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**Attachments**

    Technical Services TECH Note RILEM Tube Test Procedures

    Product Data literature for all products evaluated

**Submitted Information**

**For:** Dennis Chong, Jun Pacific, LLC  
**cc:** Paul Kane  
 Brian Koenings

**Subject:** Jun Pacific, LLC  
 Honolulu, HI

**Date:** December 19, 2007

**Project:** 0709-01 PTP

**Samples Submitted:** 6 types of natural stone with a CMU backing

<b>Name</b>	<b>Color</b>	<b>Type</b>	<b>Size</b>
"Jaipur Petit"	Red	Natural Stone on a CMU backing	15" x 8" x 1" and 2" x 2"
"Obelisk"	Multi-Colored	Natural Stone on a CMU backing	15" x 8" x 1" and 4" x 4"
"Luna"	Light Gray	Natural Stone on a CMU backing	15" x 8" x 1" and 2" x 2"
"Brackish"	Dark Gray	Natural Stone on a CMU backing	15" x 8" x 1" and 2" x 2"
"Limestone"	Tan	Natural Stone on a CMU backing	15" x 8" x 1" and 2" x 2"
"New Brackish"	Multi-Colored	Natural Stone on a CMU backing	15" x 8" x 1" and 2" x 2"

Submitted by: Dennis Chong, Jun Pacific, LLC

**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.

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## **Purpose of Testing**

Six types of natural stone with a CMU backing 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, color enhancers, and graffiti control products suitable for the samples was also evaluated.

**New Construction Cleaning** – Sure Klean® Vana Trol® and Enviro Klean® Safety Klean 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 samples 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 after 7, 14, and 21 days of curing. A visual examination was also made to determine if the tested cleaners caused any surface alterations to the submitted 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.

**Protective Water Repellents** – Paver Kare® Paver Enhancer, Consolideck® Saltguard® WB, Sure Klean® Weather Seal Siloxane WB Concentrate, Sure Klean® Weather Seal Natural Stone Treatment, Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II and Stand Off® Gloss 'N Guard were evaluated for their ability to provide water repellency to the submitted samples.

**Graffiti Control** – Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II was evaluated for its 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.

**Color and Sheen Enhancement** – Paver Kare® Paver Enhancer 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® Vana Trol®	1:6, 1:8
	Enviro Klean® Safety Klean	1:2, 1:3

**Protective Water Repellent Products Evaluated**

Sample	Product	Dilution
All Submitted Samples	Paver Kare® Paver Enhancer	Concentrate
	Consolideck® Saltguard® WB	Concentrate
	Sure Klean® Weather Seal Siloxane WB Concentrate	1:9
	Sure Klean® Weather Seal Natural Stone Treatment	Concentrate
	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Concentrate
	Stand Off® Gloss 'N Guard	Concentrate

**Products Evaluated****Graffiti Control Products Evaluated**

Sample	Product	Dilution
All Submitted Samples	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Concentrate

**Graffiti Removal Products Evaluated**

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

**Color/Sheen Enhancement Products Evaluated**

Sample	Product	Dilution
All Submitted Samples	Paver Kare® Paver Enhancer	Concentrate
	Stand Off® Gloss 'N Guard	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 limiting surface alterations to the decorative finish.

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

**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.

**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 most metal surfaces. Always test. Additionally, it is up to 70 percent more effective than citric and glycolic acids and 50 percent more effective than phosphoric acid.

**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 best limit surface alterations when compared with the untreated surface.

**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® Vana Trol® .....	3-5 minutes
Enviro Klean® Safety Klean.....	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. Compare the surface of the cleaned sample with uncleaned surface to examine any alterations to the decorative finish.

**\*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>“Jaipur Petit”</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Vana Trol®	1:6	80%	85%	90%
Sure Klean® Vana Trol®	1:8	80%	80%	90%
Enviro Klean® Safety Klean	1:2	75%	75%	90%
Enviro Klean® Safety Klean	1:3	70%	65%	90%
<b>“Obelisk”</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Vana Trol®	1:6	100%	100%	100%
Sure Klean® Vana Trol®	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%	90%
Enviro Klean® Safety Klean	1:3	90%	85%	85%
<b>“Luna”</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Vana Trol®	1:6	100%	100%	100%
Sure Klean® Vana Trol®	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	100%	100%	100%
Enviro Klean® Safety Klean	1:3	100%	100%	100%
<b>“Brackish”</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Vana Trol®	1:6	100%	100%	100%
Sure Klean® Vana Trol®	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	75%	100%	100%
Enviro Klean® Safety Klean	1:3	100%	100%	100%
<b>“Limestone”</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Vana Trol®	1:6	75%	75%	50%
Sure Klean® Vana Trol®	1:8	75%	75%	50%
Enviro Klean® Safety Klean	1:2	95%	95%	85%
Enviro Klean® Safety Klean	1:3	80%	95%	85%
<b>“New Brackish”</b>				
<b>Product</b>	<b>Dilution</b>	<b>7 day</b>	<b>14 day</b>	<b>21 day</b>
Sure Klean® Vana Trol®	1:6	100%	100%	100%
Sure Klean® Vana Trol®	1:8	100%	100%	100%
Enviro Klean® Safety Klean	1:2	100%	90%	95%
Enviro Klean® Safety Klean	1:3	100%	75%	88%

**Test Results – Limiting Surface Alterations**

<b>“Jaipur Petit”</b>					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Sure Klean® Vana Trol®	1:6	0	0	0	0
	1:8	0	0	0	0
Enviro Klean® Safety Klean	1:2	0	0	0	0
	1:3	0	0	0	0
<b>“Obelisk”</b>					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Sure Klean® Vana Trol®	1:6	1	1	1	1
	1:8	1	1	1	1
Enviro Klean® Safety Klean	1:2	0	0	0	0
	1:3	0	0	0	0
<b>“Luna”</b>					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Sure Klean® Vana Trol®	1:6	2	2	2	2
	1:8	2	2	2	2
Enviro Klean® Safety Klean	1:2	0	0	0	0
	1:3	0	0	0	0
<b>“Brackish”</b>					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Sure Klean® Vana Trol®	1:6	2	1	1	2
	1:8	2	1	1	1
Enviro Klean® Safety Klean	1:2	1	1	1	1
	1:3	1	1	1	1
<b>“Limestone”</b>					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Sure Klean® Vana Trol®	1:6	0	0	0	0
	1:8	0	0	0	0
Enviro Klean® Safety Klean	1:2	0	0	0	0
	1:3	0	0	0	0
<b>“New Brackish”</b>					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Sure Klean® Vana Trol®	1:6	0	0	0	0
	1:8	0	0	0	0
Enviro Klean® Safety Klean	1:2	0	0	0	0
	1:3	0	0	0	0

**0 – No Change                      3 – Change – Heavy**  
**1 – Change – Slight            4 – Change – Excessive**  
**2 – Change – Moderate**



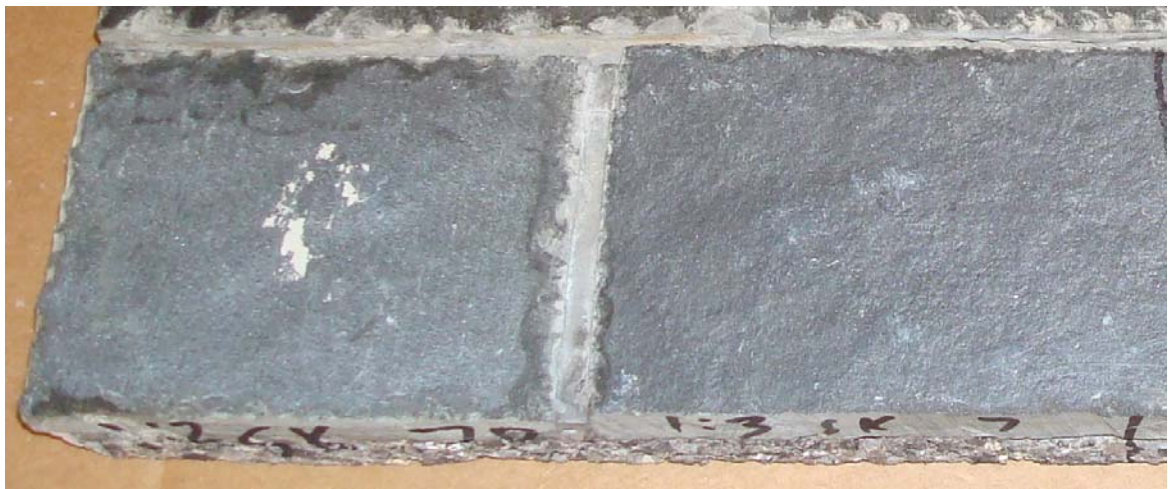
**Photographs – New Construction Cleaning**

**“Brackish” Type N Mortar 7 Day Cleaning**



**Sure Klean®  
Vana Trol® (1:6)**

**Sure Klean®  
Vana Trol® (1:8)**



**Enviro Klean®  
Safety Klean (1:2)**

**Enviro Klean®  
Safety Klean (1:3)**

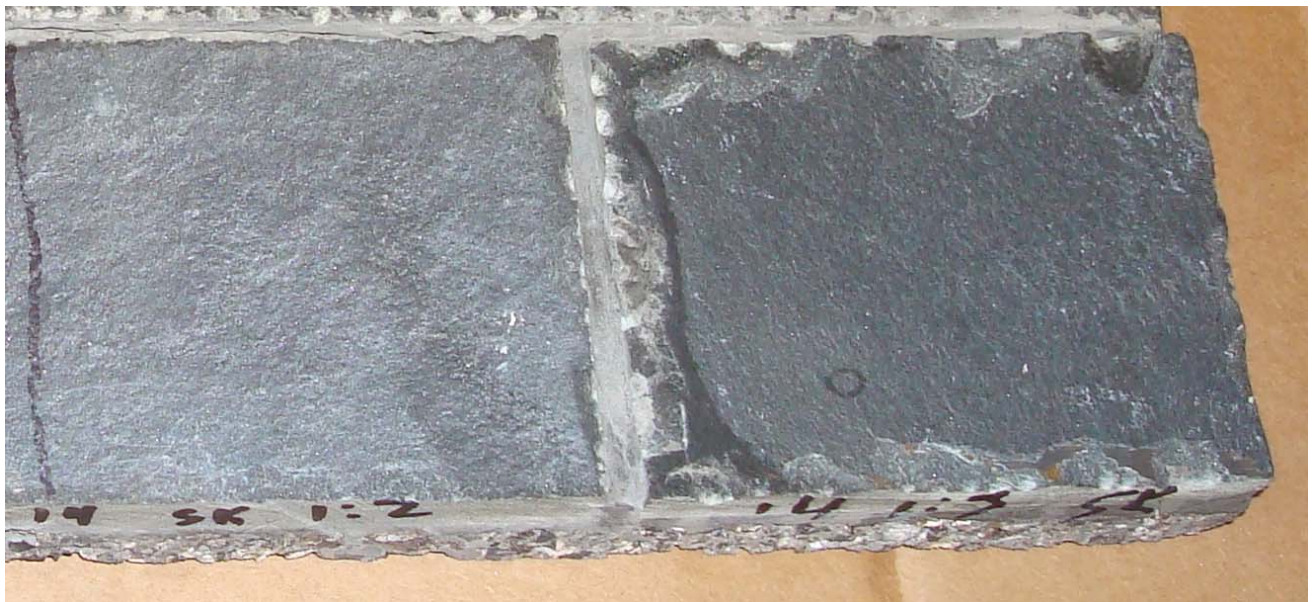
**Photographs – New Construction Cleaning**

**“Brackish” Type N Mortar 14 Day Cleaning**



**Sure Klean®  
Vana Trol® (1:6)**

**Sure Klean®  
Vana Trol® (1:8)**



**Enviro Klean®  
Safety Klean (1:2)**

**Enviro Klean®  
Safety Klean (1:3)**

**Photographs – New Construction Cleaning**

**“Brackish” Type N Mortar 21 Day Cleaning**



**Sure Klean<sup>®</sup>  
Vana Trol<sup>®</sup> (1:6)**

**Sure Klean<sup>®</sup>  
Vana Trol<sup>®</sup> (1:8)**



**Enviro Klean<sup>®</sup>  
Safety Klean (1:2)**

**Enviro Klean<sup>®</sup>  
Safety Klean (1:3)**



**Untreated  
Control**

**Photographs – Limiting Surface Alterations**

**“Jaipur Petit”**



**Sure Klean®  
Vana Trol® (1:6)**

**Sure Klean®  
Vana Trol® (1:8)**

**Untreated  
Surface**



**Enviro Klean®  
Safety Klean (1:2)**

**Enviro Klean®  
Safety Klean (1:3)**

**Untreated  
Surface**

**Conclusions – New Construction Cleaning**

Based on the test data, all of the submitted samples were efficiently cleaned with Enviro Klean® Safety Klean and/or Sure Klean® Vana Trol®. Two of the samples tested showed slight to moderate surface alterations when cleaned with Sure Klean® Vana Trol®, while one of the samples showed slight surface alterations when cleaned with Enviro Klean® Safety Klean.

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 each sample submitted by Jun Pacific, LLC, Honolulu, HI are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar while limiting surface alterations to the decorative finish of the samples.

Sample	New Construction Cleaning (Type N mortar, 21 day cleaning)
“Jaipur Petit” and “New Brackish”	Sure Klean® Vana Trol® (1:8) or Enviro Klean® Safety Klean (1:3)
“Obelisk” and “Luna” and “Brackish” and “Limestone”	Enviro Klean® Safety Klean (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® WB** – A ready-to-use water-based, VOC compliant silane/siloxane water repellent and “chloride screen” for the protection of concrete and masonry surfaces. Saltguard® WB penetrates more deeply than conventional water- or solvent-based water repellents. Low odor and alkaline stable, Saltguard® WB is ideal for field or in-plant application to concrete and most masonry surfaces. Saltguard® WB protects horizontal and vertical surfaces from moisture intrusion and chemical attack of chloride salts.

**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. Unlike conventional siloxane water repellents, Natural Stone Treatment is modified for effectiveness on most limestone, marble and other calcareous surfaces.

**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.

**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.

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### **Sample Preparation – Protective Water Repellents**

The submitted samples were scored and allowed to dry for 24 hours prior to treatment. Each of the products was applied by brush in accordance with the current PROSOCO, Inc. Product Data Sheet application instructions. Each treatment was 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>“Jaipur Petit”</b>	<b>Results in mL loss</b>	<b>Ranking</b>
Untreated Control	-0.0	--
Paver Kare® Paver Enhancer	-0.0	<u>AA</u>
Consolideck® Saltguard® WB	-0.0	<u>AA</u>
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-0.0	<u>AA</u>
Sure Klean® Weather Seal Natural Stone Treatment	-0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	-0.0	<u>AA</u>
Stand Off® Gloss 'N Guard	-0.0	<u>AA</u>
<b>“Obelisk”</b>	<b>Results in mL loss</b>	<b>Ranking</b>
Untreated Control	-0.0	--
Paver Kare® Paver Enhancer	-0.5	<u>A</u>
Consolideck® Saltguard® WB	-0.0	<u>AA</u>
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-0.0	<u>AA</u>
Sure Klean® Weather Seal Natural Stone Treatment	-0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	-0.0	<u>AA</u>
Stand Off® Gloss 'N Guard	-0.5	<u>A</u>
<b>“Luna”</b>	<b>Results in mL loss</b>	<b>Ranking</b>
Untreated Control	-0.0	--
Paver Kare® Paver Enhancer	-0.0	<u>AA</u>
Consolideck® Saltguard® WB	-2.0	<u>BA</u>
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-0.0	<u>AA</u>
Sure Klean® Weather Seal Natural Stone Treatment	-0.0	<u>AA</u>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	-0.0	<u>AA</u>
Stand Off® Gloss 'N Guard	-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**

<b>“Brackish”</b>	<b>Results in mL loss</b>	<b>Ranking</b>
Untreated Control	-0.0	--
Paver Kare® Paver Enhancer	-0.0	<b>AA</b>
Consolideck® Saltguard® WB	-0.0	<b>AA</b>
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-0.0	<b>AA</b>
Sure Klean® Weather Seal Natural Stone Treatment	-0.0	<b>AA</b>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	-0.0	<b>AA</b>
Stand Off® Gloss 'N Guard	-0.0	<b>AA</b>
<b>“Limestone”</b>	<b>Results in mL loss</b>	<b>Ranking</b>
Untreated Control	-5.0	--
Paver Kare® Paver Enhancer	-5.0	<b>BA</b>
Consolideck® Saltguard® WB	-5.0	<b>BA</b>
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-5.0	<b>BA</b>
Sure Klean® Weather Seal Natural Stone Treatment	-5.0	<b>BA</b>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	-5.0	<b>BA</b>
Stand Off® Gloss 'N Guard	-5.0	<b>BA</b>
<b>“New Brackish”</b>	<b>Results in mL loss</b>	<b>Ranking</b>
Untreated Control	-0.0	--
Paver Kare® Paver Enhancer	-0.0	<b>AA</b>
Consolideck® Saltguard® WB	-0.0	<b>AA</b>
Sure Klean® Weather Seal Siloxane WB Concentrate (1:9)	-0.0	<b>AA</b>
Sure Klean® Weather Seal Natural Stone Treatment	-0.0	<b>AA</b>
Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	-0.0	<b>AA</b>
Stand Off® Gloss 'N Guard	-0.0	<b>AA</b>

**Photographs – Protective Water Repellents**

**“Brackish” RILEM II.4, 5.0 mL, 20 Minutes**



**Untreated  
Control**

**Paver Kare<sup>®</sup>  
Paver Enhancer**

**Consolideck<sup>®</sup>  
Saltguard<sup>®</sup>  
WB**

**Sure Klean<sup>®</sup>  
Weather Seal  
Siloxane WB  
Concentrate (1:9)**

**Sure Klean<sup>®</sup>  
Weather Seal  
Natural Stone  
Treatment**



**Sure Klean<sup>®</sup>  
Weather  
Seal Blok-  
Guard<sup>®</sup>  
& Graffiti  
Control II**

**Stand Off<sup>®</sup>  
Gloss 'N  
Guard**

**Conclusions – Protective Water Repellents**

Based upon laboratory evaluations, all of the products tested provided excellent water repellency to all of the submitted samples with the exception of “Limestone”. In addition, Paver Kare® Paver Enhancer, Consolideck® Saltguard® WB, and Stand Off® Gloss ‘N Guard enhanced the color of each of the samples.

**Recommendations – Protective Water Repellents**

Recommendations for water repellency for each sample submitted by Jun Pacific, LLC, Honolulu, HI are provided in the chart below. Recommendations are based on the treatment that best provided water repellency to the submitted samples.

Sample	Protective Water Repellents
“Limestone”	No Recommendation
“Luna”	*Paver Kare® Paver Enhancer or Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) or *Sure Klean® Weather Seal Natural Stone Treatment or Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II or *Stand Off® Gloss ‘N Guard
All Other Submitted Samples	*Paver Kare® Paver Enhancer or Consolideck® Saltguard® WB or Sure Klean® Weather Seal Siloxane WB Concentrate (1:9) or *Sure Klean® Weather Seal Natural Stone Treatment or Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II or *Stand Off® Gloss ‘N Guard

**\*NOTE:** Paver Kare® Paver Enhancer, Sure Klean® Weather Seal Natural Stone Treatment, and Stand Off® Gloss ‘N Guard and are manufactured and marketed in compliance with USEPA AIM VOC regulations (40 CFR 59.403). These products 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.

**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 Treatment**

**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.

**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, split-face concrete block, 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)

**Sample Preparation – Graffiti Control**

Sections of the samples were treated with Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II in accordance with the current PROSOCO, Inc. Product Data Sheet application instructions and 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 II. Removal of the graffiti agents was attempted 24 hours after application of the graffiti agents, using Defacer Eraser® Graffiti Wipe and Sure Klean® Fast Acting Stripper.

**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:
  - Defacer Eraser® Graffiti Wipe .....5 minutes
  - Sure Klean® 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 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**

<b>“Jaipur Petit”</b>					
<b>Untreated Control</b>	<b>Red Paint</b>	<b>Black Marker</b>	<b>Green Marker</b>	<b>Red Marker</b>	<b>% Avg. Removal</b>
Fast Acting Stripper	100%	50%	60%	75%	<b>71%</b>
Graffiti Wipe	50%	50%	60%	75%	<b>59%</b>
<b>Blok-Guard® &amp; Graffiti Control II</b>	<b>Red Paint</b>	<b>Black Marker</b>	<b>Green Marker</b>	<b>Red Marker</b>	<b>% Avg. Removal</b>
Fast Acting Stripper	85%	70%	65%	75%	<b>74%</b>
Graffiti Wipe	80%	70%	50%	75%	<b>69%</b>
<b>“Obelisk”</b>					
<b>Untreated Control</b>	<b>Red Paint</b>	<b>Black Marker</b>	<b>Green Marker</b>	<b>Red Marker</b>	<b>% Avg. Removal</b>
Fast Acting Stripper	100%	100%	100%	100%	<b>100%</b>
Graffiti Wipe	65%	65%	70%	75%	<b>69%</b>
<b>Blok-Guard® &amp; Graffiti Control II</b>	<b>Red Paint</b>	<b>Black Marker</b>	<b>Green Marker</b>	<b>Red Marker</b>	<b>% Avg. Removal</b>
Fast Acting Stripper	100%	100%	100%	100%	<b>100%</b>
Graffiti Wipe	75%	75%	75%	75%	<b>75%</b>
<b>“Luna”</b>					
<b>Untreated Control</b>	<b>Red Paint</b>	<b>Black Marker</b>	<b>Green Marker</b>	<b>Red Marker</b>	<b>% Avg. Removal</b>
Fast Acting Stripper	100%	85%	75%	75%	<b>84%</b>
Graffiti Wipe	100%	75%	50%	50%	<b>69%</b>
<b>Blok-Guard® &amp; Graffiti Control II</b>	<b>Red Paint</b>	<b>Black Marker</b>	<b>Green Marker</b>	<b>Red Marker</b>	<b>% Avg. Removal</b>
Fast Acting Stripper	100%	100%	100%	100%	<b>100%</b>
Graffiti Wipe	90%	90%	90%	100%	<b>93%</b>
<b>“Brackish”</b>					
<b>Untreated Control</b>	<b>Red Paint</b>	<b>Black Marker</b>	<b>Green Marker</b>	<b>Red Marker</b>	<b>% Avg. Removal</b>
Fast Acting Stripper	100%	90%	90%	85%	<b>91%</b>
Graffiti Wipe	75%	90%	75%	75%	<b>79%</b>
<b>Blok-Guard® &amp; Graffiti Control II</b>	<b>Red Paint</b>	<b>Black Marker</b>	<b>Green Marker</b>	<b>Red Marker</b>	<b>% Avg. Removal</b>
Fast Acting Stripper	100%	100%	100%	90%	<b>98%</b>
Graffiti Wipe	75%	85%	90%	100%	<b>88%</b>
<b>“Limestone”</b>					
<b>Untreated Control</b>	<b>Red Paint</b>	<b>Black Marker</b>	<b>Green Marker</b>	<b>Red Marker</b>	<b>% Avg. Removal</b>
Fast Acting Stripper	50%	50%	50%	75%	<b>56%</b>
Graffiti Wipe	50%	45%	40%	75%	<b>53%</b>
<b>Blok-Guard® &amp; Graffiti Control II</b>	<b>Red Paint</b>	<b>Black Marker</b>	<b>Green Marker</b>	<b>Red Marker</b>	<b>% Avg. Removal</b>
Fast Acting Stripper	75%	75%	60%	50%	<b>65%</b>
Graffiti Wipe	60%	60%	50%	50%	<b>55%</b>
<b>“New Brackish”</b>					
<b>Untreated Control</b>	<b>Red Paint</b>	<b>Black Marker</b>	<b>Green Marker</b>	<b>Red Marker</b>	<b>% Avg. Removal</b>
Fast Acting Stripper	100%	85%	80%	75%	<b>85%</b>
Graffiti Wipe	100%	75%	50%	65%	<b>73%</b>
<b>Blok-Guard® &amp; Graffiti Control II</b>	<b>Red Paint</b>	<b>Black Marker</b>	<b>Green Marker</b>	<b>Red Marker</b>	<b>% Avg. Removal</b>
Fast Acting Stripper	100%	100%	100%	100%	<b>100%</b>
Graffiti Wipe	75%	95%	95%	55%	<b>80%</b>

**Photographs – Graffiti Control**

**“Jaipur Petit” Graffiti Applied**

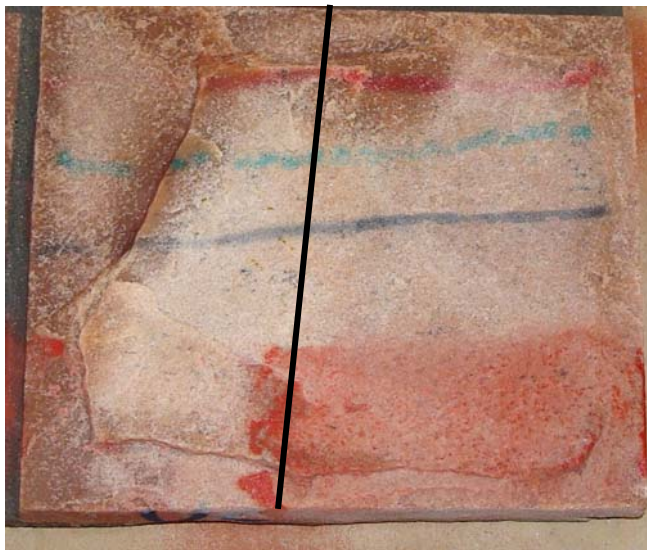


**Untreated Control**



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

**“Jaipur Petit” After Graffiti Removal**



**Untreated Control**



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

**Sure Klean® Fast  
Acting Stripper**

**Defacer Eraser®  
Graffiti Wipe**

**Sure Klean® Fast  
Acting Stripper**

**Defacer Eraser®  
Graffiti Wipe**

### 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 II prior to graffiti application. Sure Klean® Fast Acting Stripper proved to be slightly more effective than Defacer Eraser® Graffiti Wipe at removing graffiti from the submitted samples. In addition, Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II did not change the appearance of the submitted samples.

### **Recommendations – Graffiti Control**

Recommendations for graffiti control treatment for each sample submitted by Jun Pacific, LLC, Honolulu, HI 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 Samples	Sure Klean® Weather Seal Blok-Guard® & Graffiti Control II	Sure Klean® Fast Acting Stripper or Defacer Eraser® Graffiti Wipe

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.

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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.

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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>“Jaipur Petit”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	1	1
Stand Off® Gloss ‘N Guard	3	3
<b>“Obelisk”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	2	2
Stand Off® Gloss ‘N Guard	3	3
<b>“Luna”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	2	2
Stand Off® Gloss ‘N Guard	3	3
<b>“Brackish”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	2	2
Stand Off® Gloss ‘N Guard	2	2
<b>“Limestone”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	2	2
Stand Off® Gloss ‘N Guard	2	2
<b>“New Brackish”</b>		
<b>Treatment</b>	<b>Color Enhancement</b>	<b>Sheen Enhancement</b>
Paver Kare® Paver Enhancer	2	2
Stand Off® Gloss ‘N Guard	3	3

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

**1 - Slight Enhancement**

**2 - Moderate Enhancement**

**3 - Significant Enhancement**

**Photographs** – Color and Sheen Enhancement

“Obelisk”, Treatment Applied



**Paver Kare®  
Paver Enhancer**

**Stand Off®  
Gloss 'N Guard**

**Untreated  
Control**

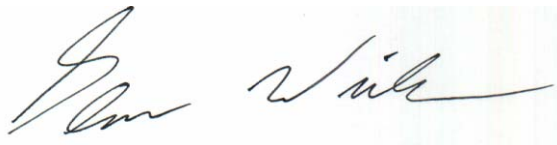
**Recommendations – Color and Sheen Enhancement**

Recommendations for color and sheen enhancement for the samples submitted by Jun Pacific, LLC, Honolulu, HI 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
"Brackish" and "Limestone"	*Stand Off <sup>®</sup> Gloss 'N Guard or *Paver Kare <sup>®</sup> Paver Enhancer	*Stand Off <sup>®</sup> Gloss 'N Guard or *Paver Kare <sup>®</sup> Paver Enhancer
All Other Submitted Samples	*Stand Off <sup>®</sup> Gloss 'N Guard	*Stand Off <sup>®</sup> Gloss 'N Guard

**\*NOTE:** Stand Off<sup>®</sup> Gloss 'N Guard and Paver Kare<sup>®</sup> Paver Enhancer are manufactured and marketed in compliance with USEPA AIM VOC regulations (40 CFR 59.403). These products may not be suitable for sale in states and districts with more restrictive AIM VOC regulations.

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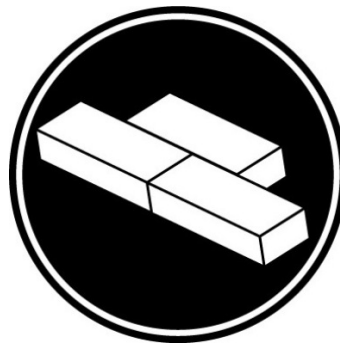


Glenn Winkler  
Project Testing Laboratory Technician



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

**Jun Pacific, LLC**  
P.O. Box 26055  
Honolulu, HI 96825



*Project No. 0709-01 PTP*

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

*Prepared By:*  
AMT Laboratories  
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