



PROSOCO, Inc.

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ATTACHMENTS

Technical Services TECH Note RILEM Test Method No. II.4 Product Data literature for all products evaluated



FOR: Mark O'Keefe cc: Paul Tessier Steve Dean

- SUBJECT: H.C. Muddox 4875 Bradshaw Rd. Sacramento, CA 95827-9727
- DATE: February 12, 2004

PROJECT: 0402-05 PTP

SAMPLES SUBMITTED: (45) types of clay brick and (1) clay paver

| Commercial Face Brick | Color/Coating | Size |
|---------------------------------|--------------------|-----------------|
| "437 Carob" | Dark brown | |
| "479 Ebony" | Dark gray | |
| "890 Old Town Red" | Dark red/ purple | |
| "1081 Dusty Rose" | Light orange & red | |
| "1183 Burnt Rose" | Dark red | |
| "1717 Sierra Slate" | Light brown & red | |
| "1230 Mountain Rose" | Red | |
| "1379 Spanish Moss" | Light brown | |
| "1535 Iron Spot Smooth" | Orange | |
| "1924 Frosted Almond" | Red | 7¾" x 3½" x 2¼" |
| "2783 Frosted Almond" | Dark red | |
| "2878 Tumbleweed" | Buff | |
| "2879 Tule Fog" | Gray | |
| "3059 Sutter Gold" | Dark brown | |
| "3062 Bronze Ridge" | Light red | |
| "3066 Iron Mountain" | Brown/red | |
| "3137 Summer Wheat" | Buff and orange | |
| "French Oak" | Red and orange | |
| "Monterey Bay Flashed smooth" | Brown and orange | |
| "Monterey Bay Flashed wire cut" | Black | |







SAMPLES SUBMITTED Continued: (45) types of clay brick and (1) type of clay paver

| Old World Brick | Color/Coating | Size |
|---------------------------|--------------------|--|
| "California Hand Mold" | Dark brown | |
| "Mendocino" | Dark red | |
| "Redwood" | Dark red | 7¾" x 3½" x 2¼" |
| "Stonehenge" | Dark red | |
| "Tuscany" | Light brown | |
| Commons Brick | Color/Coating | Size |
| "California Antique" | Light orange & red | 11½" x 4" x 3½" |
| "California Rose" | Dark red | |
| "Canterbury" | Light brown | |
| "Carquinez Antique" | Light brown & red | |
| "Chardel Blend" | Red | |
| "Clinkers" | Light brown | |
| "Common Select" | Orange | |
| "Coventry" | Tan and gray | |
| "El Dorado" | Red | |
| "English Rose" | Dark red | 7 ³ /4" x 3 ¹ /2" x 2 ¹ /4" |
| "Folsom Gold" | Buff | 1 /4 X 0/2 X Z/4 |
| "Mission Antiques" | Gray | |
| "Mission Common" | Dark brown | |
| "Mountain Mist" | Light red | |
| "Old Sacramento Blend" | Brown/red | |
| "Placer Antiques" | Buff and orange | |
| "Railroad Blend" | Brown and orange | |
| "Sacramentan" | Black | |
| "Sierra Gold" | Light brown | |
| Paver | Color/Coating | Size |
| "1535 Iron Spot Wire Cut" | Red and orange | 7¾" x 4" 1" |

Submitted By: Mark O'Keefe



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PURPOSE OF TESTING:

45 different types of clay brick and one type of clay paver were submitted to PROSOCO, Inc.'s Testing Laboratory with a request to determine if application of the products evaluated will produce any surface alteration during new construction cleaning operations. Additionally, the effectiveness of water repellent treatments and graffiti control products suitable for clay brick masonry will also be evaluated.

A. New Construction Cleaning – Sure Klean[®] Vana Trol[®] and/or Sure Klean[®] 600 Detergent and/or Enviro Klean[®] Safety Klean were evaluated for removal of laboratory applied mortar.

To simulate new construction soiling, all bricks 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 brick 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 brick for 10 minutes before removal.

Soiled bricks were allowed to dry before test cleaning.

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

B. Limiting Surface Alterations – Sure Klean[®] Vana Trol[®] and/or Sure Klean[®] 600 Detergent and /or Enviro Klean[®] Safety Klean were tested 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.

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

<u>Substrate Deterioration</u> is the visual examination of the brick 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 brick.

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

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

C. Water Repellent Evaluation - Sure Klean[®] Weather Seal Siloxane PD, Sure Klean[®] Weather Seal Siloxane WB Concentrate, and/or Consolideck[®] Saltguard WB were evaluated on the submitted samples for their ability to provide water repellency.

D. Graffiti Control Evaluation – Defacer Eraser[®] Sacrificial Coating SC-1 and Defacer Eraser[®] Graffiti Barrier S were evaluated for their ability to control graffiti on the submitted samples. Defacer Eraser[®] Graffiti Wipe and Sure Klean[®] Fast Acting Stripper were evaluated for their ability to remove graffiti from the submitted samples.

E. Stain Repellency Evaluation – Stand Off[®] Stone, Tile, & Masonry Protector and Stand Off[®] SLX100 Water & Oil Repellency were evaluated for their ability to control staining on the submitted samples.





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PRODUCTS EVALUATED FOR CLEANING AND LIMITING SURFACE ALTERATIONS

| SAMPLE | TREATMENT | DILUTION |
|---|--|----------|
| "Monterey Bay Flashed Smooth" | | |
| "French Oak" | Sure Klean [®] Vana Trol [®] | |
| "3059 Sutter Gold" | And | |
| "2878 Tumbleweed" | Sure Klean [®] 600 Detergent | 1:6, 1:8 |
| "1379 Spanish Moss" | Sule Riean 600 Deleigent | |
| "1924 Frosted Almond" | | |
| All Other Submitted Clay Bricks | Sure Klean [®] Vana Trol [®] | |
| "1535 Iron Spot Wire Cut" Clay Paver | Enviro Klean [®] Safety Klean | 1:2, 1:3 |

WATER REPELLENT PRODUCTS EVALUATED

| SAMPLE | TREATMENT | DILUTION |
|----------------------|--|-------------|
| All submitted clay | Sure Klean [®] Weather Seal Siloxane PD | Concentrate |
| brick | Sure Klean $^{	extsf{B}}$ Weather Seal Siloxane WB Concentrate | 1:9, 1:14 |
| "1535 Iron Spot Wire | Sure Klean [®] Weather Seal Siloxane WB Concentrate | 1:9 |
| Cut" Clay Paver | Consolideck [®] Saltguard WB | Concentrate |

GRAFFITI CONTROL PRODUCTS EVALUATED

| SAMPLE | TREATMENT |
|--------------------------|--|
| All submitted clay brick | Defacer Eraser [®] Sacrificial Coating SC-1 |
| All Submitted Clay blick | Defacer Eraser [®] Graffiti Barrier S |

GRAFFITI REMOVAL PRODUCTS EVALUATED

| SAMPLE | TREATMENT | | |
|--------------------------|--|--|--|
| All submitted clay brick | Defacer Eraser [®] Graffiti Wipe | | |
| All Submitted clay blick | Sure Klean [®] Fast Acting Stripper | | |

STAIN REPELLENCY PRODUCTS EVALUATED

| SAMPLE | TREATMENT | | |
|--------------------------|--|--|--|
| The submitted clay paver | Stand Off [®] Stone, Tile & Masonry Protector | | |
| The submitted clay paver | Stand Off [®] SLX100 Water & Oil Repellent | | |

Dilution ratios refer to mixtures of concentrated product : fresh water.

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PROSOCO, Inc.

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 fired clay bricks.

Ash Grove[®] Type N cementitious mortar was prepared in compliance with the manufacturers instructions, applied to the brick surface 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 Ash Grove[®] Type N cementitious masonry cement mortar was visually evaluated after 7, 14 and 21 days of curing.

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.

Sure Klean[®] 600 Detergent – A general purpose, concentrates acidic cleaner for brick, tile and concrete surfaces. 600 Detergent dissolves mortar smears and construction dirt quickly, leaving the masonry clean and uniform with no acid burning or streaking.

Enviro Klean[®] Safety Klean - An effective, safe alternative to acidic compounds for cleaning brick, tile, and concrete surfaces. Safety Klean ride new masonry construction of excess mortar, dirt and other common job site soiling. It's ideal for projects where traditional acidic cleaners are nor allowed. Nonfuming 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.

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.
- 4. Pressure rinse thoroughly. *

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



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Test Results – New Construction Cleaning

% Removal

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"3062 Bronze Ridge"

"1183 Burnt Rose"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 95% | 95% | 95% |
| | 1:8 | 95% | 95% | 95% |

"California Antique"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"California Hand Mold"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"California Rose"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 95% | 95% | 95% |
| | 1:8 | 95% | 95% | 95% |

"Canterbury"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"437 Carob"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |



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TEST RESULTS- New Construction Cleaning

% Removal

| | | _ | _ | 1 | |
|--|----------|-------|--------|--------|--|
| Product | Dilution | 7 day | 14 day | 21 day | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% | |
| | 1:8 | 100% | 100% | 100% | |
| "Chardel Blend" | | | | | |

"Carquinez Antique"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"Clinkers"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 95% | 95% | 95% |
| | 1:8 | 95% | 95% | 95% |

"Common Select"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| Sure Riean Vana Hoi | 1:8 | 100% | 100% | 100% |

"Coventry"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 90% | 90% | 90% |

"1081 Dusty Rose"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 98% | 98% | 98% |
| Sule Riean Vana Hor | 1:8 | 98% | 98% | 98% |

"479 Ebony"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 95% | 95% | 95% |
| | 1:8 | 95% | 95% | 95% |



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TEST RESULTS- New Construction Cleaning

% Removal

"El Dorado"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"English Rose"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 95% | 95% | 95% |
| | 1:8 | 95% | 95% | 95% |

"Folsom Gold"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"French Oak"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |
| R | 1:6 | 100% | 100% | 100% |
| Sure Klean [®] 600 Detergent | 1:8 | 100% | 100% | 100% |

"1924 Frosted Almond"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| Sure Riean Vana Hor | 1:8 | 100% | 100% | 100% |

"2783 Frosted Almond"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |
| Sura Klaan [®] 600 Datargant | 1:6 | 100% | 100% | 100% |
| Sure Klean [®] 600 Detergent | 1:8 | 100% | 100% | 100% |





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TEST RESULTS – New Construction Cleaning

% Removal

"3066 Iron Mountain"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"1535 Iron Spot Smooth"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"1535 Iron Spot Wire Cut" Paver

| Product | Dilution | 21 day |
|---|----------|--------|
| Enviro Klean [®] Safety Klean [®] | 1:2 | 100% |
| | 1:3 | 100% |

"Mendicino"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 95% | 95% | 95% |
| Sule Riean Vana Hor | 1:8 | 95% | 95% | 95% |

"Mission Antique"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| Sure Riean Vana Hor | 1:8 | 100% | 100% | 100% |

"Mission Common"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| Sure Riean Vana Hor | 1:8 | 100% | 100% | 100% |



TEST RESULTS – New Construction Cleaning

% Removal

"Monterey Bay Flashed Smooth"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |
| Sure Klean [®] 600 Detergent | 1:6 | 100% | 100% | 100% |
| Sure Klean 600 Detergent | 1:8 | 100% | 100% | 100% |

"Monterey Bay Flashed Wire Cut"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 95% | 95% | 95% |
| | 1:8 | 95% | 95% | 95% |

"Mountain Mist"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"Mountain Rose 1230"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 90% | 90% | 90% |
| Sure Riean Vana Hor | 1:8 | 90% | 90% | 90% |

"Northwest Used"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"Old Sacramento Blend"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| Sure Riean Vana Hor | 1:8 | 95% | 95% | 95% |





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TEST RESULTS – New Construction Cleaning

% Removal

"890 Old Town Red"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 98% | 98% | 98% |
| Sure Riean Vana Hor | 1:8 | 95% | 95% | 95% |

"Placer Antique"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| Sure Riean Vana Hor | 1:8 | 100% | 100% | 100% |

"Railroad Blend"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"Redwood"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"Sacramentan"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"Sierra Gold"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |



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TEST RESULTS – New Construction Cleaning

% Removal

| "1717 Sierra Slate" | | | | | | | |
|--|----------|-------|--------|--------|--|--|--|
| Product | Dilution | 7 day | 14 day | 21 day | | | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 95% | 95% | 95% | | | |
| | 1:8 | 95% | 95% | 95% | | | |

"1379 Spanish Moss"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |
| Sure Klean [®] 600 Detergent | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"Stonehenge"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| Sure Riean Vana Hor | 1:8 | 100% | 100% | 100% |

"3137 Summer Wheat"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 95% | 95% | 95% |
| Sure Riean Vana Hor | 1:8 | 90% | 90% | 90% |

"3059 Sutter Gold"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |
| Sure Klean [®] 600 Detergent | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |





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TEST RESULTS – New Construction Cleaning

% Removal

"2879 Tule Fog"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"2878 Tumbleweed"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |
| Sure Klean [®] 600 Detergent | 1:6 | 100% | 100% | 100% |
| | 1:8 | 100% | 100% | 100% |

"Tuscany"

| Product | Dilution | 7 day | 14 day | 21 day |
|--|----------|-------|--------|--------|
| Sure Klean [®] Vana Trol [®] | 1:6 | 95% | 95% | 95% |
| | 1:8 | 95% | 95% | 95% |





PROSOCO, Inc.

CONCLUSIONS – New Construction Cleaning

Based on the test results, Sure Klean[®] Vana Trol[®] and/or Sure Klean[®] 600 Detergent performed extremely well in removing excess mortar smears from the submitted clay bricks. Sure Klean[®] Vana Trol[®] and/or Sure Klean[®] 600 Detergent performed well in removing the mortar soils even after allowing the mortar to remain on the surface of the brick for 21 days under ideal curing conditions. Enviro Klean[®] Safety Klean performed well in removing mortar soil from the submitted brick paver.

It is recommended that the selected cleaners always be used in the lowest possible concentration. They should be rinsed with the lowest pressure of water as practical, at least 400 psi, to minimize removal of the decorative finish. Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction.

RECOMMENDATIONS– New Construction Cleaning

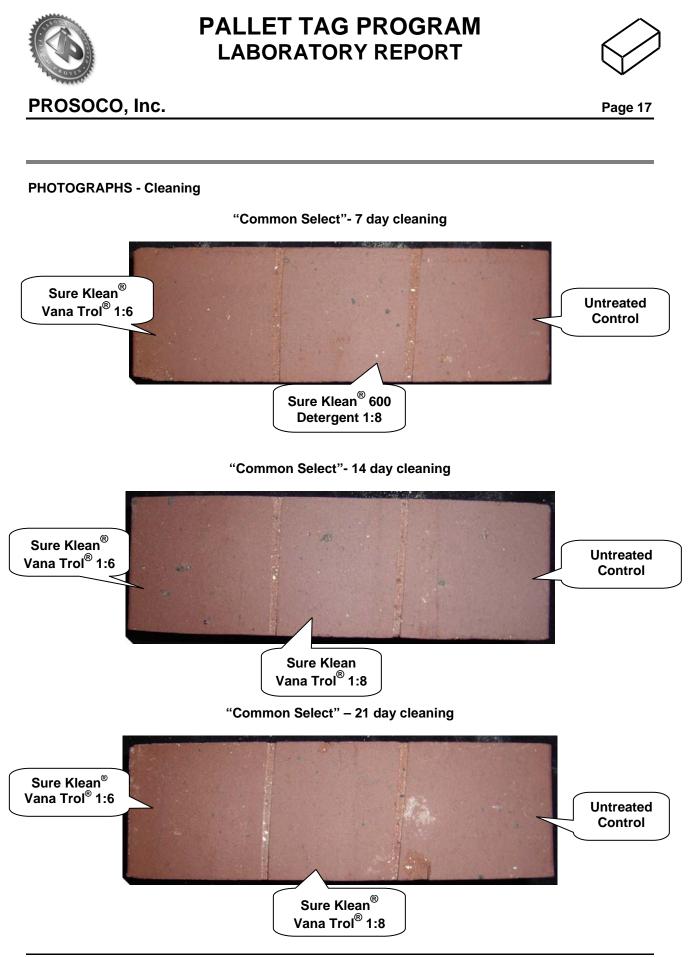
Recommendations for cleaning for each type of clay brick submitted by H.C. Muddox, Sacramento, CA, are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar while limiting surface alterations.

| Brick or Paver Type | New Construction Cleaning (Type N, 21 Days) |
|---|--|
| "Burnt Rose 1183", "California Rose", "Clinkers", "Coventry", "Dusty Rose 1081", "Ebony 479", "English Rose", "Mendicino", "Monterey Bay Flashed Wire Cut", "Mountain Rose 1230", "Old Sacramento Blend", "Old Town Red 890", "Sierra Slate 1717", "Summer Wheat 3137", "Tuscany" Clay Bricks | Sure Klean [®] Vana Trol [®] 1:6 |
| "Frosted Almond 1924", "French Oak", "Monterey Bay Flashed Smooth", "Spanish Moss 1379", "Sutter Gold 3059", Tumbleweed" Clay Bricks | Sure Klean [®] Vana Trol [®] 1:8 OR Sure Klean [®] 600 Detergent 1:8 |
| All Other Submitted Clay Brick | Sure Klean [®] Vana Trol [®] 1:8 |
| "Iron Spot Wire Cut 1535" Clay Paver | Enviro Klean [®] Safety Klean 1:3 |

Note: Sure Klean[®] Vana Trol[®] is recommended for new construction cleaning when colored mortars are used.

Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction. Rinsing with high-pressure spray (400-800 psi) is recommended.

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



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|------------------|---|
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SECTION B – LIMITING SURFACE ALTERATIONS

DESCRIPTION OF PRODUCTS EVALUATED – Limiting Surface Alterations

Sure Klean[®] Vana Trol[®] - A concentrated acidic cleaner for new masonry surfaces that are subject to vanadium, manganese and other metallic stains. Designed for use on gray, brown, white and most light-colored brick, natural stone and 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.

Sure Klean[®] **600 Detergent** – A general purpose, concentrates acidic cleaner for brick, tile and concrete surfaces. 600 Detergent dissolves mortar smears and construction dirt quickly, leaving the masonry clean and uniform with no acid burning or streaking.

Enviro Klean[®] **Safety Klean** – An effective, safe alternative to acidic compounds for cleaning brick, tile, and concrete surfaces. Safety Klean ride new masonry construction of excess mortar, dirt and other common job site soiling. It's ideal for projects where traditional acidic cleaners are nor 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.

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. | |
|----|---|-------------|
| | Vana Trol [®] | 3-5 minutes |
| | 600 Detergent | 3-5 minutes |
| | 600 Safety Klean | |
| 4. | Pressure rinse thoroughly. * | |

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





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TEST RESULTS – Limiting Surface Alterations

| Substrate: Clay brick | Pigment Col | Pigment Color: "3062 Bronze Ridge" | | | | | | |
|--|-------------|-------------------------------------|----------------------------|--------------|----------|--|--|--|
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | | | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | | | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | | | |
| Substrate: Clay brick | Pigment Col | or: "1183 Burnt Ro | se" | | | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | | | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | | | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | | | |
| Substrate: Clay brick | Pigment Col | Pigment Color: "California Antique" | | | | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | | | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | | | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | | | |
| Substrate: Clay brick | Pigment Col | or: "Chardel Blend' | 3 | | | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | | | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | | | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | | | |
| Substrate: Clay brick | Pigment Col | or: "Clinkers" | | | | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | | | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | | | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | | | |

0 – No change

3 - change - heavy

1 – change – slight

2 - change - moderate





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TEST RESULTS – Limiting Surface Alterations

| Substrate: Clay brick | Pigment Col | Pigment Color: "Common Select" | | | | |
|--|-------------|----------------------------------|----------------------------|--------------|----------|--|
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | or: "Coventry" | | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | Pigment Color: "1081 Dusty Rose" | | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | or: "479 Ebony" | | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | Pigment Color: "El Dorado" | | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |

0 – No change 1 – change – slight 3 – change – heavy

4 - change - excessive

2 – change – moderate





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TEST RESULTS – Limiting Surface Alterations

| Substrate: Clay brick | Pigment Col | or: "English Rose" | | | |
|--|-------------|---------------------------|----------------------------|--------------|----------|
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 |
| Substrate: Clay brick | Pigment Col | or: "Folsom Gold" | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 |
| Substrate: Clay brick | Pigment Col | or: "French Oak" | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 |
| Sure Klean [®] 600 Detergent | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] 600 Detergent | 1:8 | 0 | 0 | 0 | 0 |
| Substrate: Clay brick | Pigment Col | or: "1924 Frosted A | Almond" | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 |
| Sure Klean [®] 600 Detergent | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] 600 Detergent | 1:8 | 0 | 0 | 0 | 0 |
| Substrate: Clay brick | Pigment Col | or: "2783 Frosted A | Almond" | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 |
| Substrate: Clay brick | Pigment Col | or: "3066 Iron Mou | ntain" | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 |
| | | | | | |

1 – change – slight

2 – change – moderate





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TEST RESULTS – Limiting Surface Alterations

| Substrate: Clay brick | Pigment Col | Pigment Color: "1535 Iron Spot Smooth" | | | | |
|--|-------------|--|----------------------------|--------------|----------|--|
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay paver | Pigment Col | or: "1535 Iron Spot | Wire Cut" | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Enviro Klean [®] Safety Klean | 1:2 | 0 | 0 | 0 | 0 | |
| Enviro Klean [®] Safety Klean | 1:3 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | Pigment Color: "Medicino" | | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | or: "Mission Antiqu | e" | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | Pigment Color: "Mission Common" | | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| 0 – No change | • | 3 – change – heavy | | | | |

0 – No change

3 - change - heavy

1 – change – slight 2 – change – moderate



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| Substrate: Clay brick | Pigment Col | or: "Monterey Bay | Flashed Smooth | ı" | | |
|--|-------------|---------------------------------------|----------------------------|--------------|----------|--|
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] 600 Detergent | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] 600 Detergent | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | or: "Monterey Bay | Flashed Wire C | ut" | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | or: "Mountain Mist" | 1 | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | or: "1230 Mountain | Rose" | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | or: "Northwest Use | d" | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay Brick | Pigment Col | Pigment Color: "Old Sacramento Blend" | | | | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay Brick | Pigment Col | or: "Stonehenge" | | | | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| 0 – No change | | 3 – change – heavy | | | | |

TEST RESULTS- Limiting Surface Alterations

0 – No change

1 - change - slight

2 - change - moderate

3 – change – heavy



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TEST RESULTS- Limiting Surface Alterations

| Substrate: Clay brick | Pigment Col | Pigment Color: "890 Old Town Red" | | | | |
|--|-------------|-----------------------------------|----------------------------|--------------|----------|--|
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | or: "Placer Antique | " | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | or: "Railroad Blend | " | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | or: "Redwood" | | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | or: "Sacramentan" | | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | or: "Sierra Gold" | | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| Substrate: Clay brick | Pigment Col | or: "1717 Sierra S | late" | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining | |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 | |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 | |
| 0 – No change | | 3 – change | hoover | | | |

0 – No change 1 – change – slight

2 – change – moderate

3 - change - heavy 4 - change - excessive



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TEST RESULTS- Limiting Surface Alterations

| Substrate: Clay brick | Pigment Co | lor: "1379 Spanish | Moss" | | |
|---|-------------|---------------------------|----------------------------|--------------|----------|
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 |
| Sure Klean [®] 600 Detergent | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] 600 Detergent | 1:8 | 0 | 0 | 0 | 0 |
| Substrate: Clay brick | Pigment Co | lor: "3137 Summer | Wheat" | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 |
| Substrate: Clay brick | Pigment Col | lor: "3059 Sutter Go | old" | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 |
| Sure Klean [®] 600 Detergent | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] 600 Detergent | 1:8 | 0 | 0 | 0 | 0 |
| Substrate: Clay brick | Pigment Co | lor: "2879 Tule Fog | " | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 |
| Substrate: Clay brick | Pigment Co | lor: "2878 Tumblew | veed" | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] Vana Trol [®] | 1:8 | 0 | 0 | 0 | 0 |
| Sure Klean [®] 600 Detergent | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] 600 Detergent | 1:8 | 0 | 0 | 0 | 0 |
| Substrate: Clay brick | Pigment Co | lor: "Tuscany" | | | |
| Product | Dilution | Surface Finish Removal | Substrate Deterioration | Color Change | Staining |
| Sure Klean [®] Vana Trol [®] | 1:6 | 0 | 0 | 0 | 0 |
| Sure Klean [®] Vana Trol [®] 0 – No change | 1:8 | 0 3 – change | 0 | 0 | 0 |

1 – change – slight 2 – change – moderate





PROSOCO, Inc.

CONCLUSIONS – Limiting Surface Alterations

Test results indicate that none of the products tested caused any surface alterations on any of the submitted clay brick or pavers. It is recommended that the selected cleaners always be used in the lowest possible concentration. They should be rinsed with the lowest pressure of water as practical to minimize removal of the decorative finish. Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction.

RECOMMENDED PRODUCTS AND DILUTIONS – Limiting Surface Alterations

Product recommendations for limiting surface alterations for each type of clay brick submitted by H.C. Muddox, Sacramento, CA, are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar while limiting surface alterations.

| Brick or Paver Type | New Construction Cleaning (Type N, 21 Days) |
|---|--|
| "Burnt Rose 1183", "California Rose", "Clinkers", "Coventry", "Dusty Rose 1081", "Ebony 479", "English Rose", "Mendicino", "Monterey Bay Flashed Wire Cut", "Mountain Rose 1230", "Old Sacramento Blend", "Old Town Red 890", "Sierra Slate 1717", "Summer Wheat 3137", "Tuscany" Clay Bricks | Sure Klean [®] Vana Trol [®] 1:6 |
| "Frosted Almond 1924", "French Oak", "Monterey Bay Flashed Smooth", "Spanish Moss 1379", "Sutter Gold 3059", Tumbleweed" Clay Bricks | Sure Klean [®] Vana Trol [®] 1:8 OR Sure Klean [®] 600 Detergent 1:8 |
| All Other Submitted Clay Brick | Sure Klean [®] Vana Trol [®] 1:8 |
| "Iron Spot Wire Cut 1535" Clay Paver | Enviro Klean [®] Safety Klean 1:3 |

Excessive pressure and water volume may combine to damage or remove decorative finishes. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction. Rinsing with high-pressure spray (400-800 psi) is recommended.

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

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SECTION C - PROTECTIVE WATER REPELLENTS:

The testing described below evaluates the suitability of water repellent treatments.

The surface treatments evaluated were selected for their suitability for application based on the following selection criteria:

- 1. Weatherproofing properties
- 2. Color change
- 3. Ease of application

DESCRIPTIONS OF PRODUCTS EVALUATED - Protective Water Repellents:

Sure Klean[®] Weather Seal Siloxane 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.

Sure Klean[®] Weather Seal Siloxane WB Concentrate – A concentrated water repellent designed for dilution with fresh water at the jobsite. A solvent-free blend of silanes and oligomeric alkoxysiloxanes, it mixes easily with water to produce a penetrating water repellent ideal for application to dense or porous masonry surfaces.

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.

SAMPLE PREPARATION - Protective Water Repellents:

The submitted brick were cut, oven dried and allowed to reabsorb atmospheric humidity for at least 24 hours prior to treatment. The treatment method adhered to the 2004 PROSOCO, Inc. Product Guide. All treatments were allowed to cure for at least 3 days prior to testing.



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|-----------|---------------|
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TEST METHODS - Protective Water Repellents:

Water Absorption Tube Test: RILEM II.4, 5.0 milliliters, 20 minutes

The water absorption tube test simulating wind driven and wind blown rain conditions was also performed. Tests were run with 5.0-milliliter head pressures. Filled to 5 milliliters, a water absorption tube produces a 98 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.

 $\underline{\mathbf{A}}$ = "Average" correlates to less than or equal to 50% of the maximum untreated absorption.

<u>BA</u> = "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 ml of water or more, then:

A rating of <u>AA</u> Above Average water repellent performance would require loss of no more than 5 ml X 20% = 1 ml.

A rating of <u>A</u> Average water repellent performance would require loss of no more than 5 ml X 50% = 2.5ml.

A rating of <u>**BA**</u> Below Average water repellent performance would be reported for treatments which result in a loss of more than 50% X 5ml = 2.5ml+.



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| Water Absorption 1 | ube Test: RILEM II.4, 5.0 mi | lliliters, 20 minutes |
|---------------------------------|------------------------------|---------------------------|
| <u>AA</u> = Above Average | <u>A</u> = Average | <u>BA</u> = Below Average |
| "Bronze Ridge 3062" | Results in mL loss | Ranking |
| Untreated Control | 5.0 | |
| Weather Seal Siloxane PD | 4.4 | BA |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> |
| "Burnt Rose 1183" | Results in mL loss | Ranking |
| Untreated Control | 3.6 | |
| Weather Seal Siloxane PD | 0.0 | AA |
| Weather Seal Siloxane WB (1:9) | 0.0 | AA |
| Weather Seal Siloxane WB (1:14) | 0.0 | AA |
| "California Antique" | Results in mL loss | Ranking |
| Untreated Control | 2.6 | |
| Weather Seal Siloxane PD | 0.2 | AA |
| Weather Seal Siloxane WB (1:9) | 0.2 | AA |
| Weather Seal Siloxane WB (1:14) | 0.2 | <u>AA</u> |
| "California Hand Mold" | Results in mL loss | Ranking |
| Untreated Control | 0.3 | |
| Weather Seal Siloxane PD | 0.0 | AA |
| Weather Seal Siloxane WB (1:9) | 0.0 | AA |
| Weather Seal Siloxane WB (1:14) | 0.0 | AA |
| "California Rose" | Results in mL loss | Ranking |
| Untreated Control | 5.0 | |
| Weather Seal Siloxane PD | 0.4 | AA |
| Weather Seal Siloxane WB (1:9) | 0.0 | AA |
| Weather Seal Siloxane WB (1:14) | 0.0 | AA |
| "Canterbury" | Results in mL loss | Ranking |
| Untreated Control | 0.6 | |
| Weather Seal Siloxane PD | 0.2 | <u>A</u> |
| Weather Seal Siloxane WB (1:9) | 0.0 | AA |
| Weather Seal Siloxane WB (1:14) | 0.1 | AA |





| <u>AA</u> = Above Average | <u>A</u> = Average | <u>BA</u> = Below Average |
|---|--|---------------------------|
| "Carob 437"" | Results in mL loss | Ranking |
| Untreated Control | 5.0 | |
| Weather Seal Siloxane PD | 0.4 | AA |
| Weather Seal Siloxane WB (1:9) | 0.1 | AA |
| Weather Seal Siloxane WB (1:14) | 0.1 | AA |
| "Carquinez Antique" | Results in mL loss | Ranking |
| Untreated Control | 5.0 | |
| Weather Seal Siloxane PD | 0.1 | AA |
| Weather Seal Siloxane WB (1:9) | 0.1 | AA |
| Weather Seal Siloxane WB (1:14) | 0.1 | AA |
| "Chardel Blend" | Results in mL loss | Ranking |
| Untreated Control | 5.0 | |
| Weather Seal Siloxane PD | 0.1 | ΑΑ |
| Weather Seal Siloxane WB (1:9) | 0.1 | AA |
| Weather Seal Siloxane WB (1:14) | 0.0 | AA |
| "Clinkers" | Results in mL loss | Ranking |
| Untreated Control | 4.3 | |
| Weather Seal Siloxane PD | 0.3 | <u>AA</u> |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> |
| "Common Select" | Results in mL loss | Ranking |
| Untreated Control | 2.7 | |
| | | |
| | 0.2 | <u>AA</u> |
| Weather Seal Siloxane PD | | <u>AA</u> <u>AA</u> |
| Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9) | 0.2 | |
| Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9) Weather Seal Siloxane WB (1:14) | 0.2 0.0 | AA |
| Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9) Weather Seal Siloxane WB (1:14) "Coventry" | 0.2 0.0 0.0 | <u>AA</u> <u>AA</u> |
| Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9) Weather Seal Siloxane WB (1:14) "Coventry" Untreated Control | 0.2 0.0 0.0 Results in mL loss | <u>AA</u> <u>AA</u> |
| Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9) Weather Seal Siloxane WB (1:14) "Coventry" Untreated Control Weather Seal Siloxane PD Weather Seal Siloxane WB (1:9) | 0.2 0.0 0.0 Results in mL loss 5.0 | AA AA Ranking |



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| Water Absorption 1 | Tube Test: RILEM II.4, 5.0 mi | lliliters, 20 minutes |
|---------------------------------|-------------------------------|---------------------------|
| <u>AA</u> = Above Average | <u>A</u> = Average | <u>BA</u> = Below Average |
| "Dusty Rose 1081" | Results in mL loss | Ranking |
| Untreated Control | 5.0 | |
| Weather Seal Siloxane PD | 0.1 | <u>AA</u> |
| Weather Seal Siloxane WB (1:9) | 0.1 | <u>AA</u> |
| Weather Seal Siloxane WB (1:14) | 0.1 | <u>AA</u> |
| "Ebony 479" | Results in mL loss | Ranking |
| Untreated Control | 1.3 | |
| Weather Seal Siloxane PD | 0.2 | <u>AA</u> |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> |
| "El Dorado" | Results in mL loss | Ranking |
| Untreated Control | 3.7 | |
| Weather Seal Siloxane PD | 0.0 | <u>AA</u> |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> |
| "English Rose" | Results in mL loss | Ranking |
| Untreated Control | 1.3 | |
| Weather Seal Siloxane PD | 0.0 | AA |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> |
| "Folsom Gold" | Results in mL loss | Ranking |
| Untreated Control | 0.3 | |
| Weather Seal Siloxane PD | 0.1 | <u>A</u> |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> |
| "French Oak" | Results in mL loss | Ranking |
| Untreated Control | 5.0 | |
| Weather Seal Siloxane PD | 0.2 | AA |
| weather Sear Siloxane PD | •.= | |
| Weather Seal Siloxane WB (1:9) | 0.0 | AA |

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| Water Absorption Tube Test: RILEM II.4, 5.0 milliliters, 20 minutes | | | | |
|---|--------------------|---------------------------|--|--|
| <u>AA</u> = Above Average | <u>A</u> = Average | <u>BA</u> = Below Average | | |
| "Frosted Almond 1924" | Results in mL loss | Ranking | | |
| Untreated Control | 4.7 | | | |
| Weather Seal Siloxane PD | 0.0 | AA | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> | | |
| "Frosted Almond 2783" | Results in mL loss | Ranking | | |
| Untreated Control | 2.0 | | | |
| Weather Seal Siloxane PD | 0.1 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> | | |
| "Iron Mountain 3066" | Results in mL loss | Ranking | | |
| Untreated Control | 2.9 | | | |
| Weather Seal Siloxane PD | 0.1 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> | | |
| "Iron Spot Smooth 1535" | Results in mL loss | Ranking | | |
| Untreated Control | 2.4 | | | |
| Weather Seal Siloxane PD | 0.2 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | AA | | |
| "Iron Spot Wire Cut 1535" (Paver) | Results in mL loss | Ranking | | |
| Untreated Control | 3.5 | | | |
| Saltguard WB | 0.3 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | | |
| "Mendicino" | Results in mL loss | Ranking | | |
| Untreated Control | 5.0 | | | |
| Weather Seal Siloxane PD | 0.4 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> | | |



| Water Absorption Tube Test: RILEM II.4, 5.0 milliliters, 20 minutes | | | | |
|---|--------------------|---------------------------|--|--|
| <u>AA</u> = Above Average | <u>A</u> = Average | <u>BA</u> = Below Average | | |
| "Mission Antique" | Results in mL loss | Ranking | | |
| Untreated Control | 3.1 | | | |
| Weather Seal Siloxane PD | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> | | |
| "Mission Common" | Results in mL loss | Ranking | | |
| Untreated Control | 1.9 | | | |
| Weather Seal Siloxane PD | 0.0 | AA | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> | | |
| "Monterey Bay Flashed Smooth" | Results in mL loss | Ranking | | |
| Untreated Control | 2.6 | | | |
| Weather Seal Siloxane PD | 0.1 | ΑΑ | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | AA | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | AA | | |
| "Monterey Bay Flashed Wire Cut" | Results in mL loss | Ranking | | |
| Untreated Control | 2.1 | | | |
| Weather Seal Siloxane PD | 0.0 | ΑΑ | | |
| Weather Seal Siloxane WB (1:9) | 0.1 | AA | | |
| Weather Seal Siloxane WB (1:14) | 0.1 | <u>AA</u> | | |
| "Mountain Mist" | Results in mL loss | Ranking | | |
| Untreated Control | 0.9 | | | |
| Weather Seal Siloxane PD | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> | | |
| "Mountain Rose 1230" | Results in mL loss | Ranking | | |
| Untreated Control | 5.0 | | | |
| Weather Seal Siloxane PD | 0.3 | AA | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | AA | | |
| Weather Seal Siloxane WB (1:14) | 0.1 | AA | | |



| Water Absorption Tube Test: RILEM II.4, 5.0 milliliters, 20 minutes | | | | |
|---|--------------------|---------------------------|--|--|
| <u>AA</u> = Above Average | <u>A</u> = Average | <u>BA</u> = Below Average | | |
| "Northwest Used" | Results in mL loss | Ranking | | |
| Untreated Control | 5.0 | | | |
| Weather Seal Siloxane PD | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:9) | 0.1 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.1 | <u>AA</u> | | |
| "Old Sacramento Blend" | Results in mL loss | Ranking | | |
| Untreated Control | 2.5 | | | |
| Weather Seal Siloxane PD | 0.8 | <u>A</u> | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> | | |
| "Old Town Red 890" | Results in mL loss | Ranking | | |
| Untreated Control | 4.9 | | | |
| Weather Seal Siloxane PD | 0.5 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> | | |
| "Placer Antique" | Results in mL loss | Ranking | | |
| Untreated Control | 2.0 | | | |
| Weather Seal Siloxane PD | 0.4 | AA | | |
| Weather Seal Siloxane WB (1:9) | 0.1 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.1 | <u>AA</u> | | |
| "Railroad Blend" | Results in mL loss | Ranking | | |
| Untreated Control | 0.1 | | | |
| Weather Seal Siloxane PD | 0.1 | BA | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | AA | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> | | |
| "Redwood" | Results in mL loss | Ranking | | |
| Untreated Control | 5.0 | | | |
| Weather Seal Siloxane PD | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.1 | <u>AA</u> | | |



| Water Absorption Tube Test: RILEM II.4, 5.0 milliliters, 20 minutes | | | | |
|---|--------------------|---------------------------|--|--|
| <u>AA</u> = Above Average | <u>A</u> = Average | <u>BA</u> = Below Average | | |
| "Sacramentan" | Results in mL loss | Ranking | | |
| Untreated Control | 2.0 | | | |
| Weather Seal Siloxane PD | 0.1 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:9) | 0.2 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.2 | <u>AA</u> | | |
| "Sierra Gold" | Results in mL loss | Ranking | | |
| Untreated Control | 0.3 | | | |
| Weather Seal Siloxane PD | 0.0 | AA | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | AA | | |
| Weather Seal Siloxane WB (1:14) | 0.1 | <u>A</u> | | |
| "Sierra Slate 1717" | Results in mL loss | Ranking | | |
| Untreated Control | 0.7 | | | |
| Weather Seal Siloxane PD | 0.4 | BA | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | AA | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> | | |
| "Spanish Moss 1379" | Results in mL loss | Ranking | | |
| Untreated Control | 5.0 | | | |
| Weather Seal Siloxane PD | 0.3 | AA | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> | | |
| "Stonehenge" | Results in mL loss | Ranking | | |
| Untreated Control | 2.5 | | | |
| Weather Seal Siloxane PD | 0.1 | AA | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | AA | | |
| Weather Seal Siloxane WB (1:14) | 0.1 | <u>AA</u> | | |
| "Summer Wheat 3137" | Results in mL loss | Ranking | | |
| Untreated Control | 3.0 | | | |
| Weather Seal Siloxane PD | 0.3 | AA | | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | | |
| Weather Seal Siloxane WB (1:14) | 0.0 | AA | | |



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| Water Absorption Tube Test: RILEM II.4, 5.0 milliliters, 20 minutes | | | |
|---|--------------------|---------------------------|--|
| <u>AA</u> = Above Average | <u>A</u> = Average | <u>BA</u> = Below Average | |
| "Sutter Gold 3059" | Results in mL loss | Ranking | |
| Untreated Control | 5.0 | | |
| Weather Seal Siloxane PD | 0.1 | <u>AA</u> | |
| Weather Seal Siloxane WB (1:9) | 0.1 | <u>AA</u> | |
| Weather Seal Siloxane WB (1:14) | 0.1 | <u>AA</u> | |
| "Tule Fog 2879" | Results in mL loss | Ranking | |
| Untreated Control | 0.1 | | |
| Weather Seal Siloxane PD | 0.1 | BA | |
| Weather Seal Siloxane WB (1:9) | 0.0 | <u>AA</u> | |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> | |
| "Tumbleweed 2878" | Results in mL loss | Ranking | |
| Untreated Control | 1.9 | | |
| Weather Seal Siloxane PD | 0.1 | AA | |
| Weather Seal Siloxane WB (1:9) | 0.0 | AA | |
| Weather Seal Siloxane WB (1:14) | 0.0 | <u>AA</u> | |
| "Tuscany" | Results in mL loss | Ranking | |
| Untreated Control | 2.7 | | |
| Weather Seal Siloxane PD | 2.1 | BA | |
| Weather Seal Siloxane WB (1:9) | 0.3 | AA | |
| Weather Seal Siloxane WB (1:14) | 1.2 | <u>A</u> | |

Water Absorption Tube Test: RILEM II.4, 5.0 milliliters, 20 minutes



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PHOTOGRAPH – Water Repellents

 Untreated Control
 Weather Seal® Siloxane PD
 Weather Seal® Siloxane WB 1:9
 Weather Seal® Siloxane WB 1:14

"Ebony 479"- RILEM Testing



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CONCLUSIONS – Protective Water Repellents:

RILEM test results indicate that at least one of the three water repellents tested exhibited above average water repellency on all submitted clay brick and pavers.

RECOMMENDATIONS – Protective Water Repellents:

Recommendations for water repellent treatments for each type of clay brick submitted by H.C Muddox, Sacramento, CA, are provided in the chart below. Recommendations are based on the treatments that proved most effective by RILEM results and can provide water repellency on all types indicated.

| Brick or Paver Type | Water Repellent |
|---|---|
| "Old Sacramento Blend" "Folsom Gold" "Tule Fog 2879" "Sierra Slate1717" "Bronze Ridge 3062" "Railroad Blend" | Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:9) OR Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:14) |
| "Tuscany" | Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:9) |
| "Sierra Gold" | Sure Klean [®] Weather Seal Siloxane PD OR Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:9) |
| "Iron Spot Wire Cut 1535" Paver | Consolideck [®] Saltguard WB OR Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:9) |
| All Other Submitted Clay Brick | Sure Klean [®] Weather Seal Siloxane PD OR Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:9) OR Sure Klean [®] Weather Seal Siloxane WB Concentrate (1:14) |

It must be pointed out that in any installation, the brick are a single component of the masonry facade. The ability of a water repellent treatment to prevent the ingress of water is affected by a variety of other factors. Therefore, on-site testing should be carried out for all installations with the recommended systems to ensure job site workmanship yields equivalent results.

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



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SECTION D - GRAFFITI CONTROL

DESCRIPTION OF PRODUCTS EVALUATED

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

Graffiti Control Treatments

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.

Defacer Eraser[®] **Graffiti Barrier S** – A clear, water-based sacrificial coating for control of graffiti on most building surfaces. Easy-to-apply Graffiti Barrier S stops spray paints, crayons and ink from penetrating and staining the underlying surface. After a graffiti attack, simply wash off the sacrificial coating with Defacer Eraser[®] Graffiti Release. The graffiti gets washed away, too! Reapply the sacrificial coating 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 removed a variety of graffiti stains from most smooth masonry, wood and metal surfaces.

Sure Klean[®] Fast Acting Stripper – A thixotropic stripping compound designed for removing coatings and epoxies from masonry, wood and metal surfaces. Also removes oil, grease, and waxes from concrete decks, tile and terrazzo floors.

Graffiti Agents

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

SAMPLE PREPARATION – Graffiti Control

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

Sections of the brick samples were treated with the selected anti-graffiti treatments in accordance with PROSOCO, Inc.'s Product Guide application recommendations and then allowed to cure for 24 hours. 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 at least 24 hours following application of the anti-graffiti treatments. 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.



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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.
- 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.



| | "В | ronze Ridge 30 | 62" | | |
|----------------------------|--------------|-----------------|-----------------|---------------|-------------------|
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 50-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| Graffiti Barrier S | Red | Black | Green | Red | % Avg. |
| Graniti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| | "E | Burnt Rose 118 | 33" | | - |
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 98% | 100% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| 0 11 | Red | Black | Green | Red | % Avg. |
| SC-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 100% | 98% | 98% | 99% |
| | Red | Black | Green | Red | % Avg. |
| Graffiti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| J J J J J J J J J J | "C | alifornia Antiq | ue" | | |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 98% | 95% | 85% | 85% | 91% |
| Fast Acting Stripper | 98% | 85% | 85% | 85% | 88% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 30-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 98% | 90% | 90% | 95% |
| Fast Acting Stripper | 100% | 90% | 90% | 90% | 93% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 95% | 85% | 85% | 91% |
| Fast Acting Stripper | 100% | 90% | 90% | 90% | 93% |



| | "Ca | lifornia Hand M | lold" | | |
|----------------------|-------|-----------------|--------|--------|---------|
| Untreated Control | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| Graffiti Barrier S | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| | " | California Ros | e" | | |
| | Red | Black | Green | Red | % Avg. |
| Untreated Control | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 95% | 98% | 98% |
| Fast Acting Stripper | 100% | 95% | 95% | 98% | 97% |
| – | Red | Black | Green | Red | % Avg. |
| SC-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 90% | 98% | 97% |
| Fast Acting Stripper | 100% | 95% | 90% | 98% | 96% |
| | Red | Black | Green | Red | % Avg. |
| Graffiti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| | | "Canterbury" | | | |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 90% | 98% | 85% | 85% | 90% |
| Fast Acting Stripper | 95% | 90% | 85% | 85% | 89% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 95% | 95% | 90% | 90% | 93% |
| Fast Acting Stripper | 95% | 95% | 90% | 90% | 93% |
| Graffiti Barrier S | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 100% | 98% | 98% | 99% |





| | | "Carob 437" | | | |
|----------------------|--------------|-----------------|-----------------|---------------|-------------------|
| Untreated Control | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| | | arquinez Antiq | | | |
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 90% | 98% | 90% | 90% | 92% |
| Fast Acting Stripper | 90% | 90% | 90% | 90% | 90% |
| - · · · | Red | Black | Green | Red | % Avg. |
| SC-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 90% | 90% | 90% | 90% | 90% |
| Fast Acting Stripper | 95% | 90% | 90% | 90% | 91% |
| | Red | Black | Green | Red | % Avg. |
| Graffiti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 98% | 98% | 98% | 98% | 98% |
| Fast Acting Stripper | 98% | 98% | 98% | 98% | 98% |
| | | Chardel Blend | l" | | |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 90% | 95% | 90% | 90% | 91% |
| Fast Acting Stripper | 85% | 85% | 90% | 90% | 88% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 98% | 95% | 85% | 90% | 92% |
| Fast Acting Stripper | 98% | 85% | 85% | 85% | 88% |
| Graffiti Barrier S | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |



| | | "Clinkers" | | | |
|----------------------|--------------|-----------------|-----------------|---------------|-------------------|
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 95% | 100% | 100% | 100% | 99% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 50-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 85% | 100% | 100% | 100% | 96% |
| v , , | " | Common Selec | :t" | | |
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| SC-1 | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| | 1 | "Coventry" | | L | |
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 95% | 95% | 90% | 90% | 93% |
| Fast Acting Stripper | 95% | 90% | 90% | 90% | 91% |
| <u> </u> | Red | Black | Green | Red | % Avg. |
| SC-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 95% | 95% | 95% | 96% |
| Fast Acting Stripper | 100% | 95% | 95% | 95% | 96% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 98% | 98% | 98% | 98% | 98% |



| | "[| Dusty Rose 108 | 61" | | |
|----------------------|--------------|-----------------|-----------------|---------------|-------------------|
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 95% | 100% | 95% | 98% | 97% |
| Fast Acting Stripper | 95% | 90% | 90% | 95% | 93% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 50-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 95% | 95% | 95% | 95% | 95% |
| Fast Acting Stripper | 95% | 90% | 90% | 90% | 91% |
| Graffiti Barrier S | Red | Black | Green | Red | % Avg. |
| Graniti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| | | "Ebony 479" | | | |
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 95% | 98% | 98% | 98% | 97% |
| Fast Acting Stripper | 98% | 98% | 98% | 98% | 98% |
| 0 11 | Red | Black | Green | Red | % Avg. |
| SC-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 98% | 98% | 98% | 98% | 98% |
| Fast Acting Stripper | 98% | 98% | 98% | 98% | 98% |
| 0 11 | Red | Black | Green | Red | % Avg. |
| Graffiti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 98% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 98% | 100% | 100% | 100% | 100% |
| 5 11 | 4 | "El Dorado" | | I | |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 98% | 95% | 95% | 97% |
| Fast Acting Stripper | 100% | 95% | 95% | 95% | 96% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |



| | | "English Rose | " | | |
|----------------------|--------------|-----------------|-----------------|---------------|-------------------|
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 95% | 95% | 98% | 97% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 50-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 95% | 95% | 95% | 96% |
| Graffiti Barrier S | Red | Black | Green | Red | % Avg. |
| Graniti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 95% | 100% | 100% | 100% | 99% |
| | | "Folsom Gold" | | | - |
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 95% | 95% | 85% | 85% | 90% |
| Fast Acting Stripper | 95% | 95% | 85% | 85% | 90% |
| 0 11 | Red | Black | Green | Red | % Avg. |
| SC-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 95% | 95% | 95% | 96% |
| Fast Acting Stripper | 100% | 95% | 95% | 95% | 96% |
| 0 11 | Red | Black | Green | Red | % Avg. |
| Graffiti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| | | "French Oak" | | 10070 | |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 95% | 95% | 98% | 97% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |



| | "Fro | sted Almond 1 | 1924" | | |
|----------------------|--------------|-----------------|-----------------|---------------|-------------------|
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 70% | 95% | 75% | 75% | 79% |
| Fast Acting Stripper | 70% | 65% | 65% | 65% | 66% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 30-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 95% | 95% | 80% | 80% | 88% |
| Fast Acting Stripper | 95% | 90% | 80% | 80% | 86% |
| Graffiti Barrier S | Red | Black | Green | Red | % Avg. |
| Graniti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 98% | 98% | 95% | 98% |
| Fast Acting Stripper | 100% | 98% | 95% | 95% | 97% |
| | "Fro | sted Almond 2 | 2783" | | |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| Uniteated Control | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 95% | 85% | 85% | 85% | 88% |
| Fast Acting Stripper | 95% | 85% | 85% | 85% | 88% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| ••• | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 95% | 95% | 98% | 95% | 96% |
| Fast Acting Stripper | 100% | 90% | 90% | 90% | 93% |
| Graffiti Barrier S | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| | "Ire | on Mountain 30 | 066" | | |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 98% | 100% | 98% | 100% | 99% |
| Fast Acting Stripper | 98% | 100% | 100% | 100% | 100% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100 % | 100% | 100% | 100% | 100 % |
| | 10070 | 10070 | 10070 | 10070 | 100 /0 |



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| "Iron | Spot Smooth | 1535" | | |
|--------------|--|--|---|--|
| Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| 100% | 100% | 100% | 100% | 100% |
| 100% | 100% | 100% | 100% | 100% |
| Red | Black | Green | Red | % Avg. |
| Paint | Marker | Marker | Marker | Removal |
| 100% | 100% | 100% | 100% | 100% |
| 100% | 100% | 100% | 100% | 100% |
| Red | Black | Green | Red | % Avg. |
| Paint | Marker | Marker | Marker | Removal |
| 98% | 100% | 100% | 100% | 100% |
| 98% | 98% | 98% | 98% | 98% |
| | "Mendicino" | | | - |
| Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| | | | | 100% |
| | | | | 100% |
| | | | | % Avg. |
| | | | | Removal |
| | | | | 100% |
| | | | | 100% |
| | | | Red | % Avg. |
| Paint | Marker | Marker | Marker | Removal |
| 100% | | 100% | | 100% |
| 100% | | 100% | 100% | 100% |
| " | | e" | 1 | |
| Red | Black | Green | Red | % Avg. |
| | | | | Removal |
| | | | | 85% |
| | | | | 86% |
| Red | Black | Green | Red | % Avg. |
| Paint | Marker | Marker | Marker | Removal |
| 100% | | | 80% | 86% |
| 100% | 98% | | 95% | 97% |
| Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| | | | | 100% |
| 100% | 98% | 98% | 98% | 99% |
| | Red Paint 100% 100% 100% Red Paint 100% 100% Red Paint 98% 98% 98% 98% 98% 98% 98% 98% 98% 98% 98% 98% 98% 98% 98% 98% 98% 98% 98% 98% 98% Red Paint 100% Red Paint 100% 100% Red Paint 100% | Red Black Paint Marker 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 98% 98% "Mendicino" Red Black Paint Marker 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% % 95% 95% 90% Red Black Paint Marker 100% 100% % 95% 95% 90% Red | Paint Marker Marker 100% 100% 100% 100% 100% 100% Red Black Green Paint Marker Marker 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 98% 98% 98% 98% 98% 98% 98% 98% 98% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% | Red Paint Black Marker Green Marker Red Marker 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% Red Black Green Red Paint Marker Marker Marker 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 8% 98% 98% 98% 98% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100 |



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| | "N | lission Commo | on" | | |
|----------------------|--------------|-----------------|-----------------|---------------|-------------------|
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 95% | 100% | 99% |
| Fast Acting Stripper | 100% | 95% | 95% | 98% | 97% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 30-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| <u> </u> | "Montere | ey Bay Flashed | Smooth" | | |
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 98% | 98% | 98% | 98% | 98% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| SC-1 | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| 0 11 | Red | Black | Green | Red | % Avg. |
| Graffiti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| | | y Bay Flashed | | 10070 | 100 / 0 |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 98% | 95% | 98% | 98% |
| Fast Acting Stripper | 100% | 98% | 95% | 98% | 98% |
| SC-1 | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 98% | 98% | 99% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |



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| | " | 'Mountain Mist | | | |
|----------------------|--------------|-----------------|-----------------|---------------|-------------------|
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 85% | 100% | 80% | 80% | 86% |
| Fast Acting Stripper | 85% | 100% | 80% | 80% | 86% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 50-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 90% | 100% | 80% | 80% | 88% |
| Fast Acting Stripper | 90% | 100% | 80% | 80% | 88% |
| Graffiti Barrier S | Red | Black | Green | Red | % Avg. |
| Graffiti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 90% | 100% | 95% | 95% | 95% |
| Fast Acting Stripper | 90% | 100% | 95% | 95% | 95% |
| 0 | "Мс | ountain Rose 1 | 230" | | |
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| | Red | Black | Green | Red | % Avg. |
| SC-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 98% | 100% | 98% | 98% | 99% |
| Fast Acting Stripper | 98% | 95% | 95% | 98% | 97% |
| U 1 | Red | Black | Green | Red | % Avg. |
| Graffiti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| | | Northwest Use | | 10070 | 10070 |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| Untreated Control | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 98% | 95% | 98% | 98% |
| Fast Acting Stripper | 100% | 95% | 90% | 98% | 96% |
| 0 11 | Red | Black | Green | Red | % Avg. |
| SC-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |



| | "Old | Sacramento B | lend" | | |
|----------------------|--------------|-----------------|-----------------|---------------|-------------------|
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 98% | 100% | 100% |
| Fast Acting Stripper | 100% | 95% | 95% | 100% | 98% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 50-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| | | ld Town Red 8 | | | 10070 |
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 95% | 98% | 98% | 98% | 97% |
| Fast Acting Stripper | 95% | 95% | 95% | 98% | 96% |
| <u> </u> | Red | Black | Green | Red | % Avg. |
| SC-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 95% | 98% | 98% |
| Fast Acting Stripper | 100% | 98% | 95% | 100% | 98% |
| | Red | Black | Green | Red | % Avg. |
| Graffiti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 95% | 100% | 100% | 100% | 99% |
| 0 11 | | Placer Antique | e" | I | |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 90% | 65% | 65% | 65% | 71% |
| Fast Acting Stripper | 98% | 70% | 70% | 70% | 77% |
| SC-1 | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 95% | 85% | 85% | 80% | 86% |
| Fast Acting Stripper | 95% | 85% | 85% | 85% | 88% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 90% | 90% | 90% | 93% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |



| | 6 | Railroad Blend | 1" | | |
|----------------------|--------------|-----------------|-----------------|---------------|-------------------|
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 50-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| Graffiti Barrier S | Red | Black | Green | Red | % Avg. |
| Graniti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| | | "Redwood" | | | - |
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| <u> </u> | Red | Black | Green | Red | % Avg. |
| SC-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| 0 11 | Red | Black | Green | Red | % Avg. |
| Graffiti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| | | "Sacramentan | " | | • |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 98% | 95% | 95% | 95% | 96% |
| Fast Acting Stripper | 98% | 95% | 95% | 95% | 96% |
| SC-1 | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| Graffiti Barrier S | Red | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |



| | | "Sierra Gold" | | | |
|----------------------|--------------|------------------|-----------------|---------------|-------------------|
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 98% | 98% | 98% | 98% | 98% |
| Fast Acting Stripper | 98% | 98% | 98% | 98% | 98% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 50-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 98% | 100% |
| Fast Acting Stripper | 100% | 98% | 100% | 98% | 99% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| 5 11 | "§ | Sierra Slate 171 | 17" | I | |
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| | Red | Black | Green | Red | % Avg. |
| SC-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 98% | 100% | 98% | 98% | 99% |
| Fast Acting Stripper | 98% | 100% | 98% | 98% | 99% |
| | Red | Black | Green | Red | % Avg. |
| Graffiti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| U 1, | "Sp | oanish Moss 13 | 379" | | |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| Untreated Control | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 95% | 98% | 90% | 95% | 95% |
| Fast Acting Stripper | 95% | 95% | 90% | 90% | 93% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 95% | 95% | 98% |
| Fast Acting Stripper | 100% | 98% | 95% | 95% | 97% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |



| | | "Stonehenge" | 9 | | |
|----------------------|--------------|-----------------|-----------------|---------------|-------------------|
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 85% | 98% | 70% | 70% | 81% |
| Fast Acting Stripper | 80% | 95% | 70% | 70% | 79% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 50-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 95% | 95% | 95% | 96% |
| Fast Acting Stripper | 100% | 95% | 95% | 95% | 96% |
| Graffiti Barrier S | Red | Black | Green | Red | % Avg. |
| Gramiti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 98% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 98% | 100% |
| 0 11 | "Su | mmer Wheat 3 | 137" | L | |
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 80% | 95% | 85% | 85% | 86% |
| Fast Acting Stripper | 90% | 85% | 85% | 85% | 86% |
| Fast Acting Stripper | 80% | Black | 63% Green | Red | % Avg. |
| SC-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 98% | 95% | 95% | 95% | 96% |
| Fast Acting Stripper | 98% | 95% | 95% | 95% | 96% |
| | Red | Black | Green | Red | % Avg. |
| Graffiti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 95% | 98% | 98% | 98% | 96% |
| Fast Acting Stripper | 95% | 98% | 98% | 98% | 96% |
| <u> </u> | | Sutter Gold 305 | | | |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| Unitealed Control | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 80% | 90% | 90% | 90% | 88% |
| Fast Acting Stripper | 80% | 75% | 75% | 75% | 76% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 30-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 95% | 85% | 85% | 85% | 88% |
| Fast Acting Stripper | 95% | 80% | 80% | 80% | 84% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 95% | 98% | 98% | 98% | 97% |
| Fast Acting Stripper | 95% | 98% | 98% | 98% | 97% |
| | 90 /0 | 30 /0 | 30 /0 | 3070 | 31 70 |



| | | "Tule Fog 2879 |)" | | |
|----------------------|--------------|-----------------|-----------------|---------------|-------------------|
| Untreated Control | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 90% | 95% | 95% | 95% | 94% |
| Fast Acting Stripper | 95% | 85% | 85% | 85% | 88% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 30-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 98% | 100% | 100% |
| Graffiti Barrier S | Red | Black | Green | Red | % Avg. |
| Graniti Barrier S | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 98% | 98% | 98% | 98% | 98% |
| Fast Acting Stripper | 98% | 98% | 98% | 98% | 98% |
| | "T | umbleweed 28 | 78" | | - |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 98% | 98% | 95% | 95% | 97% |
| Fast Acting Stripper | 98% | 95% | 95% | 95% | 96% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 98% | 98% | 95% | 95% | 97% |
| Fast Acting Stripper | 98% | 98% | 95% | 95% | 97% |
| Graffiti Barrier S | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 100% | 100% | 100% | 100% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| | | "Tuscany" | | | |
| Untreated Control | Red | Black | Green | Red | % Avg. |
| | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 98% | 100% | 98% | 98% | 99% |
| Fast Acting Stripper | 98% | 95% | 90% | 95% | 95% |
| SC-1 | Red | Black | Green | Red | % Avg. |
| 30-1 | Paint | Marker | Marker | Marker | Removal |
| Graffiti Wipe | 100% | 98% | 98% | 98% | 99% |
| Fast Acting Stripper | 100% | 98% | 98% | 98% | 99% |
| Graffiti Barrier S | Red Paint | Black Marker | Green Marker | Red Marker | % Avg. Removal |
| Graffiti Wipe | 95% | 100% | 100% | 100% | 99% |
| Fast Acting Stripper | 100% | 100% | 100% | 100% | 100% |
| | 10070 | 10070 | 10070 | 10070 | 100 /0 |



PALLET TAG PROGRAM LABORATORY REPORT



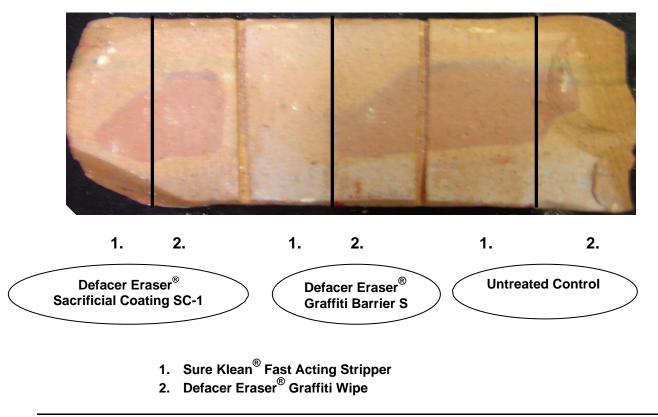
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PHOTOGRAPHS – Graffiti Control

"French Oak" Before Graffiti Removal



"French Oak" After Graffiti Removal







RECOMMENDATIONS – GRAFFITI CONTROL

Recommendations for graffiti control treatment for each type of clay brick and pavers submitted by H.C. Muddox, Sacramento, CA, 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.

| Brick or Type | Graffiti Repellents | Graffiti Removers |
|---|---|---|
| "California Rose" "Carquinez Antique" "Dusty Rose 1081" "English Rose" "Mountain Rose 1230" "Northwest Used" | Defacer Eraser [®] Graffiti Barrier S | Defacer Eraser [®] Graffiti Wipe OR Sure Klean [®] Fast Acting Stripper |
| "Clinkers" "Iron Spot Smooth 1535" | Defacer Eraser [®] Sacrificial Coating SC-1 | Defacer Eraser [®] Graffiti Wipe OR Sure Klean [®] Fast Acting Stripper |
| All Other Submitted Clay Brick | Defacer Eraser [®] Graffiti Barrier S OR Defacer Eraser [®] Sacrificial Coating SC-1 | Defacer Eraser [®] Graffiti Wipe OR Sure Klean [®] Fast Acting Stripper |

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 graffiti control product and procedure for a particular project. See product literature for application and product information.



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SECTION D - STAIN REPELLENCY

DESCRIPTION OF PRODUCTS EVALUATED

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

Products Evaluated for Stain Protection: *

Stand Off[®] Stone, Tile & Masonry Protector – A penetrating oil and stain repellent. Easy-to-use. Low-VOC, low-odor protective treatment improves the stain resistance and simplifies maintenance cleaning of interior and exterior stone, quarry tile, concrete and masonry surfaces.

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

Temperature:

Kitchen Products Evaluated:

| Coca Cola Ketchup Mustard Red wine Balsamic Vinegar Soy Sauce Olive Oil Wesson Oil Coffee | ambient (~70°F) ambient (~70°F) ambient (~70°F) ambient (~70°F) ambient (~70°F) ambient (~70°F) ambient (~250°F) ambient (~120°F) |
|---|--|
| Coffee | ambient (~120°F) |

SAMPLE PREPARATION – Stain Repellency

Samples were cleaned with Enviro Klean[®] 2010 All Surface Cleaner diluted with 10 parts water, allowed to dry and absorb atmospheric moisture for 24 hours prior to treatment. The method of application for protective treatments followed the PROSOCO, Inc. 2004 Product Guide.



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TEST METHOD – Stain Repellency

Surface Beading Evaluation

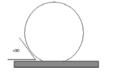
The food and oil products were applied to the test areas by using a dropper creating a bead 0.5 - 1.0 cm in diameter. The beading properties of the oils and liquids were visually evaluated within two minutes after application. The results are reported as a rating based on the angle of contact between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

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

Rating System (1-5)

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

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



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



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



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

NO ANGLE

Stain Removal Evaluation

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



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TEST RESULTS – Surface Beading

| | "Iron Spot Wire Cut 1535" Paver | | | | | | | | | |
|----------------------|---------------------------------|---------|---------|-------------|---------------------|--------------|-----------|---------------|------------|--|
| | Coco- Cola | Ketchup | Mustard | Red Wine | Balsamic Vinegar | Soy Sauce | Olive Oil | Wesson Oil | Hot Coffee | |
| Untreated Control | 4 | - | - | 4 | 4 | 4 | 4 | 4 | 4 | |
| SLX 100 | 4 | - | - | 5 | 5 | 5 | 5 | 5 | 4 | |
| STMP | 4 | - | - | 4 | 4 | 4 | 4 | 4 | 4 | |

TEST RESULTS – STAINING REMOVAL

% Removal

"Iron Spot Wire Cut 1535" Paver

| Coca Cola 100% | Ketchup 95% | Mustard 95% | Red Wine | Balsamic Vinegar | Soy Sauce | Olive Oil | Wesson Oil | Hot Coffee |
|----------------------|----------------|----------------|---------------|---------------------|-------------------------|------------------------------|-----------------------------------|--|
| 100% | 95% | 059/ | 4000/ | 1000/ | 10001 | | | |
| 10070 | 3576 | 95% | 100% | 100% | 100% | 100% | 100% | 100% |
| 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 1(| 00% | 00% 100% | 00% 100% 100% | 00% 100% 100% 100% | 00% 100% 100% 100% 100% | 00% 100% 100% 100% 100% 100% | 00% 100% 100% 100% 100% 100% 100% | 00% 100% 100% 100% 100% 100% |

Stand Off[®] Stone, Tile, & Masonry Protector

| | Coca Cola | Ketchup | Mustard | Red Wine | Balsamic Vinegar | Soy Sauce | Olive Oil | Wesson Oil | Hot Coffee |
|---------|--------------|---------|---------|-------------|---------------------|-----------|--------------|---------------|---------------|
| 24 hr | 100% | 95% | 95% | 100% | 100% | 100% | 100% | 100% | 100% |
| 4 hour | 100% | 100% | 95% | 100% | 100% | 100% | 100% | 100% | 100% |
| 1 hour | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 10 min. | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

Stand Off[®] SLX 100 Water & Oil Repellent

| | Coca Cola | Ketchup | Mustard | Red Wine | Balsamic Vinegar | Soy Sauce | Olive Oil | Wesson Oil | Hot Coffee |
|---------|--------------|---------|---------|-------------|---------------------|-----------|--------------|---------------|---------------|
| 24 hr | 100% | 95% | 95% | 100% | 100% | 100% | 100% | 100% | 100% |
| 4 hour | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 1 hour | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 10 min. | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |



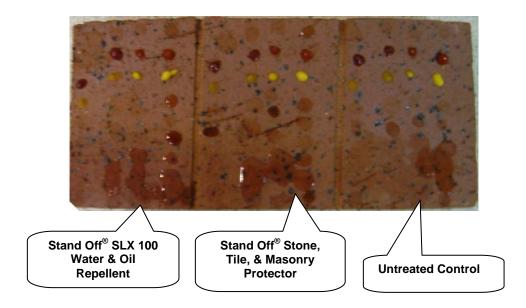
PALLET TAG PROGRAM LABORATORY REPORT



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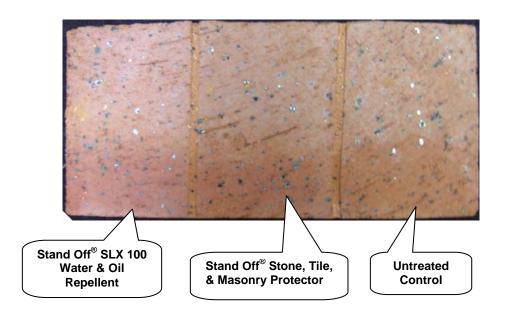
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PHOTOGRAPHS- Stain Results



"Iron Spot Wire Cut 1535"; Stains applied

"Iron Spot Wire Cut 1535"; Stains removed







CONCLUSIONS – Stain Repellency

Based upon laboratory evaluations, both Stand Off[®] Stone, Tile, and Masonry Protector (STMP) and Stand Off[®] SLX100 Water & Oil Repellent were effective treatments in repelling the staining agents from the samples tested. Both treatments also improved the ability of the samples to repel water.

RECOMMENDATIONS – STAIN REPELLENCY

Recommendations for stain resistance treatment for the clay paver submitted by H.C. Muddox, Sacramento, CA, are provided in the chart below.

| Sample | Stain Repellent | Maintenance Cleaner |
|------------------------------------|---|---|
| "1535 Iron Spot Wire Cut" Paver | Stand Off [®] Stone, Tile & Masonry Protector OR Stand Off [®] SLX100 Water & Oil Repellent | Enviro Klean [®] 2010 All Surface Cleaner (1:10) |

Alat & Colom

Nathan R. Colaner Technical Analyst NRC/



Laboratory Report

Pallet Tag Program Evaluation

H.C. Muddox Sacramento, CA

Project No. 0402-05 PTP

Prepared For:

H.C. Muddox 4875 Bradshaw Rd. Sacramento, CA 95827-9727

Prepared By:



PROSOCO, Inc. March 2004