEST METHOD – COLOR ENHANCEMENT**

The color enhancing products were applied in accordance with the product recommendation in the 2003 PROSOCO, Inc. Product Guide.



# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

**Page 27**

## TEST RESULTS- COLOR ENHANCEMENT

Cast-Stone Name	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control	Stand Off® Gloss 'N Guard
"Chardonnay" Green	2	3
"Chardonnay" Red	2	3
"Chardonnay" White	1	2
"Hillside" Black	1	2
"Hillside" Beige	2	3
"Hillside" Green	2	3
"Hillside" Red	1	3
"River Rock" Black	1	2
"River Rock" Red	1	2
"River Rock" Red+Black	1	2
"River Rock" White	2	3

**Scale: 0- No enhancement; dull**

**1- Slight Enhancement**

**2- Moderate Enhancement**

**3- Significant Enhancement**



# PALLET TAG PROGRAM LABORATORY REPORT

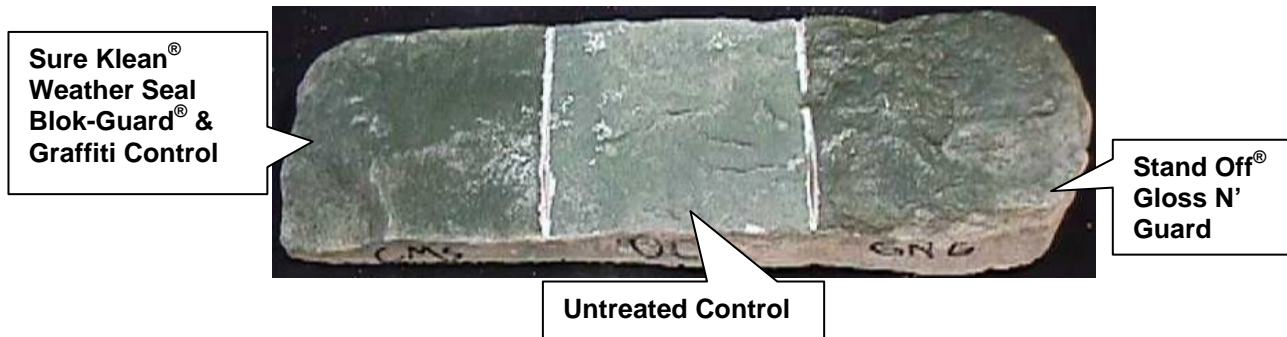


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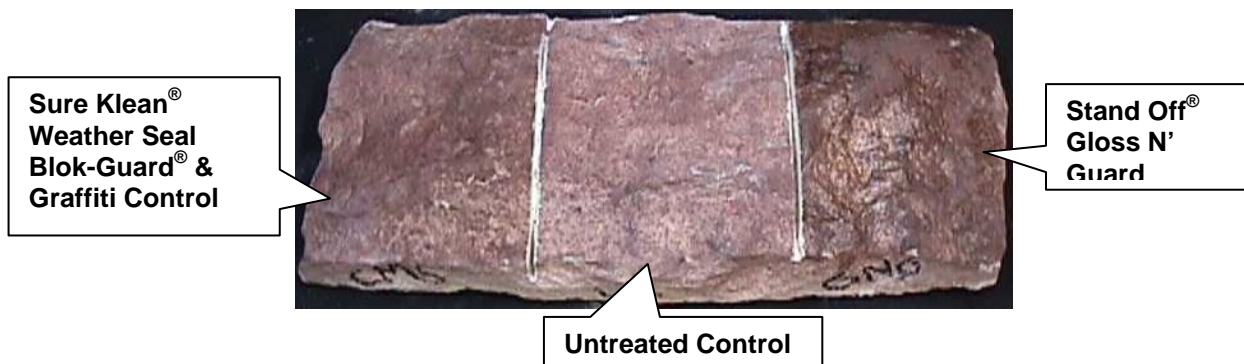
Page 28

## PHOTOGRAPHS- Color Enhancement

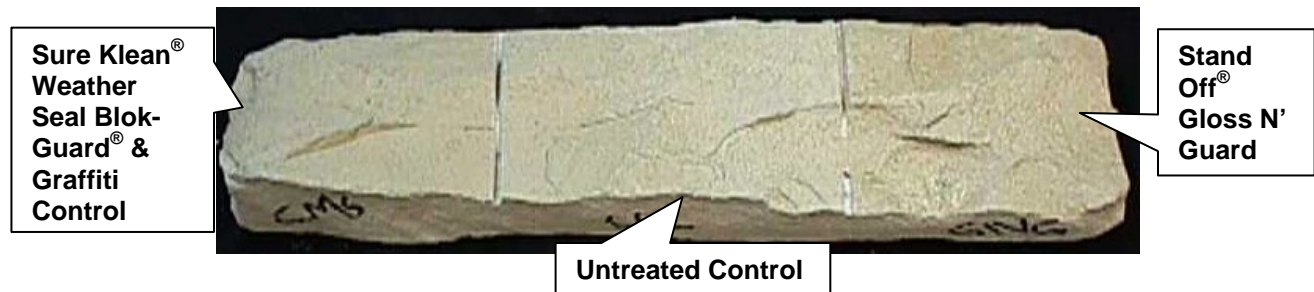
"Chardonnay" Green



"Chardonnay" Red



"Chardonnay" White







# PALLET TAG PROGRAM LABORATORY REPORT

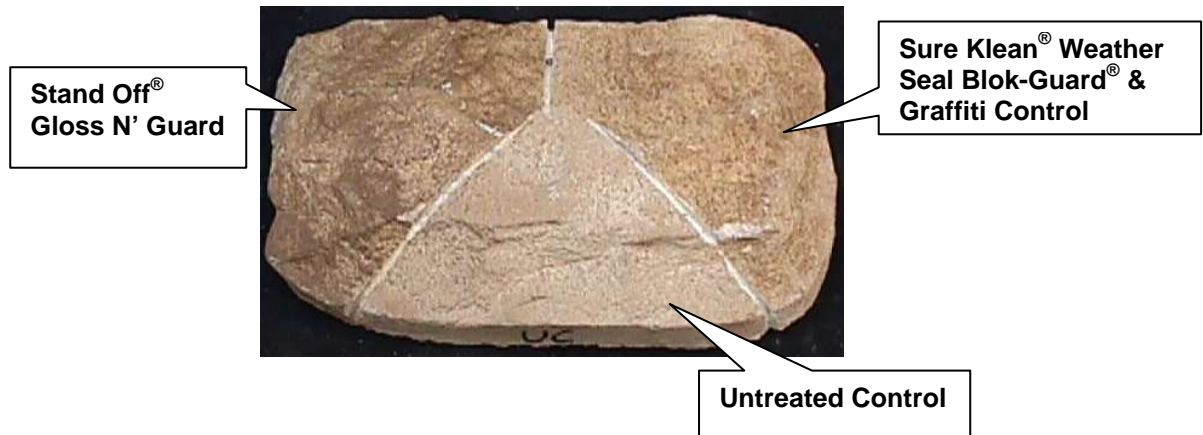


PROSOCO, Inc.

Page 29

## PHOTOGRAPHS- Color Enhancement Continued

"Hillside" Beige



"Hillside" Green



"Hillside" Red







# PALLET TAG PROGRAM LABORATORY REPORT



PROSOCO, Inc.

Page 30

## PHOTOGRAPHS- Color Enhancement Continued

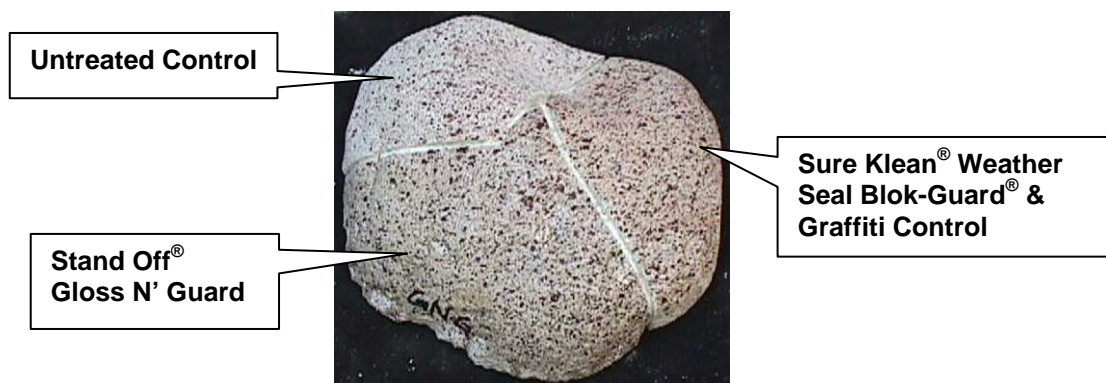
**"Hillside" Black**



**"River Rock" Black**



**"River Rock" Red**





# PALLET TAG PROGRAM LABORATORY REPORT

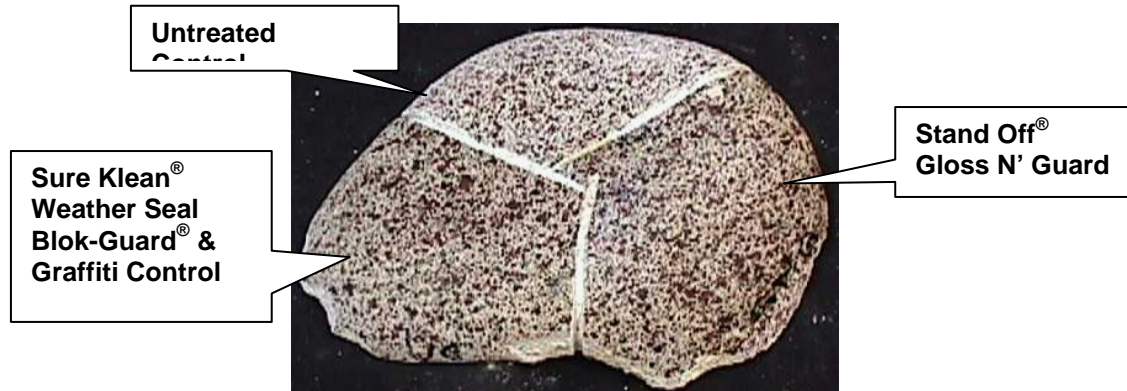


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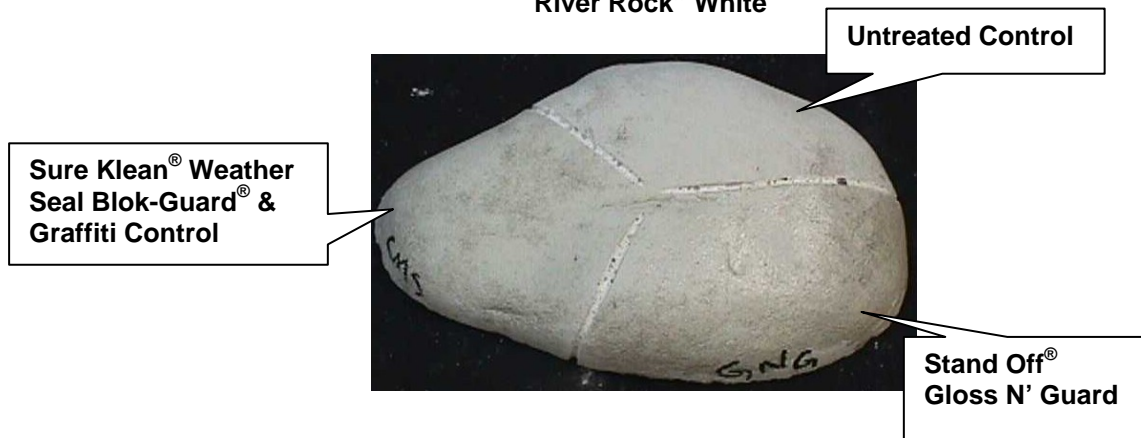
Page 31

## PHOTOGRAPHS- Color Enhancement Continued

**"River Rock" Red and Black**



**"River Rock" White**





# PALLET TAG PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

**Page 32**

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## RECOMMENDATIONS – Color Enhancement

Recommendations for color enhancement for each type of cast-stone submitted by ProLine Stone, Allenton, WI are provided in the chart below. Recommendations are based on the treatment that proved most effective in providing color enhancement to the cast-stone.

Substrate	Color Enhancer
All submitted cast-stone	Stand Off <sup>®</sup> Gloss N' Guard

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 product and procedures for a particular project. See product literature for additional application and product information.

Nathan R. Colaner  
Technical Analyst

NRC/csm



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***Laboratory Report***

**Pallet Tag Program Evaluation**  
**REVISED**

**ProLine Stone**  
**Allenton, WI**

***Project No.    0305-04 PTP***

***Prepared For:***

**Bill Walker**

**ProLine Stone**  
**536 Main Street**  
**Allenton, WI**

***Prepared By:***



***PROSOCO, Inc.***  
***August 2003***