

**Table of Contents**

**Executive Summary** ..... i

**Submitted Information** ..... 1

**Introduction** ..... 1

**Purpose of Testing**..... 2

    Products Evaluated ..... 3

**New Construction Cleaning** ..... 4

    Description of Products Evaluated – New Construction Cleaning ..... 4

    Sample Preparation – New Construction Cleaning ..... 5

    Test Method – New Construction Cleaning ..... 5

    Test Results – New Construction Cleaning ..... 6

    Test Results – Limiting Surface Alterations ..... 9

    Test Results – Color Uniformity ..... 11

    Photographs – New Construction Cleaning ..... 12

    Photographs – Limiting Surface Alterations ..... 16

    Photographs – Color Uniformity ..... 18

    Conclusions – New Construction Cleaning ..... 20

    Recommendations – New Construction Cleaning ..... 20

**Protective Water Repellents**..... 21

    Description of Products Evaluated – Protective Water Repellents ..... 21

    Sample Preparation – Protective Water Repellents ..... 22

    Test Methods – Protective Water Repellents ..... 22

    Test Results – Protective Water Repellents ..... 23

    Photographs – Protective Water Repellents ..... 25

    Conclusions – Protective Water Repellents ..... 26

    Recommendations – Protective Water Repellents ..... 26

**Color and Sheen Enhancement**..... 27

    Description of Products Evaluated – Color and Sheen Enhancement ..... 27

    Test Method – Color and Sheen Enhancement ..... 27

    Test Results – Color and Sheen Enhancement ..... 28

    Photographs – Color and Sheen Enhancement ..... 30

    Recommendations – Color and Sheen Enhancement ..... 31

**Attachments**

    Technical Services TECH Note RILEM Tube Test Procedures

    Product Data literature for all products evaluated

**Submitted Information**

**For:** Cecil Spencer  
**cc:** Jeff Lucas  
 Brian Koenings  
 Jim Lucas

**Subject:** Aggregate Industries  
 Elkhart, IN

**Date:** November 9, 2007

**Project:** 0709-04 PTP

**Samples Submitted:** 7 types of manufactured stone, 3 types of concrete pavers

Name	Color	Type	Size
"Old Town Flagstone, Blue Stone"	Blue	Manufactured Stone	Various
"Old Town Flagstone, Lilac"	Grey	Manufactured Stone	Various
"Old Town Flagstone, Gironde"	Tan	Manufactured Stone	Various
"Old Town Flagstone, Autumn Cottswald"	Red	Manufactured Stone	Various
"Old Town Flagstone, York Brown"	Brown	Manufactured Stone	Various
"Old Cathedral, Blue Stone"	Blue	Manufactured Stone	Various
"Old Riven, Autumn Cottswald"	Tan	Manufactured Stone	Various
"Athena, Grey Stone"	Grey	Concrete Paver	2.25" x 6" x 9"
"Pioneer Stone, Red Ash"	Red	Concrete Paver	2.25" x 3.5" x 8"
"Pioneer Stone, Harvest Wheat"	Blue	Concrete Paver	2.25" x 3.5" x 8"

Submitted by: Cecil Spencer, Aggregate Industries

**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**

Seven types of manufactured stone and three types of concrete pavers were submitted for testing to AMT Laboratories by PROSOCO, Inc. to determine the optimum concentration of cleaner for complete removal of mortar and related new construction soiling. The effectiveness of protective water repellents and color and sheen enhancers suitable for the submitted samples was also evaluated.

**New Construction Cleaning** – Sure Klean® Custom Masonry Cleaner, Sure Klean® Concrete Brick Cleaner, Sure Klean® Manufactured Stone Cleaner, and Paver Kare® Cleaner/Brightener 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 manufactured stone or the through body of the concrete paver 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.

A visual examination was also made to determine if the tested cleaners caused any surface alterations to the submitted manufactured stone samples based on the following:

Surface Finish Removal is the visual examination of the sample comparing the surface finish of the untreated control surface to the surface finish cleaned with selected product(s) at given dilutions.

Substrate Deterioration is the visual examination of the sample comparing the surface of the untreated control to surfaces cleaned with selected product(s) at given dilutions looking for any potential erosion/digestion of the sample.

Color Change is the visual examination comparing the color of the untreated control surface to color of surfaces cleaned with selected products at given dilutions.

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 in each of the categories

- |                          |                             |
|--------------------------|-----------------------------|
| 0 – <b>No Change</b>     | 3 – <b>Heavy Change</b>     |
| 1 – <b>Slight Change</b> | 4 – <b>Excessive Change</b> |
| 2 – <b>Moderate</b>      |                             |

Color uniformity was evaluated for the concrete paver samples by comparing aggregate exposure and surface pigment alternation/removal of each cleaned surface compared to the through body of the substrates.

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 – <b>Worst</b> match to uncleaned surface | 3 – <b>Good</b> match to uncleaned surface |
| 1 – <b>Poor</b> match to uncleaned surface  | 4 – <b>Best</b> match to uncleaned surface |
| 2 – <b>Fair</b> match to uncleaned surface  |  |

**Protective Water Repellents** – Paver Kare® Paver Enhancer, Consolideck® Saltguard®, Paver Kare® Deep Sheen, and Stand Off® Gloss 'N Guard were evaluated for their ability to provide water repellency to the submitted samples.

**Color and Sheen Enhancement** – Paver Kare® Paver Enhancer, Paver Kare® Deep Sheen, and Stand Off® Gloss 'N Guard were evaluated for their ability to provide color and sheen enhancement to the submitted samples.

**Products Evaluated****New Construction Cleaning Products Evaluated**

Sample	Product	Dilution
All Submitted Samples	Sure Klean® Custom Masonry Cleaner	1:2, 1:4, 1:6
	Sure Klean® Concrete Brick Cleaner	1:2, 1:3
	Sure Klean® Manufactured Stone Cleaner	1:2, 1:3
	Paver Kare® Cleaner/Brightener	1:2, 1:3

**Protective Water Repellent Products Evaluated**

Sample	Product	Dilution
All Submitted Samples	Paver Kare® Paver Enhancer	Concentrate
	Consolideck® Saltguard®	Concentrate
	Paver Kare® Deep Sheen	Concentrate
	Stand Off® Gloss 'N Guard	Concentrate

**Color/Sheen Enhancement Products Evaluated**

Sample	Product	Dilution
All Submitted Samples	Paver Kare® Paver Enhancer	Concentrate
	Paver Kare® Deep Sheen	Concentrate
	Stand Off® Gloss 'N Guard	Concentrate

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## **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 providing the best color uniformity when compared to the through-body color of the submitted concrete pavers and limiting surface alterations of the manufactured stone when compared to the untreated surface.

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### **Description of Products Evaluated – New Construction Cleaning**

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

**Sure Klean® Concrete Brick Cleaner** – Removes common construction and atmospheric staining from concrete brick 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. Concrete Brick Cleaner adds depth to colors and brightens white matrices and exposed aggregate.

**Sure Klean® Manufactured Stone 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. Manufactured Stone Cleaner adds depth to colors and brightens white matrices and exposed aggregate.

**Paver Kare® Cleaner/Brightener** – 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. Cleaner/Brightener adds depth to colors and brightens white matrices and exposed aggregate.

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### **Sample Preparation – New Construction Cleaning**

Type N mortar was prepared in compliance with the manufacturer's instructions, applied to the samples and allowed to cure for 7, 14, and 21 days. Mortar removal was accomplished using chemical assistance and a high-pressure water rinse with pressure rinsing equipment. The removal of Type N masonry mortar was visually evaluated after 7, 14, and 21 days of curing. A visual examination was also made to determine the optimal dilution of the tested cleaners that provides the best color uniformity when compared to the through-body color of the submitted concrete pavers and leaves the surface of the manufactured stone looking most like the untreated surface.

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### **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 <sup>®</sup> Custom Masonry Cleaner .....	3-5 minutes
Sure Klean <sup>®</sup> Concrete Brick Cleaner.....	3-5 minutes
Sure Klean <sup>®</sup> Manufactured Stone Cleaner .....	3-5 minutes
Paver Kare <sup>®</sup> Cleaner/Brightener .....	3-5 minutes
4. Reapply the product and moderately agitate with a brush.
5. Pressure rinse thoroughly.\*
6. Allow the sample to dry for at least 18 hours and visually examine.
7. Break the concrete pavers in half and compare the through-body surfaces to the cleaned surfaces for the best match. Also, visually evaluate any surface alterations to the manufactured stone when compared with the untreated surface.

**\*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)**

<b>“Old Town Flagstone, Blue Stone” Manufactured Stone</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Custom Masonry Cleaner	1:2	85%	90%	85%
Sure Klean® Custom Masonry Cleaner	1:4	100%	85%	90%
Sure Klean® Custom Masonry Cleaner	1:6	85%	90%	90%
Sure Klean® Concrete Brick Cleaner	1:2	95%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%
Sure Klean® Manufactured Stone Cleaner	1:2	95%	100%	100%
Sure Klean® Manufactured Stone Cleaner	1:3	100%	100%	100%
Paver Kare® Cleaner/Brightener	1:2	95%	100%	100%
Paver Kare® Cleaner/Brightener	1:3	100%	100%	100%
<b>“Old Town Flagstone, Lilac” Manufactured Stone</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Custom Masonry Cleaner	1:2	100%	80%	90%
Sure Klean® Custom Masonry Cleaner	1:4	100%	85%	90%
Sure Klean® Custom Masonry Cleaner	1:6	85%	90%	90%
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%
Sure Klean® Manufactured Stone Cleaner	1:2	100%	100%	100%
Sure Klean® Manufactured Stone Cleaner	1:3	100%	100%	100%
Paver Kare® Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare® Cleaner/Brightener	1:3	100%	100%	100%
<b>“Old Town Flagstone, Gironde” Manufactured Stone</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%
Sure Klean® Manufactured Stone Cleaner	1:2	100%	100%	100%
Sure Klean® Manufactured Stone Cleaner	1:3	100%	100%	100%
Paver Kare® Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare® Cleaner/Brightener	1:3	100%	100%	100%
<b>“Old Town Flagstone, Autumn Cottswald” Manufactured Stone</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Custom Masonry Cleaner	1:2	80%	90%	90%
Sure Klean® Custom Masonry Cleaner	1:4	85%	90%	90%
Sure Klean® Custom Masonry Cleaner	1:6	80%	90%	90%
Sure Klean® Concrete Brick Cleaner	1:2	85%	95%	95%
Sure Klean® Concrete Brick Cleaner	1:3	90%	95%	95%
Sure Klean® Manufactured Stone Cleaner	1:2	85%	95%	95%
Sure Klean® Manufactured Stone Cleaner	1:3	90%	95%	95%
Paver Kare® Cleaner/Brightener	1:2	85%	95%	95%
Paver Kare® Cleaner/Brightener	1:3	90%	95%	95%

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

<b>“Old Town Flagstone, York Brown” Manufactured Stone</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:2	100%	90%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%
Sure Klean® Manufactured Stone Cleaner	1:2	100%	90%	100%
Sure Klean® Manufactured Stone Cleaner	1:3	100%	100%	100%
Paver Kare® Cleaner/Brightener	1:2	100%	90%	100%
Paver Kare® Cleaner/Brightener	1:3	100%	100%	100%
<b>“Old Cathedral, Blue Stone” Manufactured Stone</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	89%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	93%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:2	95%	100%	90%
Sure Klean® Concrete Brick Cleaner	1:3	95%	100%	90%
Sure Klean® Manufactured Stone Cleaner	1:2	95%	100%	90%
Sure Klean® Manufactured Stone Cleaner	1:3	95%	100%	90%
Paver Kare® Cleaner/Brightener	1:2	95%	100%	90%
Paver Kare® Cleaner/Brightener	1:3	95%	100%	90%
<b>“Old Riven, Autumn Cottswald” Manufactured Stone</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%
Sure Klean® Manufactured Stone Cleaner	1:2	100%	100%	100%
Sure Klean® Manufactured Stone Cleaner	1:3	100%	100%	100%
Paver Kare® Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare® Cleaner/Brightener	1:3	100%	100%	100%
<b>“Athena Grey Stone” Concrete Paver</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Custom Masonry Cleaner	1:2	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	100%	100%
Sure Klean® Custom Masonry Cleaner	1:6	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:2	100%	100%	100%
Sure Klean® Concrete Brick Cleaner	1:3	100%	100%	100%
Sure Klean® Manufactured Stone Cleaner	1:2	100%	100%	100%
Sure Klean® Manufactured Stone Cleaner	1:3	100%	100%	100%
Paver Kare® Cleaner/Brightener	1:2	100%	100%	100%
Paver Kare® Cleaner/Brightener	1:3	100%	100%	100%



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

<b>“Pioneer Stone, Red Ash” Concrete Paver</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Custom Masonry Cleaner	1:2	100%	90%	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%	90%	100%
Sure Klean® Custom Masonry Cleaner	1:6	90%	90%	100%
Sure Klean® Concrete Brick Cleaner	1:2	100%	85%	90%
Sure Klean® Concrete Brick Cleaner	1:3	100%	85%	90%
Sure Klean® Manufactured Stone Cleaner	1:2	100%	85%	90%
Sure Klean® Manufactured Stone Cleaner	1:3	100%	85%	90%
Paver Kare® Cleaner/Brightener	1:2	100%	85%	90%
Paver Kare® Cleaner/Brightener	1:3	100%	85%	90%
<b>“Pioneer Stone, Harvest Wheat” Concrete Paver</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Custom Masonry Cleaner	1:2	90%	85%	90%
Sure Klean® Custom Masonry Cleaner	1:4	90%	85%	90%
Sure Klean® Custom Masonry Cleaner	1:6	90%	85%	75%
Sure Klean® Concrete Brick Cleaner	1:2	85%	85%	85%
Sure Klean® Concrete Brick Cleaner	1:3	85%	85%	85%
Sure Klean® Manufactured Stone Cleaner	1:2	85%	85%	85%
Sure Klean® Manufactured Stone Cleaner	1:3	85%	85%	85%
Paver Kare® Cleaner/Brightener	1:2	85%	85%	85%
Paver Kare® Cleaner/Brightener	1:3	85%	85%	85%

**Test Results – Limiting Surface Alterations**

<b>Substrate: Manufactured Stone</b>		<b>Sample: “Old Town Flagstone, Blue Stone”</b>				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining	
Sure Klean® Custom Masonry Cleaner	1:2	0	0	0	0	
Sure Klean® Custom Masonry Cleaner	1:4	0	0	0	0	
Sure Klean® Custom Masonry Cleaner	1:6	0	0	0	0	
Sure Klean® Concrete Brick Cleaner	1:2	0	0	0	0	
Sure Klean® Concrete Brick Cleaner	1:3	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:2	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:3	0	0	0	0	
Paver Kare® Cleaner/Brightener	1:2	0	0	0	0	
Paver Kare® Cleaner/Brightener	1:3	0	0	0	0	
<b>Substrate: Manufactured Stone</b>		<b>Sample: “Old Town Flagstone, Lilac”</b>				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining	
Sure Klean® Custom Masonry Cleaner	1:2	0	0	0	0	
Sure Klean® Custom Masonry Cleaner	1:4	0	0	0	0	
Sure Klean® Custom Masonry Cleaner	1:6	0	0	0	0	
Sure Klean® Concrete Brick Cleaner	1:2	0	0	0	0	
Sure Klean® Concrete Brick Cleaner	1:3	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:2	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:3	0	0	0	0	
Paver Kare® Cleaner/Brightener	1:2	0	0	0	0	
Paver Kare® Cleaner/Brightener	1:3	0	0	0	0	
<b>Substrate: Manufactured Stone</b>		<b>Sample: “Old Town Flagstone, Gironde”</b>				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining	
Sure Klean® Custom Masonry Cleaner	1:2	0	0	0	0	
Sure Klean® Custom Masonry Cleaner	1:4	0	0	0	0	
Sure Klean® Custom Masonry Cleaner	1:6	0	0	0	0	
Sure Klean® Concrete Brick Cleaner	1:2	0	0	0	0	
Sure Klean® Concrete Brick Cleaner	1:3	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:2	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:3	0	0	0	0	
Paver Kare® Cleaner/Brightener	1:2	0	0	0	0	
Paver Kare® Cleaner/Brightener	1:3	0	0	0	0	
<b>Substrate: Manufactured Stone</b>		<b>Sample: “Old Town Flagstone, Autumn Cottswald”</b>				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining	
Sure Klean® Custom Masonry Cleaner	1:2	0	0	0	0	
Sure Klean® Custom Masonry Cleaner	1:4	0	0	0	0	
Sure Klean® Custom Masonry Cleaner	1:6	0	0	0	0	
Sure Klean® Concrete Brick Cleaner	1:2	0	0	0	0	
Sure Klean® Concrete Brick Cleaner	1:3	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:2	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:3	0	0	0	0	
Paver Kare® Cleaner/Brightener	1:2	0	0	0	0	
Paver Kare® Cleaner/Brightener	1:3	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  |               |

**Test Results – Limiting Surface Alterations**

<b>Substrate:</b> Manufactured Stone		<b>Sample:</b> “Old Town Flagstone, York Brown”				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining	
Sure Klean® Custom Masonry Cleaner	1:2	0	0	0	0	
Sure Klean® Custom Masonry Cleaner	1:4	0	0	0	0	
Sure Klean® Custom Masonry Cleaner	1:6	0	0	0	0	
Sure Klean® Concrete Brick Cleaner	1:2	0	0	0	0	
Sure Klean® Concrete Brick Cleaner	1:3	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:2	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:3	0	0	0	0	
Paver Kare® Cleaner/Brightener	1:2	0	0	0	0	
Paver Kare® Cleaner/Brightener	1:3	0	0	0	0	
<b>Substrate:</b> Manufactured Stone		<b>Sample:</b> “Old Cathedral, Blue Stone”				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining	
Sure Klean® Custom Masonry Cleaner	1:2	0	0	0	0	
Sure Klean® Custom Masonry Cleaner	1:4	0	0	0	0	
Sure Klean® Custom Masonry Cleaner	1:6	0	0	0	0	
Sure Klean® Concrete Brick Cleaner	1:2	0	0	0	0	
Sure Klean® Concrete Brick Cleaner	1:3	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:2	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:3	0	0	0	0	
Paver Kare® Cleaner/Brightener	1:2	0	0	0	0	
Paver Kare® Cleaner/Brightener	1:3	0	0	0	0	
<b>Substrate:</b> Manufactured Stone		<b>Sample:</b> “Old Riven, Autumn Cottswald”				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining	
Sure Klean® Custom Masonry Cleaner	1:2	0	0	0	0	
Sure Klean® Custom Masonry Cleaner	1:4	0	0	0	0	
Sure Klean® Custom Masonry Cleaner	1:6	0	0	0	0	
Sure Klean® Concrete Brick Cleaner	1:2	0	0	0	0	
Sure Klean® Concrete Brick Cleaner	1:3	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:2	0	0	0	0	
Sure Klean® Manufactured Stone Cleaner	1:3	0	0	0	0	
Paver Kare® Cleaner/Brightener	1:2	0	0	0	0	
Paver Kare® Cleaner/Brightener	1:3	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  |               |

**Test Results – Color Uniformity**

<b>Substrate: Concrete Paver</b>		<b>Color: “Athena, Grey Stone”</b>		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Sure Klean® Custom Masonry Cleaner	1:2	4	4	
Sure Klean® Custom Masonry Cleaner	1:4	4	4	
Sure Klean® Custom Masonry Cleaner	1:6	4	4	
Sure Klean® Concrete Brick Cleaner	1:2	4	4	
Sure Klean® Concrete Brick Cleaner	1:3	4	4	
Sure Klean® Manufactured Stone Cleaner	1:2	4	4	
Sure Klean® Manufactured Stone Cleaner	1:3	4	4	
Paver Kare® Cleaner/Brightener	1:2	4	4	
Paver Kare® Cleaner/Brightener	1:3	4	4	
<b>Substrate: Concrete Paver</b>		<b>Color: “Pioneer Stone, Red Ash”</b>		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Sure Klean® Custom Masonry Cleaner	1:2	4	4	
Sure Klean® Custom Masonry Cleaner	1:4	4	4	
Sure Klean® Custom Masonry Cleaner	1:6	4	4	
Sure Klean® Concrete Brick Cleaner	1:2	3	3	
Sure Klean® Concrete Brick Cleaner	1:3	3	3	
Sure Klean® Manufactured Stone Cleaner	1:2	3	3	
Sure Klean® Manufactured Stone Cleaner	1:3	3	3	
Paver Kare® Cleaner/Brightener	1:2	3	3	
Paver Kare® Cleaner/Brightener	1:3	3	3	
<b>Substrate: Concrete Paver</b>		<b>Color: “Pioneer Stone, Harvest Wheat”</b>		
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal	
Sure Klean® Custom Masonry Cleaner	1:2	4	4	
Sure Klean® Custom Masonry Cleaner	1:4	4	4	
Sure Klean® Custom Masonry Cleaner	1:6	4	4	
Sure Klean® Concrete Brick Cleaner	1:2	4	4	
Sure Klean® Concrete Brick Cleaner	1:3	4	4	
Sure Klean® Manufactured Stone Cleaner	1:2	4	4	
Sure Klean® Manufactured Stone Cleaner	1:3	4	4	
Paver Kare® Cleaner/Brightener	1:2	4	4	
Paver Kare® Cleaner/Brightener	1:3	4	4	

Scale used for reporting results of both categories

- 0 – **Worst** match to through-body    3 – **Good** match to through-body  
 1 – **Poor** match to through-body    4 – **Best** match to through-body  
 2 – **Fair** match to through-body

**Photographs – New Construction Cleaning**

**“Old Town Flagstone, Gironde” Manufactured Stone, 7 & 14 Day Cleaning**



**Sure Klean®  
Custom Masonry  
Cleaner (1:2)**

**Sure Klean®  
Custom Masonry  
Cleaner (1:4)**

**Sure Klean®  
Custom Masonry  
Cleaner (1:6)**

**Sure Klean®  
Custom Masonry  
Cleaner (1:2)**

**“Old Town Flagstone, Gironde” Manufactured Stone, 14 & 21 Day Cleaning**



**Sure Klean®  
Custom Masonry  
Cleaner (1:4)**

**Sure Klean®  
Custom Masonry  
Cleaner (1:6)**

**Sure Klean®  
Custom Masonry  
Cleaner (1:2)**

**Sure Klean®  
Custom Masonry  
Cleaner (1:4)**

**Photographs – New Construction Cleaning**

**“Old Town Flagstone, Gironde” Manufactured Stone, 21 & 7 Day Cleaning**



**“Old Town Flagstone, Gironde” Manufactured Stone, 14 & 21 Day Cleaning**



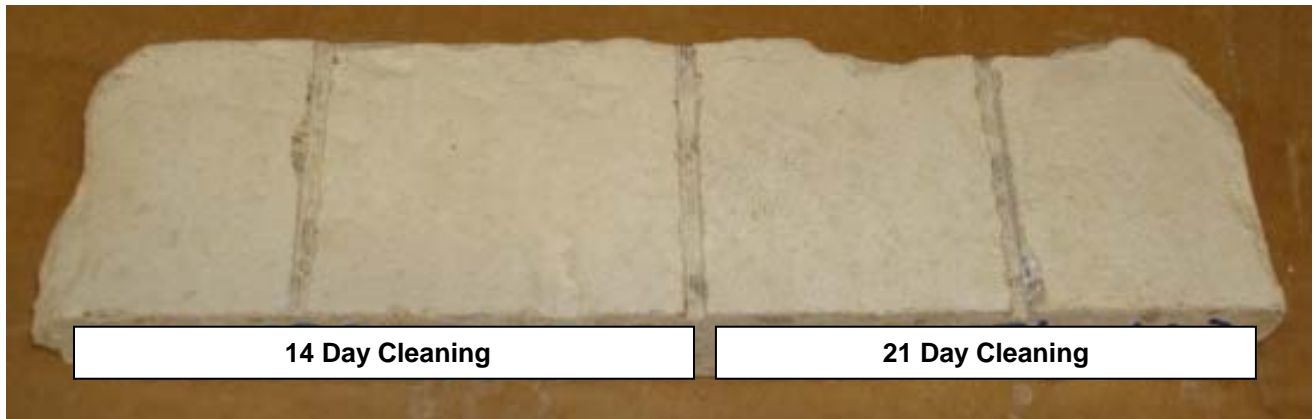
**Photographs – New Construction Cleaning**

**“Old Town Flagstone, Gironde” Manufactured Stone, 7 Day Cleaning**



<b>Sure Klean® Manufactured Stone Cleaner (1:2)</b>	<b>Sure Klean® Manufactured Stone Cleaner (1:3)</b>	<b>Untreated Control</b>
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**“Old Town Flagstone, Gironde” Manufactured Stone, 14 & 21 Day Cleaning**



<b>Sure Klean® Manufactured Stone Cleaner (1:2)</b>	<b>Sure Klean® Manufactured Stone Cleaner (1:3)</b>	<b>Sure Klean® Manufactured Stone Cleaner (1:2)</b>	<b>Sure Klean® Manufactured Stone Cleaner (1:3)</b>
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**Photographs – New Construction Cleaning**

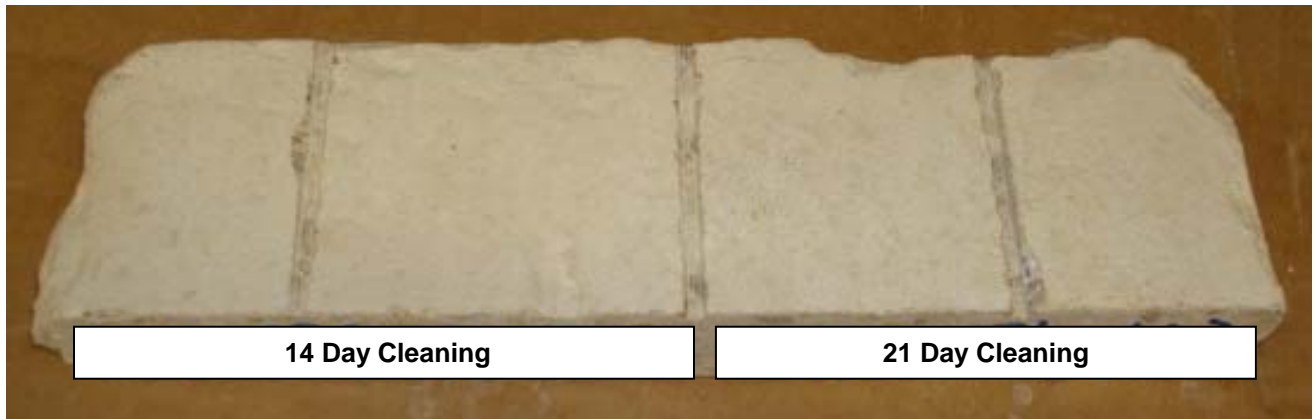
**“Old Town Flagstone, Gironde” Manufactured Stone, 7 Day Cleaning**



**Paver Kare®  
Cleaner/Brightener (1:2)**

**Paver Kare®  
Cleaner/Brightener (1:3)**

**“Old Town Flagstone, Gironde” Manufactured Stone, 14 & 21 Day Cleaning**



**Paver Kare®  
Cleaner/Brightener  
(1:2)**

**Paver Kare®  
Cleaner/Brightener  
(1:3)**

**Paver Kare®  
Cleaner/Brightener  
(1:2)**

**Paver Kare®  
Cleaner/Brightener  
(1:3)**



**Photographs – Limiting Surface Alterations**

**“Old Town Flagstone, Gironde” Manufactured Stone; Limiting Surface Alterations**



**Sure Klean®  
Custom Masonry  
Cleaner (1:2)**

**Sure Klean®  
Custom Masonry  
Cleaner (1:4)**

**Sure Klean®  
Custom Masonry  
Cleaner (1:6)**



**Sure Klean®  
Concrete Brick  
Cleaner (1:2)**

**Sure Klean®  
Concrete Brick  
Cleaner (1:3)**

**Sure Klean®  
Manufactured Stone  
Cleaner (1:2)**

**Sure Klean®  
Manufactured Stone  
Cleaner (1:3)**



**Untreated  
Surface**

**Photographs – Limiting Surface Alterations**

**“Old Town Flagstone, Gironde” Manufactured Stone; Limiting Surface Alterations**



**Paver Kare®  
Cleaner/Brightener  
(1:2)**

**Paver Kare®  
Cleaner/Brightener  
(1:3)**



**Untreated  
Surface**

**Photographs – Color Uniformity**

**“Pioneer Stone, Harvest Wheat” Concrete Paver; Color Uniformity**

**Sure Klean®  
Custom Masonry  
Cleaner (1:6)**



**Sure Klean®  
Custom Masonry  
Cleaner (1:2)**

**Sure Klean®  
Custom Masonry  
Cleaner (1:4)**



**Through  
Body**

**Photographs – Color Uniformity**

**“Pioneer Stone, Harvest Wheat” Concrete Paver; Color Uniformity**



<b>Paver Kare<sup>®</sup> Cleaner/Brightener (1:2)</b>	<b>Paver Kare<sup>®</sup> Cleaner/Brightener (1:3)</b>
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<b>Through Body</b>
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### **Conclusions – New Construction Cleaning**

Based on the test data, all of the submitted samples were efficiently cleaned with Sure Klean® Custom Masonry Cleaner, Sure Klean® Concrete Brick Cleaner, Sure Klean® Manufactured Stone Cleaner, and Paver Kare® Cleaner/Brightener.

Use higher concentrations and surface agitation to maximize aggregate exposure on the concrete paver samples. Use low concentration and surface agitation to minimize aggregate exposure.

### **Recommendations – New Construction Cleaning**

Recommendations for cleaning for each sample submitted by Aggregate Industries, Elkhart, IN are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar while limiting surface alterations of the manufactured stone, and providing the best color uniformity to the through body of the concrete paver samples.

<b>Sample</b>	<b>New Construction Cleaning (Type N mortar, 21 day cleaning)</b>
"Pioneer Stone, Harvest Wheat"	Sure Klean® Custom Masonry Cleaner, (1:4) or Sure Klean® Concrete Brick Cleaner, (1:3) or Sure Klean® Manufactured Stone Cleaner, (1:3) or Paver Kare® Cleaner/Brightener, (1:3)
All Other Submitted Samples	Sure Klean® Custom Masonry Cleaner, (1:6) or Sure Klean® Concrete Brick Cleaner, (1:3) or Sure Klean® Manufactured Stone Cleaner, (1:3) or Paver Kare® Cleaner/Brightener, (1:3)

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

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

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## **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**

**Paver Kare® Paver Enhancer** – A solvent-based blend of high-quality siloxanes modified to provide excellent water repellency and color enhancement to interlocking concrete, fired clay, porous tile and many types of natural stone surfaces. Paver Enhancer penetrates and reacts with the surface to form a chemical bond, providing long-term durability, alkali resistance and superior breatheability.

**Consolideck® Saltguard®** – A general-purpose silane/siloxane water repellent and chloride screen for concrete and masonry. Saltguard® protects horizontal and vertical surfaces from moisture intrusion and chemical attack of chloride salts, reducing rebar corrosion and surface spalling.

**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 that enhances the natural beauty of treated surfaces.

**Paver Kare® Deep Sheen** – This is the perfect treatment for pavers, inside or out. This durable protective treatment weather- and stain-proofs new or newly cleaned pavers, giving them a premium, vibrant gloss and shine. Not just for concrete, Deep Sheen adds luster and brings out the real beauty of clay and stone pavers, too. Highly tested Deep Sheen will not “yellow,” blush or dull-out.

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**Sample Preparation – Protective Water Repellents**

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

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**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

<b>“Old Town Flagstone, Blue Stone”</b>	<b><u>Results in mL loss</u></b>	<b><u>Ranking</u></b>
Untreated Control	-5.0	
Paver Kare® Paver Enhancer	-0.0	<b><u>AA</u></b>
Consolideck® Saltguard®	-0.0	<b><u>AA</u></b>
Paver Kare® Deep Sheen	-0.0	<b><u>AA</u></b>
Stand Off® Gloss ‘N Guard	-5.0	<b><u>BA</u></b>
<b>“Old Town Flagstone, Lilac”</b>	<b><u>Results in mL loss</u></b>	<b><u>Ranking</u></b>
Untreated Control	-0.0	
Paver Kare® Paver Enhancer	-0.0	<b><u>AA</u></b>
Consolideck® Saltguard®	-0.0	<b><u>AA</u></b>
Paver Kare® Deep Sheen	-0.0	<b><u>AA</u></b>
Stand Off® Gloss ‘N Guard	-0.0	<b><u>AA</u></b>
<b>“Old Town Flagstone, Gironde”</b>	<b><u>Results in mL loss</u></b>	<b><u>Ranking</u></b>
Untreated Control	-0.0	
Paver Kare® Paver Enhancer	-0.0	<b><u>AA</u></b>
Consolideck® Saltguard®	-0.0	<b><u>AA</u></b>
Paver Kare® Deep Sheen	-0.0	<b><u>AA</u></b>
Stand Off® Gloss ‘N Guard	-0.0	<b><u>AA</u></b>
<b>“Old Town Flagstone, Autumn Cottswald”</b>	<b><u>Results in mL loss</u></b>	<b><u>Ranking</u></b>
Untreated Control	-0.0	
Paver Kare® Paver Enhancer	-0.0	<b><u>AA</u></b>
Consolideck® Saltguard®	-0.0	<b><u>AA</u></b>
Paver Kare® Deep Sheen	-0.0	<b><u>AA</u></b>
Stand Off® Gloss ‘N Guard	-5.0	<b><u>BA</u></b>
<b>“Old Town Flagstone, York Brown”</b>	<b><u>Results in mL loss</u></b>	<b><u>Ranking</u></b>
Untreated Control	-0.0	
Paver Kare® Paver Enhancer	-0.0	<b><u>AA</u></b>
Consolideck® Saltguard®	-0.0	<b><u>AA</u></b>
Paver Kare® Deep Sheen	-0.0	<b><u>AA</u></b>
Stand Off® Gloss ‘N Guard	-0.0	<b><u>AA</u></b>



**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**

<b>“Old Cathedral, Blue Stone”</b>	<b><u>Results in mL loss</u></b>	<b><u>Ranking</u></b>
Untreated Control	-5.0	
Paver Kare® Paver Enhancer	-0.0	<b><u>AA</u></b>
Consolideck® Saltguard®	-0.25	<b><u>AA</u></b>
Paver Kare® Deep Sheen	-0.0	<b><u>AA</u></b>
Stand Off® Gloss ‘N Guard	-5.0	<b><u>BA</u></b>
<b>“Old Riven, Autumn Cottswald”</b>	<b><u>Results in mL loss</u></b>	<b><u>Ranking</u></b>
Untreated Control	-5.0	
Paver Kare® Paver Enhancer	-0.0	<b><u>AA</u></b>
Consolideck® Saltguard®	-0.0	<b><u>AA</u></b>
Paver Kare® Deep Sheen	-0.0	<b><u>AA</u></b>
Stand Off® Gloss ‘N Guard	-0.0	<b><u>AA</u></b>
<b>“Athena, Grey Stone”</b>	<b><u>Results in mL loss</u></b>	<b><u>Ranking</u></b>
Untreated Control	-5.0	
Paver Kare® Paver Enhancer	-0.0	<b><u>AA</u></b>
Consolideck® Saltguard®	-0.0	<b><u>AA</u></b>
Paver Kare® Deep Sheen	-0.0	<b><u>AA</u></b>
Stand Off® Gloss ‘N Guard	-0.0	<b><u>AA</u></b>
<b>“Pioneer Stone, Red Ash”</b>	<b><u>Results in mL loss</u></b>	<b><u>Ranking</u></b>
Untreated Control	-5.0	
Paver Kare® Paver Enhancer	-0.0	<b><u>AA</u></b>
Consolideck® Saltguard®	-3.4	<b><u>BA</u></b>
Paver Kare® Deep Sheen	-0.75	<b><u>AA</u></b>
Stand Off® Gloss ‘N Guard	-4.0	<b><u>BA</u></b>
<b>“Pioneer Stone, Harvest Wheat”</b>	<b><u>Results in mL loss</u></b>	<b><u>Ranking</u></b>
Untreated Control	-5.0	
Paver Kare® Paver Enhancer	-2.5	<b><u>A</u></b>
Consolideck® Saltguard®	-4.5	<b><u>BA</u></b>
Paver Kare® Deep Sheen	-2.0	<b><u>A</u></b>
Stand Off® Gloss ‘N Guard	-3.5	<b><u>BA</u></b>

**Photographs – Protective Water Repellents**

“Old Town Flagstone, Lilac”; RILEM II.4, 5.0 mL, 20 Minutes



**Paver Kare®  
Paver Enhancer**

**Consolideck®  
Saltguard®**

**Untreated  
Control**



**Stand Off®  
Gloss 'N Guard**

**Paver Kare®  
Deep Sheen**

### **Conclusions – Protective Water Repellents**

Based upon laboratory evaluations, Paver Kare® Paver Enhancer provided excellent water repellency to each of the submitted samples. Consolideck® Saltguard® and Paver Kare® Deep Sheen both provided excellent water repellency to each of the manufactured stone samples, and the “Athena Grey Stone” concrete paver sample. Stand Off® Gloss ‘N Guard provided excellent water repellency to four of the manufactured stone samples, as well as the “Athena, Grey Stone” sample. Each of the submitted samples was enhanced when treated with Paver Kare® Deep Sheen and Stand Off® Gloss ‘N Guard. In addition, Paver Kare® Paver Enhancer enhanced the color on the concrete paver samples. Consolideck® Saltguard® did not alter the appearance of any of the samples.

### **Recommendations – Protective Water Repellents**

Recommendations for water repellency for each sample submitted by Aggregate Industries, Elkhart, IN are provided in the chart below. Recommendations are based on the treatment that proved most effective and can provide water repellency on all types submitted.

<b>Sample</b>	<b>Protective Water Repellents</b>
“Old Town Flagstone, Blue Stone” and “Old Town Flagstone, Autumn Cottswald” and “Old Cathedral, Blue Stone”	*Paver Kare® Paver Enhancer or *Consolideck® Saltguard® or *Paver Kare® Deep Sheen
“Pioneer Stone, Red Ash”	*Paver Kare® Paver Enhancer
“Pioneer Stone, Harvest Wheat”	*Paver Kare® Paver Enhancer or *Paver Kare® Deep Sheen
All Other Submitted Samples	*Paver Kare® Paver Enhancer or *Consolideck® Saltguard® or *Paver Kare® Deep Sheen or *Stand Off® Gloss ‘N Guard

**\*NOTE:** Paver Kare® Paver Enhancer, Consolideck® Saltguard®, Paver Kare® Deep Sheen, and Stand Off® Gloss ‘N Guard are 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.

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**Color and Sheen Enhancement**

This evaluation compares the effectiveness of the evaluated products in providing color and sheen enhancement to the submitted samples.

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**Description of Products Evaluated – Color and Sheen Enhancement**

**Paver Kare® Paver Enhancer** – A solvent-based blend of high-quality siloxanes modified to provide excellent water repellency and color enhancement to interlocking concrete, fired clay, porous tile and many types of natural stone surfaces. Paver Enhancer penetrates and reacts with the surface to form a chemical bond, providing long-term durability, alkali resistance and superior breatheability.

**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 that enhances the natural beauty of treated surfaces.

**Paver Kare® Deep Sheen** – This is the perfect treatment for pavers, inside or out. This durable protective treatment weather- and stain-proofs new or newly cleaned pavers, giving them a premium, vibrant gloss and shine. Not just for concrete, Deep Sheen adds luster and brings out the real beauty of clay and stone pavers, too. Highly tested Deep Sheen will not “yellow,” blush or dull-out. 24 hours prior to treatment.

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**Test Method – Color and Sheen Enhancement**

All products were applied by brush in accordance with the application instructions in the current PROSOCO, Inc. Product Data Sheets. After 24 hours, a visual evaluation was conducted to determine the level of color and sheen enhancement the treatments provided as compared to the untreated control.

**Test Results – Color and Sheen Enhancement**

<b>“Old Town Flagstone, Blue Stone”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	0	0
Stand Off® Gloss ‘N Guard	1	1
Paver Kare® Deep Sheen	3	3
<b>“Old Town Flagstone, Lilac”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	0	0
Stand Off® Gloss ‘N Guard	1	1
Paver Kare® Deep Sheen	3	3
<b>“Old Town Flagstone, Gironde”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	0	0
Stand Off® Gloss ‘N Guard	1	1
Paver Kare® Deep Sheen	2	2
<b>“Old Town Flagstone, Autumn Cotswald”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	0	0
Stand Off® Gloss ‘N Guard	1	1
Paver Kare® Deep Sheen	2	2
<b>“Old Town Flagstone, York Brown”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	0	0
Stand Off® Gloss ‘N Guard	1	1
Paver Kare® Deep Sheen	2	2

**Scale: 0 - No Enhancement; Dull**

**1 - Slight Enhancement**

**2 - Moderate Enhancement**

**3 - Significant Enhancement**

**Test Results – Color and Sheen Enhancement**

<b>“Old Cathedral, Blue Stone”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	0	0
Stand Off® Gloss ‘N Guard	1	1
Paver Kare® Deep Sheen	3	3
<b>“Athena, Grey Stone”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	1	1
Stand Off® Gloss ‘N Guard	2	1
Paver Kare® Deep Sheen	3	3
<b>“Old Riven, Autumn Cottswald”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	0	0
Stand Off® Gloss ‘N Guard	2	2
Paver Kare® Deep Sheen	3	3
<b>“Pioneer Stone, Red Ash”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	2	1
Stand Off® Gloss ‘N Guard	1	1
Paver Kare® Deep Sheen	3	3
<b>“Pioneer Stone, Harvest Wheat”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	2	1
Stand Off® Gloss ‘N Guard	2	1
Paver Kare® Deep Sheen	3	3

**Scale: 0 - No Enhancement; Dull**

**1 - Slight Enhancement**

**2 - Moderate Enhancement**

**3 - Significant Enhancement**

**Photographs – Color and Sheen Enhancement**

**“Old Town Flagstone, Blue Stone” Manufactured Stone; Treatment Applied**



**Paver Kare®  
Paver Enhancer**

**Stand Off®  
Gloss 'N Guard**

**Paver Kare®  
Deep Sheen**

**Untreated  
Control**

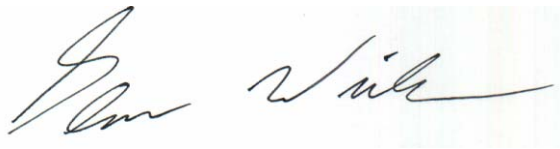
**Recommendations – Color and Sheen Enhancement**

Recommendations for color and sheen enhancement for the samples submitted by Aggregate Industries, Elkhart, IN are provided in the chart below. Recommendations are based on the treatment that proved most effective in providing color and sheen enhancement to the submitted samples.

Sample	Color Enhancement	Sheen Enhancement
All Submitted Samples	*Paver Kare® Deep Sheen	*Paver Kare® Deep Sheen

**\*NOTE:** Paver Kare® Deep Sheen 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 product and procedures for a particular project. See product literature for additional application and product information.



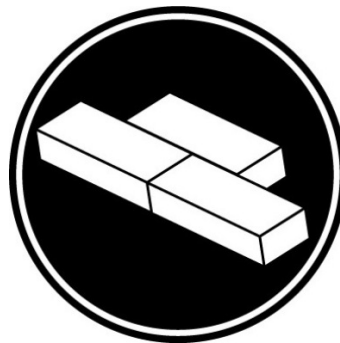
Glenn Winkler  
Project Testing Laboratory Technician





***PALLET TAG PROGRAM***  
*Laboratory Report*

Aggregate Industries  
1500 W. Bristol  
Elkhart, IN 46514



*Project No. 0709-04 PTP*

*Prepared For:*  
**PROSOCO**  
SINCE 1939

*Prepared By:*  
AMT Laboratories  
November 2007