



*Pallet Tag Program  
Laboratory Report*

**Glen-Gery  
Mid-Atlantic Plant  
Shoemakersville, PA**



*Project No. 2110-03 PTP*

***Prepared For:***



**PROSOCO**

***Prepared By:***

*J. Lucas Comadoll*

J. Lucas Comadoll  
Project Testing Technician  
AMT Laboratories

December 2021



# LABORATORY REPORT

AMT Laboratories • 3741 Greenway Circle • Lawrence, Kansas 66046 • (888) 376-3600

**FOR:** Steve German, Glen-Gery  
**cc:** Steve Long  
Guy Mazza, PROSOCO, Inc.  
Jake Boyer, PROSOCO, Inc.  
Al Morris, PROSOCO, Inc.

**SUBJECT:** Glen-Gery  
Import Team, Mid-Atlantic Plant  
Shoemakersville, PA  
Pallet Tag Evaluation

**DATE:** December 13, 2021  
**PROJECT:** 2110-03 PTP

**SAMPLES SUBMITTED:** 21 types of clay brick

Sample	Name	Type	Color Per Website	Size
(10) Brick	"Azul"	Cored	Blue	7-5/8" x 2-1/4"
(10) Brick	"Castellana"	Cored	White	7-5/8" x 2-1/4"
(10) Brick	"Romero"	Cored	Black	7-5/8" x 2-1/4"
(10) Brick	"Arno Textured"	Solid	Tan	19-11/16" x 1-9/16"
(10) Brick	"Marana Textured"	Solid	Grey	19-11/16" x 1-9/16"
(10) Brick	"Piave Textured"	Solid	Black	19-11/16" x 1-9/16"
(10) Brick	"Potenza Textured"	Solid	Red	19-11/16" x 1-9/16"
(10) Brick	"Arno Raw"	Solid	Tan	19-11/16" x 1-9/16"
(10) Brick	"Brenta Raw"	Solid	Buff	19-11/16" x 1-9/16"
(10) Brick	"Livenza Raw"	Solid	Grey	19-11/16" x 1-9/16"
(10) Brick	"Marana Raw"	Solid	Grey	19-11/16" x 1-9/16"
(10) Brick	"Piave Raw"	Solid	Black	19-11/16" x 1-9/16"
(10) Brick	"Potenza Raw"	Solid	Red	19-11/16" x 1-9/16"
(10) Brick	"Feldhaus 100 Classic Cream Smooth"	Thin	Cream	7-5/8" x 2-1/4"
(10) Brick	"Feldhaus 401 Classic Red Velour"	Thin	Red	7-5/8" x 2-1/4"
(10) Brick	"Feldhaus 511 Onyx Smooth"	Thin	Black	7-5/8" x 2-1/4"
(10) Brick	"Feldhaus 567 Coal Brindle Smooth"	Thin	Black	7-5/8" x 2-1/4"
(10) Brick	"Feldhaus 664 Deep Wine Handform"	Thin	Burgundy	7-5/8" x 2-1/4"
(10) Brick	"Feldhaus 764 Gray White Waterstruck"	Thin	Grey	7-5/8" x 2-1/4"
(10) Brick	"Feldhaus 777 Onyx Waterstruck"	Thin	Black	7-5/8" x 2-1/4"
(10) Brick	"Feldhaus 800 Classic Gray Smooth"	Thin	Grey	7-5/8" x 2-1/4"

**SUBMITTED BY:** Steve German  
Glen-Gery Tech Services  
423 S. Pottsville Pike  
Shoemakersville, PA 19555

**PURPOSE OF TEST:**

- To determine the most appropriate PROSOCO, Inc. new construction cleaner(s) for the submitted samples.
- To determine if any of the requested PROSOCO, Inc. products cause any adverse effects to the submitted samples.

**PRODUCTS EVALUATED:**

<b>New Construction Cleaning</b>	<b>Dilution:</b>
Sure Klean® 600	1:6, 1:8
Sure Klean® Vana Trol®	1:6, 1:8

<b>Adverse Effects</b>	<b>Dilution:</b>
Sure Klean® Ferrous Stain Remover	1:3
Sure Klean® 800 Stain Remover	1:1
Sure Klean® White Scum Remover	1:1
Sure Klean® ReVeal	1:3
Sure Klean® Restoration Cleaner	1:3
Enviro Klean® Klean 'N Release Cleaner	1:10

**TEST METHODS: New Construction Cleaning**

Sure Klean® 600 and Sure Klean® Vana Trol® were evaluated to determine the optimal concentration of cleaner which leaves the external surface looking most like the uncleaned surface of the submitted clay brick.

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

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

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

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

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

- 0 – **No change** compared to uncleaned surface
- 1 – **Slight change** compared to uncleaned surface
- 2 – **Moderate change** compared to uncleaned surface
- 3 – **Significant change** compared to uncleaned surface

**Cleaning Procedure:**

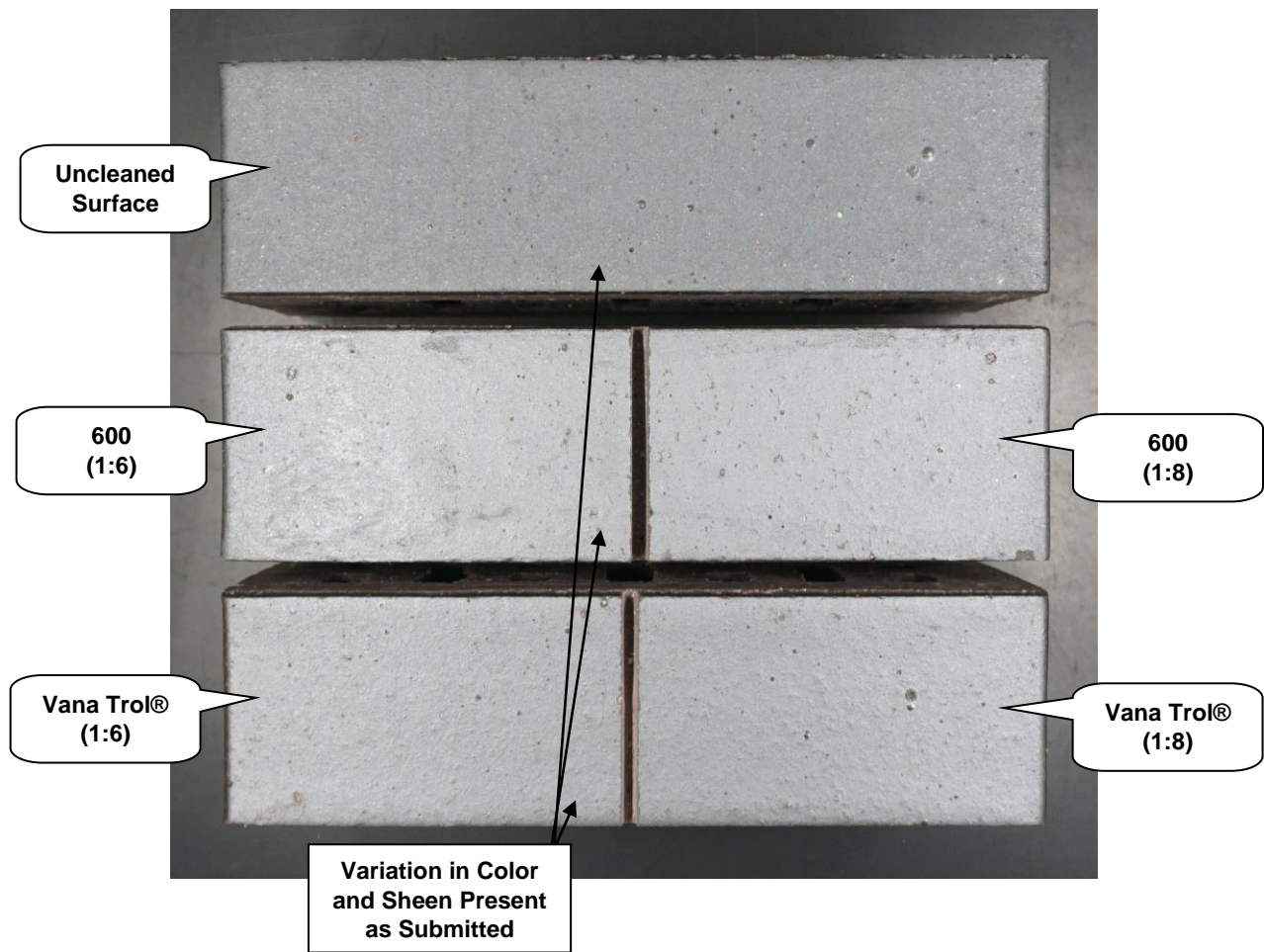
1. Pre-wet the surface and apply diluted cleaning solution according to PROSOCO, Inc. Product Data Sheet.
2. Allow for an appropriate dwell time and periodically agitate:
  - 600 .....5 minutes
  - Vana Trol®.....5 minutes
3. Reapply cleaning solution; do not let cleaner dry into sample.
4. Rinse thoroughly with plenty of fresh water.\*
5. Allow the sample to dry for at least 18 hours and visually examine.
6. Compare the uncleaned surfaces to the cleaned surfaces for the best match.

**\*Rinsing Equipment** – A garden hose with an adjustable nozzle set for a narrow stream of water was used for rinsing because the manufacturer recommends psi values below 400 for the majority of the submitted brick.

**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning**

Name: "Azul" Cored Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

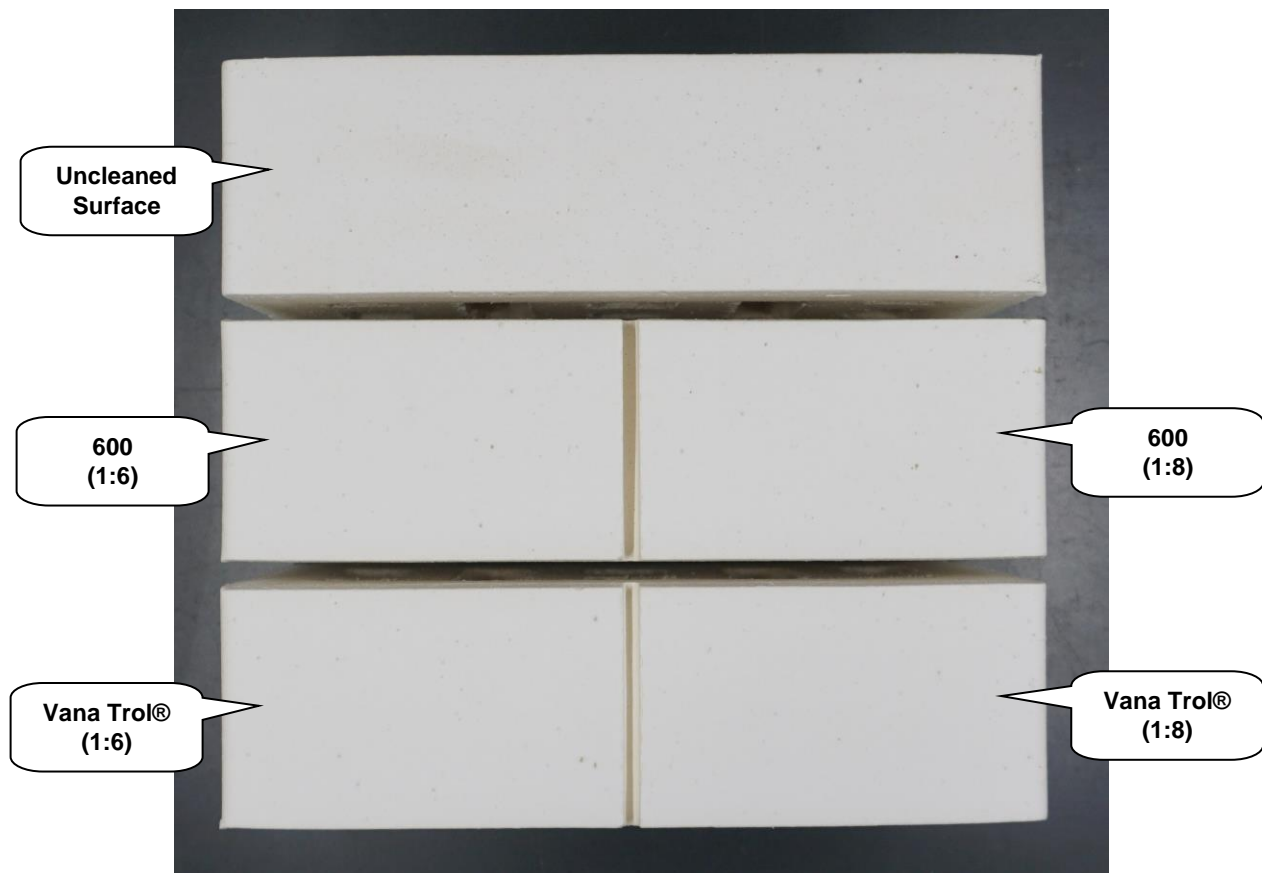
**"Azul" Cored Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Castellana" Cored Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

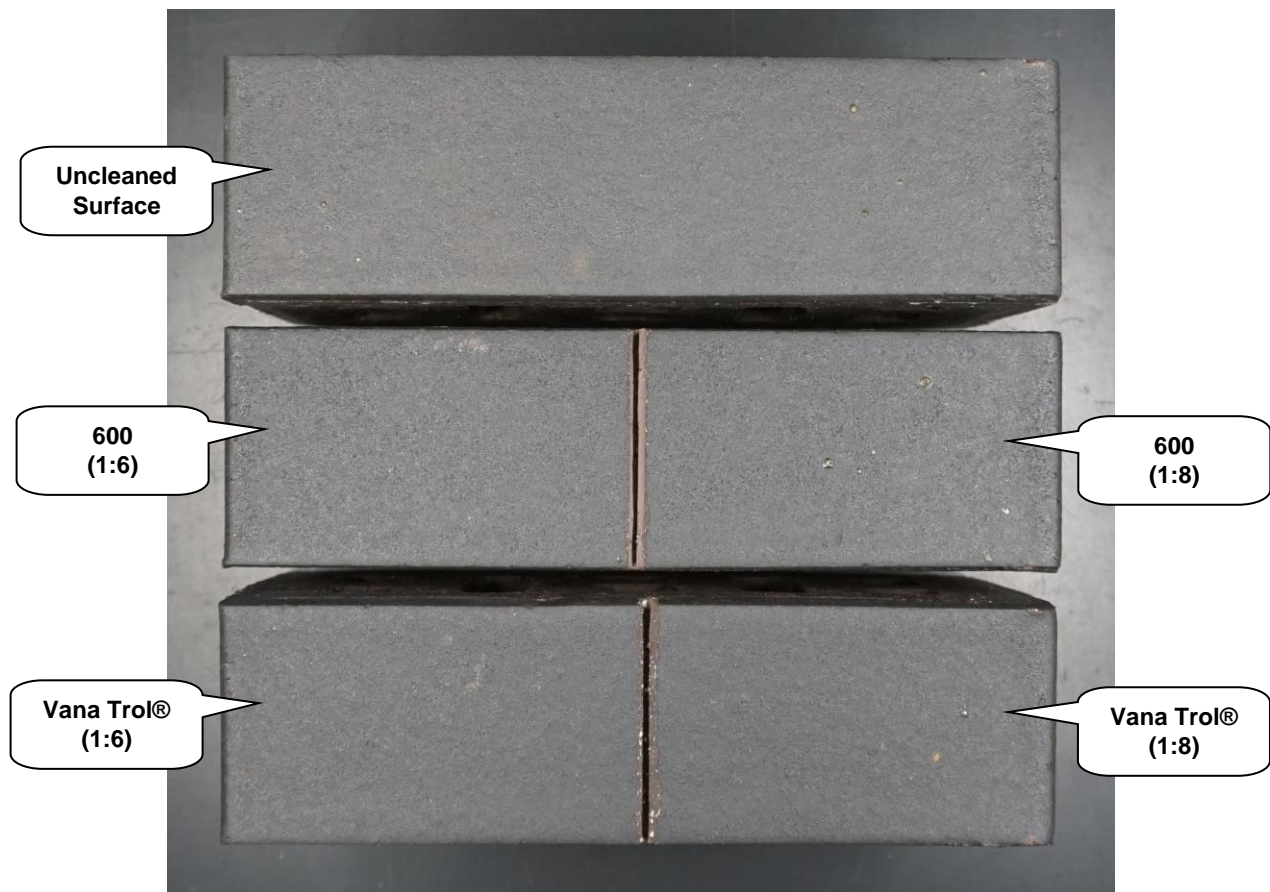
**"Castellana" Cored Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Romero" Cored Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

**"Romero" Cored Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Arno Textured" Solid Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
600	1:6	1	1	0	0
600	1:8	1	1	0	0
Vana Trol®	1:6	1	1	0	0
Vana Trol®	1:8	1	1	0	0

**"Arno Textured" Solid Brick After Cleaning**





**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Marana Textured" Solid Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
600	1:6	1	1	0	0
600	1:8	1	1	0	0
Vana Trol®	1:6	1	1	0	0
Vana Trol®	1:8	1	1	0	0

**"Marana Textured" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Piave Textured" Solid Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
600	1:6	1	1	0	0
600	1:8	1	1	0	0
Vana Trol®	1:6	1	1	0	0
Vana Trol®	1:8	1	1	0	0

**"Piave Textured" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Potenza Textured" Solid Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
600	1:6	1	1	0	0
600	1:8	1	1	0	0
Vana Trol®	1:6	1	1	0	0
Vana Trol®	1:8	1	1	0	0

**"Potenza Textured" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Arno Raw" Solid Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

**"Arno Raw" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Brenta Raw" Solid Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
600	1:6	1	0	0	0
600	1:8	1	0	0	0
Vana Trol®	1:6	1	0	0	0
Vana Trol®	1:8	1	0	0	0

**"Brenta Raw" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Livenza Raw" Solid Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

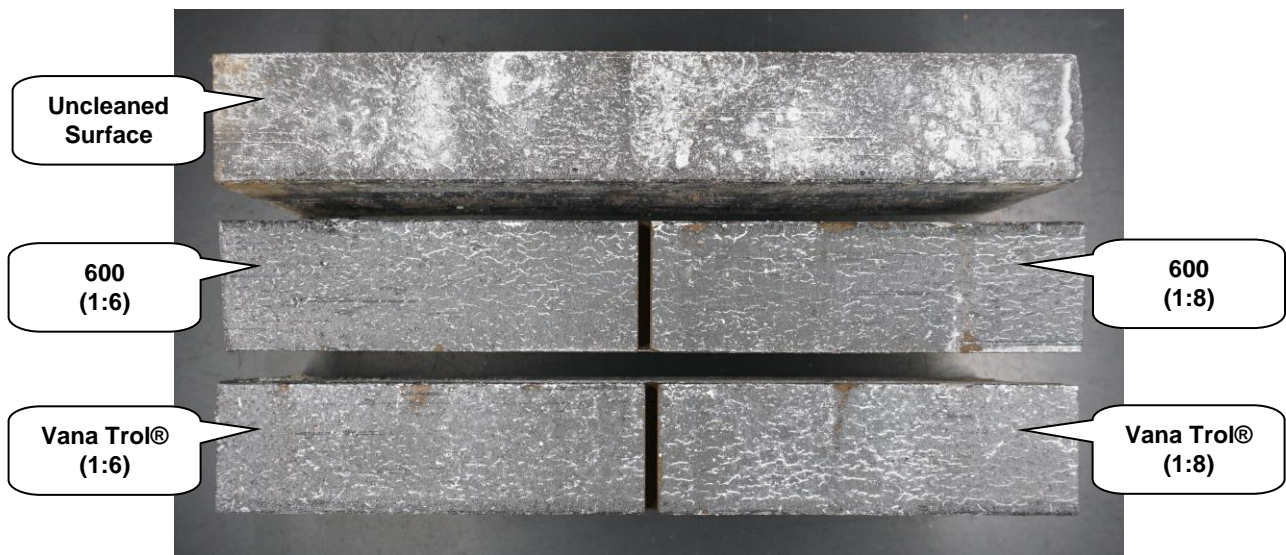
**"Livenza Raw" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Marana Raw" Solid Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
600	1:6	3	0	0	0
600	1:8	3	0	0	0
Vana Trol®	1:6	3	0	0	0
Vana Trol®	1:8	2	0	0	0

**"Marana Raw" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Piave Raw" Solid Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

**"Piave Raw" Solid Brick After Cleaning**





**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Potenza Raw" Solid Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

**"Potenza Raw" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Feldhaus 100 Classic Cream Smooth" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

**"Feldhaus 100 Classic Cream Smooth" Thin Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Feldhaus 401 Classic Red Velour" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

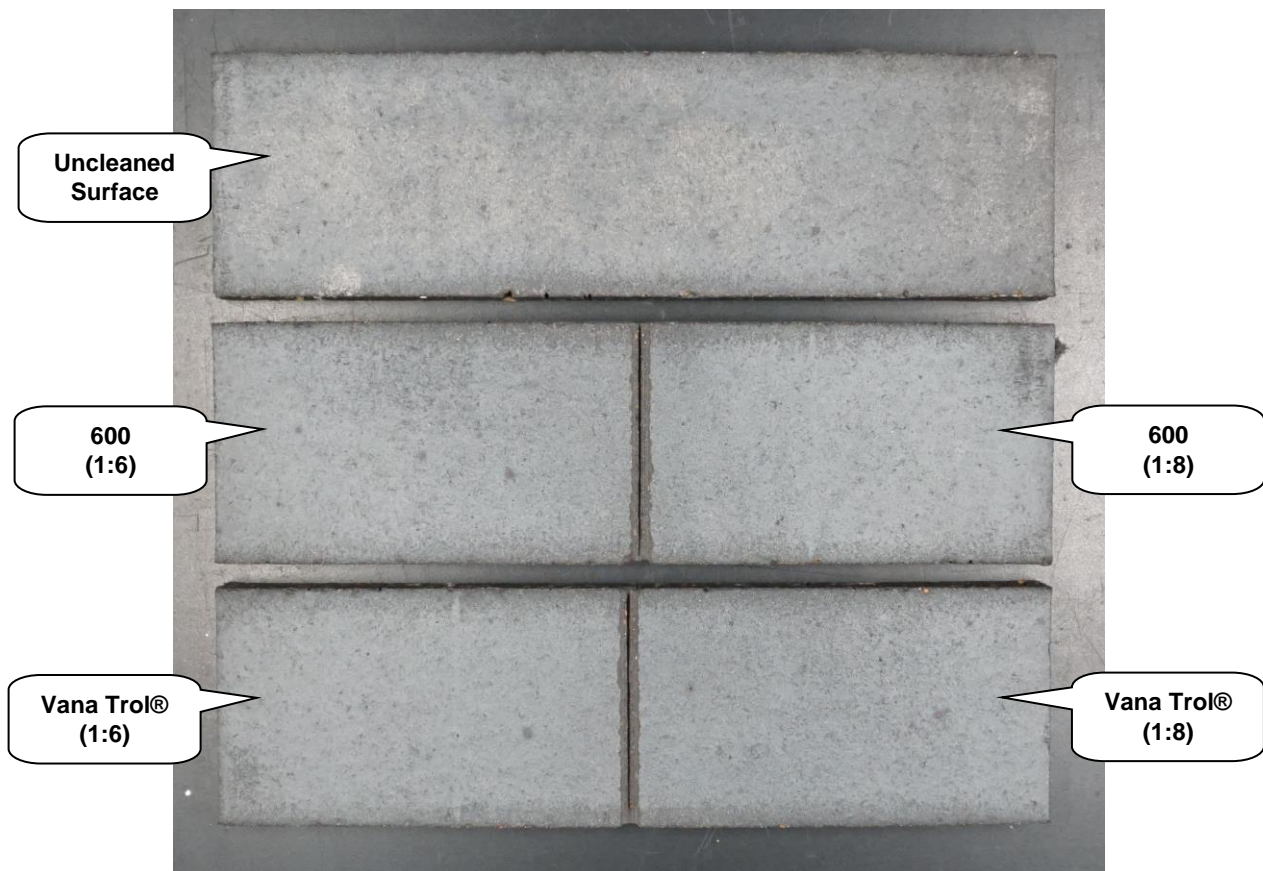
**"Feldhaus 401 Classic Red Velour" Thin Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Feldhaus 511 Onyx Smooth" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

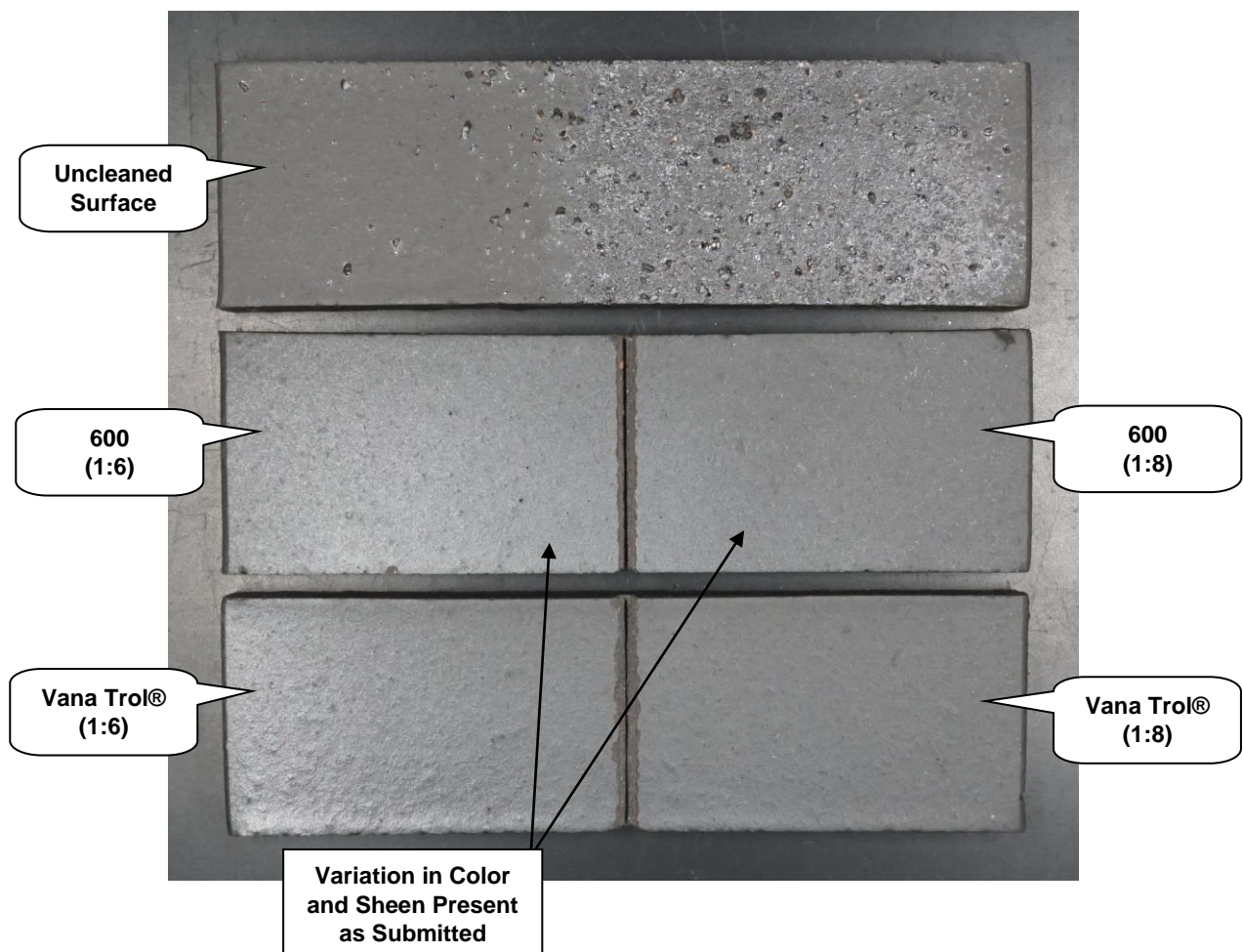
**"Feldhaus 511 Onyx Smooth" Thin Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Feldhaus 567 Coal Brindle Smooth" Thin Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

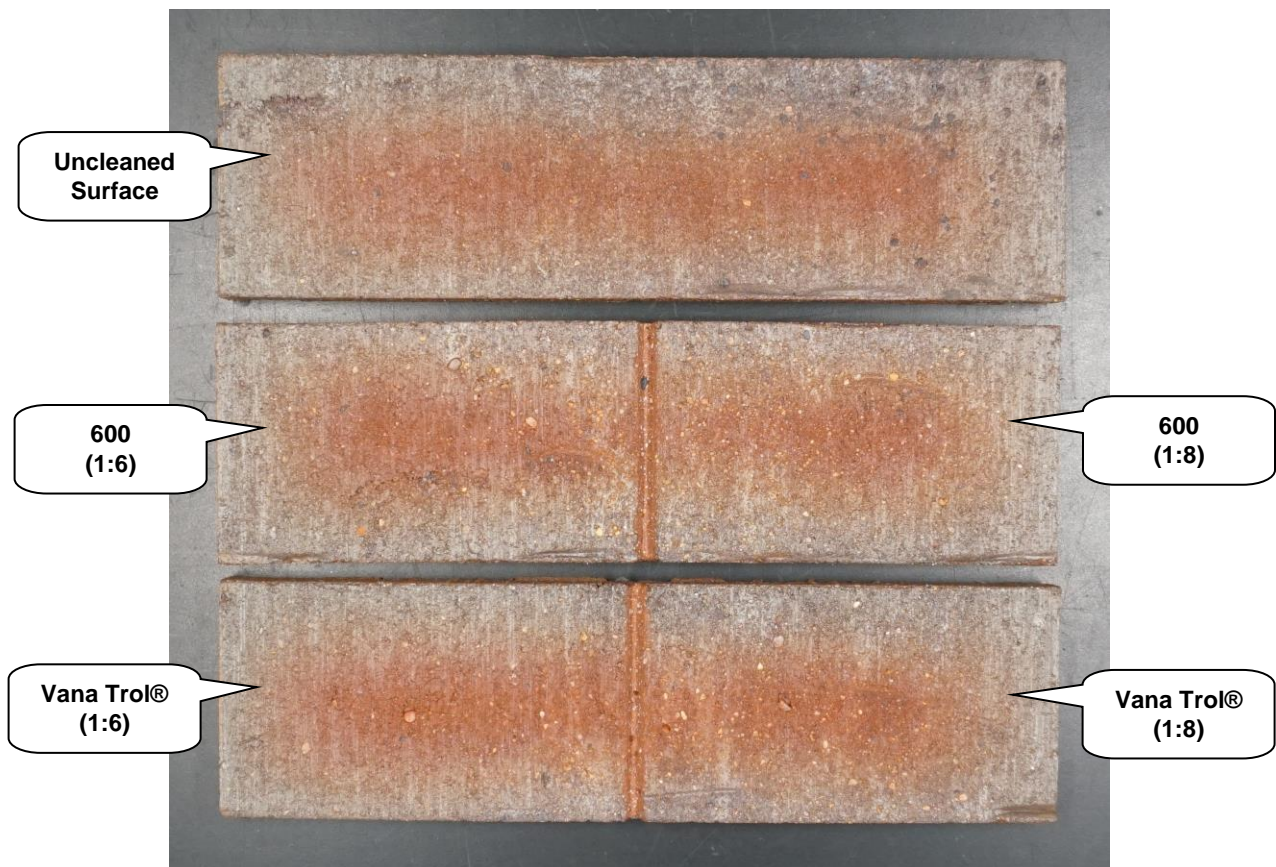
**"Feldhaus 567 Coal Brindle Smooth" Thin Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Feldhaus 664 Deep Wine Handform" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

**"Feldhaus 664 Deep Wine Handform" Thin Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Feldhaus 764 Gray White Waterstruck" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

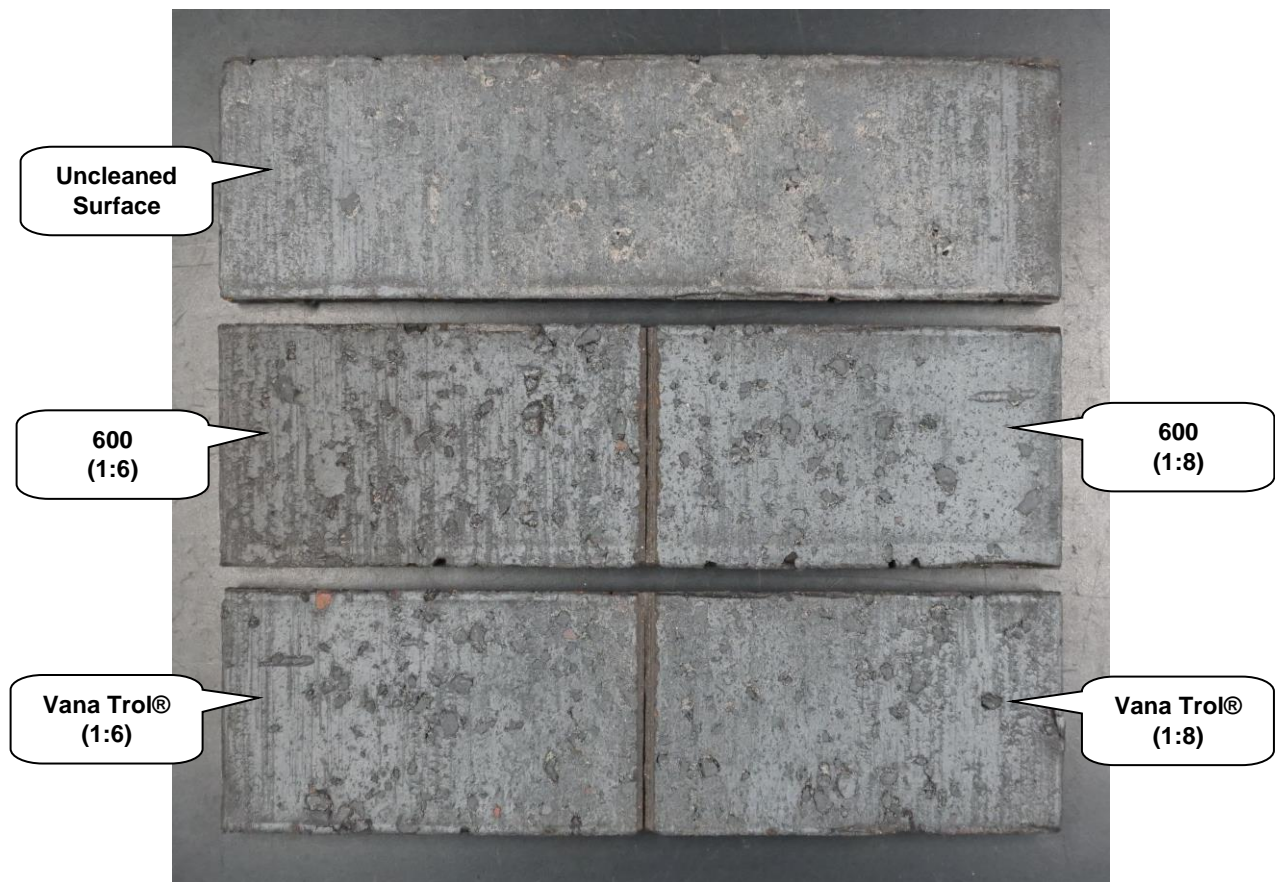
**"Feldhaus 764 Gray White Waterstruck" Thin Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Feldhaus 777 Onyx Waterstruck" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

**"Feldhaus 777 Onyx Waterstruck" Thin Brick After Cleaning**

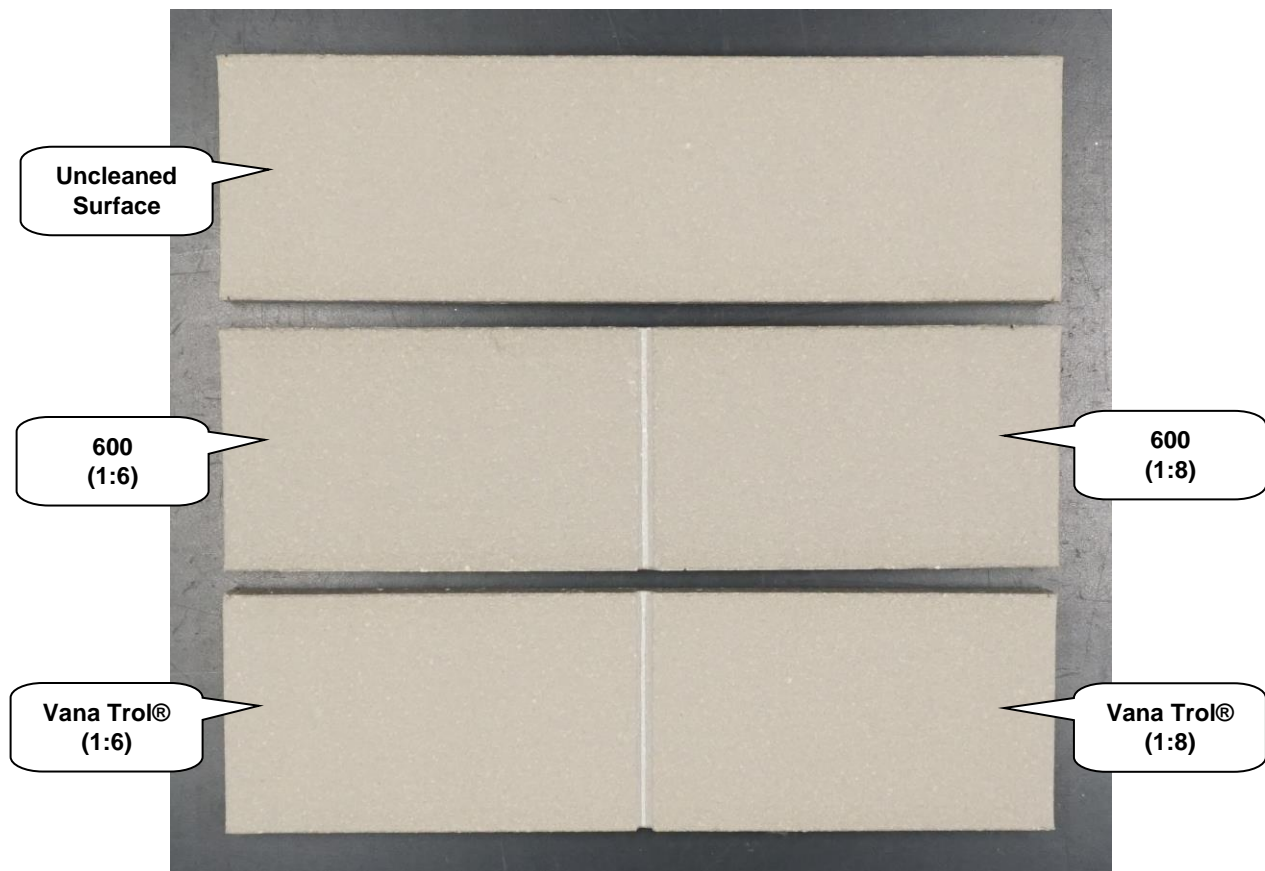




**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Feldhaus 800 Classic Gray Smooth" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
600	1:6	0	0	0	0
600	1:8	0	0	0	0
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0

**"Feldhaus 800 Classic Gray Smooth" Thin Brick After Cleaning**



## **CONCLUSIONS: New Construction Cleaning**

In most of the cleaning tests conducted, Sure Klean® 600 and Sure Klean® Vana Trol® caused no change to the appearance of the submitted brick. However, the Product Data Sheet for Sure Klean® 600 Detergent states, “may not be suitable for cleaning buff-colored brick and brick, stone, or tile with manganese or other metallic additives.” Additionally, Sure Klean® Vana Trol® is “designed for use with colored mortar.”

A slight amount of surface finish removal and substrate deterioration was observed when cleaning the “Arno Textured”, “Marana Textured”, “Piave Textured”, and “Potenza Textured” Solid Brick with both dilutions of Sure Klean® 600 and Sure Klean® Vana Trol®. Additionally, both dilutions of both cleaners removed a slight to significant amount of surface finish from the “Brenta Raw” and “Marana Raw” Solid Brick.

When choosing the most appropriate product for the desired result:

- For a general purpose, concentrated acidic cleaner – test Sure Klean® 600
- For new masonry surfaces that are subject to vanadium, manganese, and other metallic stains – test Sure Klean® Vana Trol®

It is recommended that the selected cleaners always be used in the lowest possible concentration. Apply all products in accordance with the manufacturer’s recommendations provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate cleaning product and procedures for a particular project. See product literature for additional application and product information.

**RECOMMENDATIONS: New Construction Cleaning**

Recommendations for cleaning the brick submitted by Glen-Gery, Shoemakersville, PA are provided in the chart below. Recommendations are based on the cleaner and dilution that provided the best match to the uncleaned surface as well as brick type.

Sample	New Construction Cleaning
"Azul" Cored Brick	<sup>1</sup> Sure Klean® Vana Trol® (1:6) or (1:8) OR <sup>2</sup> Sure Klean® 600 (1:6) or (1:8)
"Castellana" Cored Brick	
"Romero" Cored Brick	
"Marana Textured" Solid Brick	
"Brenta Raw" Solid Brick	
"Livenza Raw" Solid Brick	
"Marana Raw" Solid Brick	
"Piave Raw" Solid Brick	
"Feldhaus 100 Classic Cream Smooth" Thin Brick	
"Feldhaus 511 Onyx Smooth" Thin Brick	
"Feldhaus 567 Coal Brindle Smooth" Thin Brick	
"Feldhaus 764 Gray White Waterstruck" Thin Brick	
"Feldhaus 777 Onyx Waterstruck" Thin Brick	
"Arno Textured" Solid Brick	<sup>1</sup> Sure Klean® 600 (1:6) or (1:8) OR <sup>2</sup> Sure Klean® Vana Trol® (1:6) or (1:8)
"Piave Textured" Solid Brick	
"Potenza Textured" Solid Brick	
"Arno Raw" Solid Brick	
"Potenza Raw" Solid Brick	
"Feldhaus 401 Classic Red Velour" Thin Brick	
"Feldhaus 664 Deep Wine Handform" Thin Brick	
"Feldhaus 800 Classic Gray Smooth" Thin Brick	

NOTE: "1" indicates the recommended first choice and "2" indicates the recommended second choice. These recommendations are based on the Product Data Sheet limitations for certain brick types.

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

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

**TEST METHODS: Adverse Effects**

Various PROSOCO, Inc. cleaners were evaluated to determine if the any of the cleaners cause any adverse effects when used on the submitted brick. The samples were visually examined following the procedure below based on the following:

**Surface Finish Removal** is the visual examination of the sample comparing the surface finish of the uncleaned surface to the surface finish cleaned with selected product(s).

**Substrate Deterioration** is the visual examination of the sample comparing the uncleaned surface to surfaces cleaned with selected product(s) for any potential erosion/digestion of the sample.

**Color Change** is the visual examination comparing the color of the uncleaned surface to the color of surfaces cleaned with selected product(s).

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

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

- 0 – **No change** compared to uncleaned surface
- 1 – **Slight change** compared to uncleaned surface
- 2 – **Moderate change** compared to uncleaned surface
- 3 – **Significant change** compared to uncleaned surface

**Cleaning Procedure:**

1. Pre-wet the surface and apply diluted cleaning solution according to PROSOCO, Inc. Product Data Sheet.
2. Allow for an appropriate dwell time and periodically agitate:
 

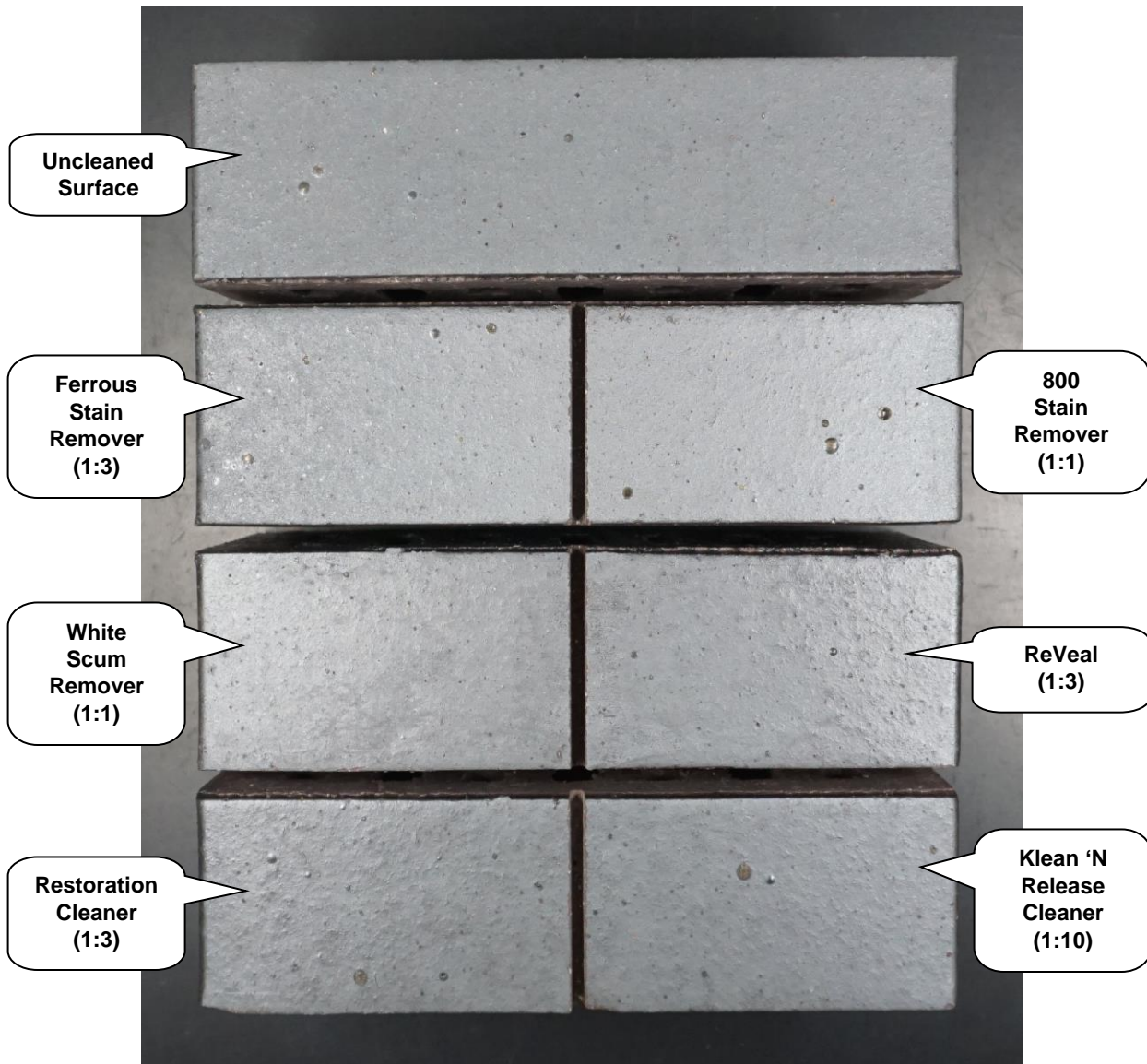
Ferrous Stain Remover .....	5 minutes
800 Stain Remover .....	5 minutes
White Scum Remover .....	3 minutes
ReVeal.....	5 minutes
Restoration Cleaner .....	5 minutes
Klean 'N Release Cleaner.....	10 minutes
3. Reapply cleaning solution; do not let cleaner dry into the brick.
4. Rinse thoroughly with plenty of fresh water.\*
5. Allow the sample to dry for at least 18 hours and visually examine.
6. Compare the uncleaned surfaces to the cleaned surfaces for the best match.

**\*Rinsing Equipment** – A garden hose with an adjustable nozzle set for a narrow stream of water was used for rinsing because the manufacturer recommends psi values below 400 for the majority of the submitted brick.

**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects**

Name: "Azul" Cored Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	0	0
White Scum Remover	1:1	0	0	0	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

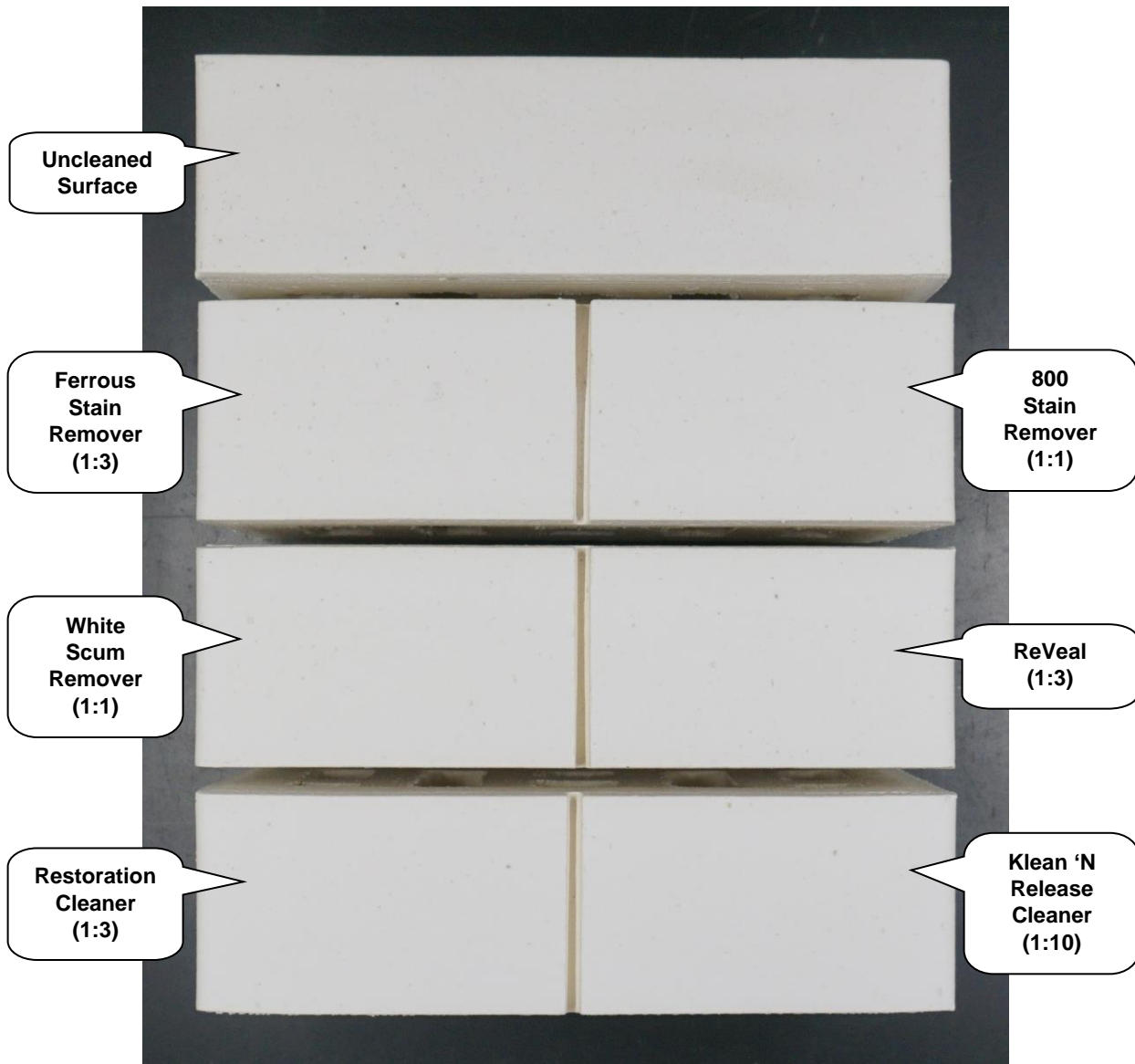
**"Azul" Cored Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

Name: "Castellana" Cored Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	0	0
White Scum Remover	1:1	0	0	0	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

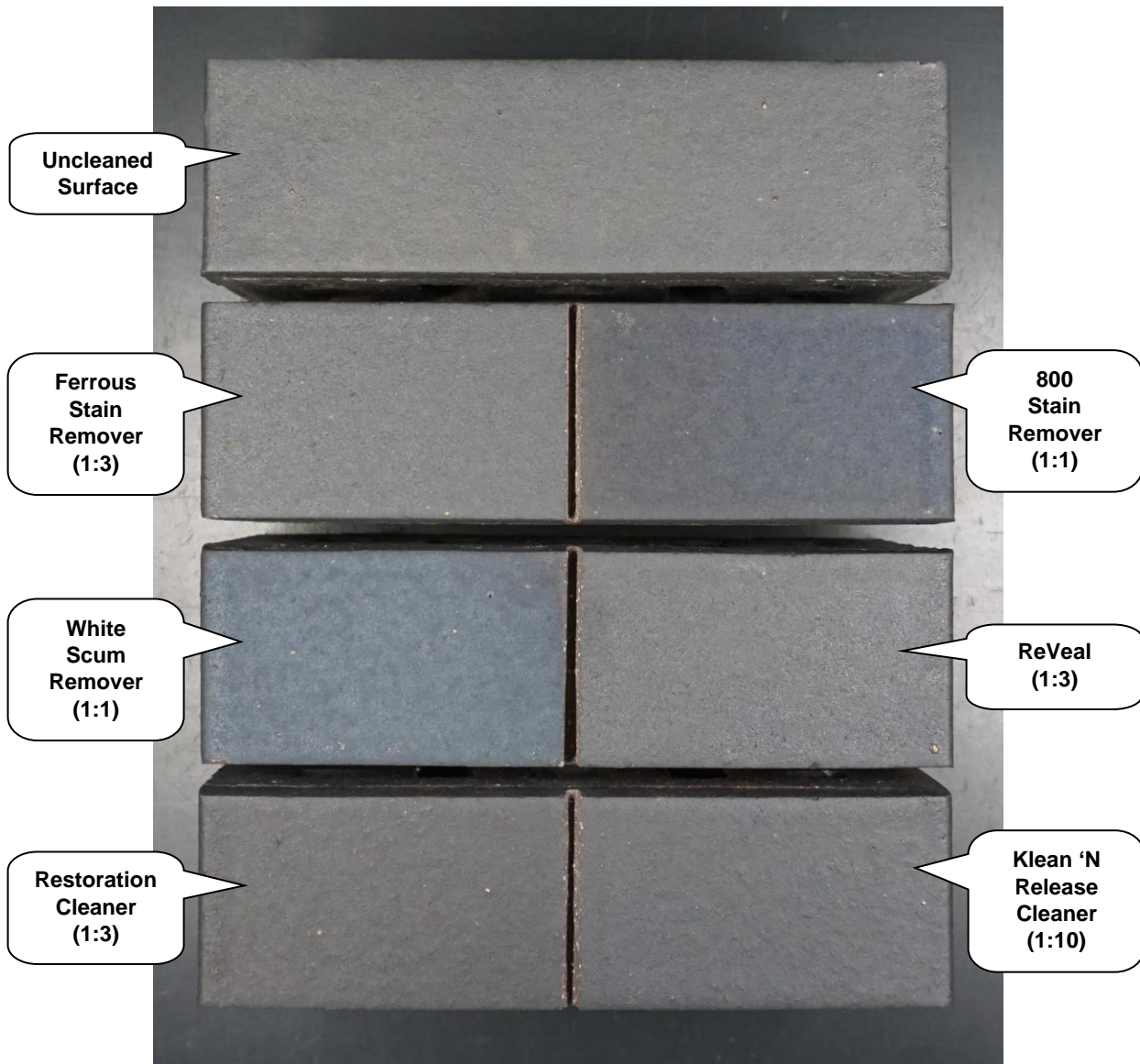
**"Castellana" Cored Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

Name: "Romero" Cored Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	2	0
White Scum Remover	1:1	0	0	3	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

**"Romero" Cored Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Arno Textured" Solid Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	1	1	0	0
800 Stain Remover	1:1	1	1	0	0
White Scum Remover	1:1	1	1	0	0
ReVeal	1:3	1	1	0	0
Restoration Cleaner	1:3	1	1	0	0
Klean 'N Release Cleaner	1:10	1	1	0	0

**"Arno Textured" Solid Brick After Cleaning**





**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Marana Textured" Solid Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	1	1	0	0
800 Stain Remover	1:1	1	1	0	0
White Scum Remover	1:1	1	1	0	0
ReVeal	1:3	1	1	0	0
Restoration Cleaner	1:3	1	1	0	0
Klean 'N Release Cleaner	1:10	1	1	0	0

**"Marana Textured" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Piave Textured" Solid Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	1	1	0	0
800 Stain Remover	1:1	1	1	0	1
White Scum Remover	1:1	1	1	0	2
ReVeal	1:3	1	1	0	0
Restoration Cleaner	1:3	1	1	0	0
Klean 'N Release Cleaner	1:10	1	1	0	0

**"Piave Textured" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Potenza Textured" Solid Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	1	1	0	1
800 Stain Remover	1:1	1	1	0	1
White Scum Remover	1:1	1	1	0	2
ReVeal	1:3	1	1	0	0
Restoration Cleaner	1:3	1	1	0	0
Klean 'N Release Cleaner	1:10	1	1	0	0

**"Potenza Textured" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

Name: "Arno Raw" Solid Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	1	0
White Scum Remover	1:1	0	0	0	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

**"Arno Raw" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

Name: "Brenta Raw" Solid Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	0	0
White Scum Remover	1:1	0	0	0	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

**"Brenta Raw" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Livenza Raw" Solid Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	0	0
White Scum Remover	1:1	0	0	0	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

**"Livenza Raw" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Marana Raw" Solid Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	3	0	0	0
800 Stain Remover	1:1	3	0	0	0
White Scum Remover	1:1	2	0	0	0
ReVeal	1:3	2	0	0	0
Restoration Cleaner	1:3	1	0	0	0
Klean 'N Release Cleaner	1:10	2	0	0	0

**"Marana Raw" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

Name: "Piave Raw" Solid Brick					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	0	0
White Scum Remover	1:1	0	0	0	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

**"Piave Raw" Solid Brick After Cleaning**





**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Potenza Raw" Solid Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	0	0
White Scum Remover	1:1	0	0	0	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

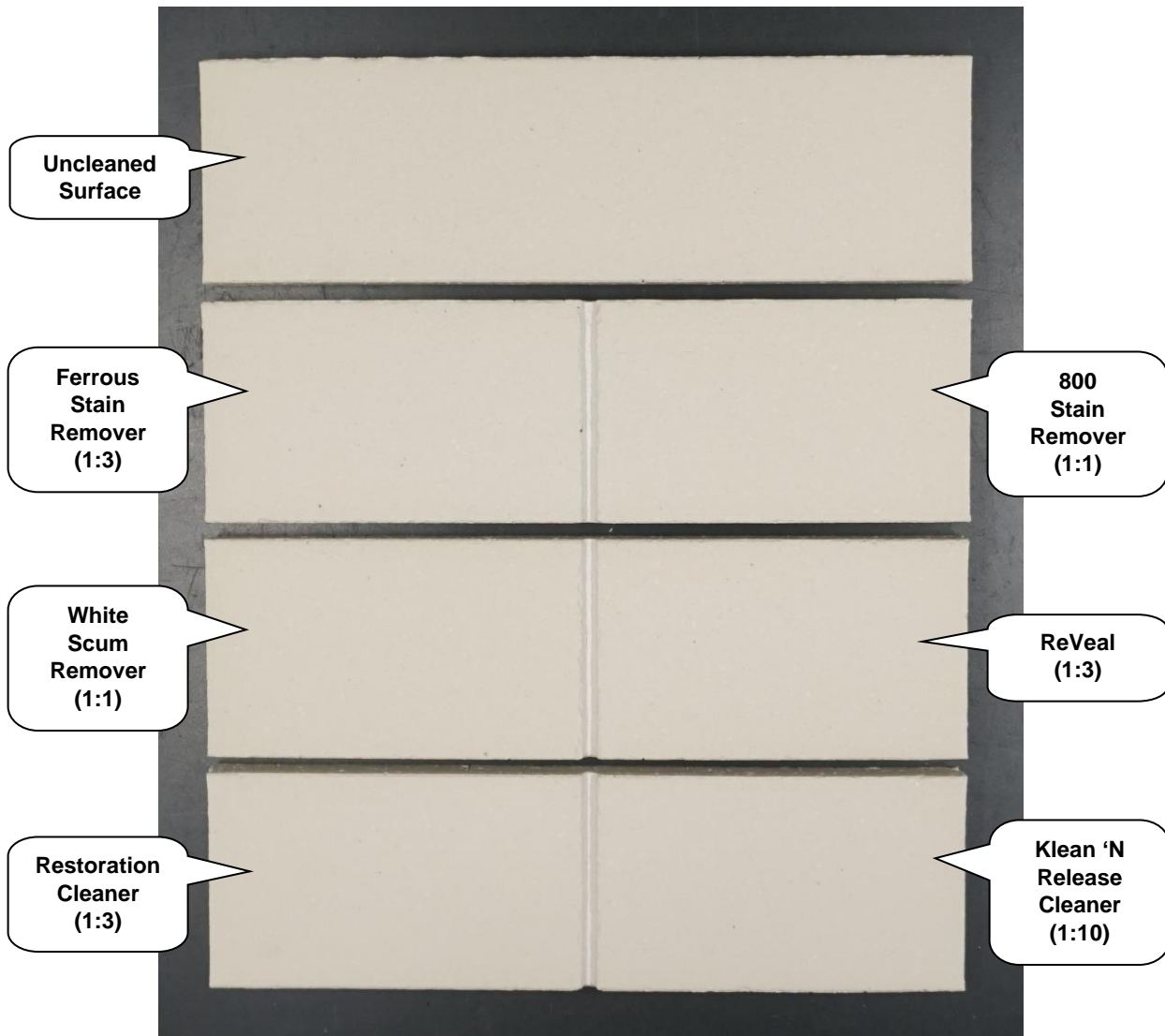
**"Potenza Raw" Solid Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Feldhaus 100 Classic Cream Smooth" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	0	0
White Scum Remover	1:1	0	0	0	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

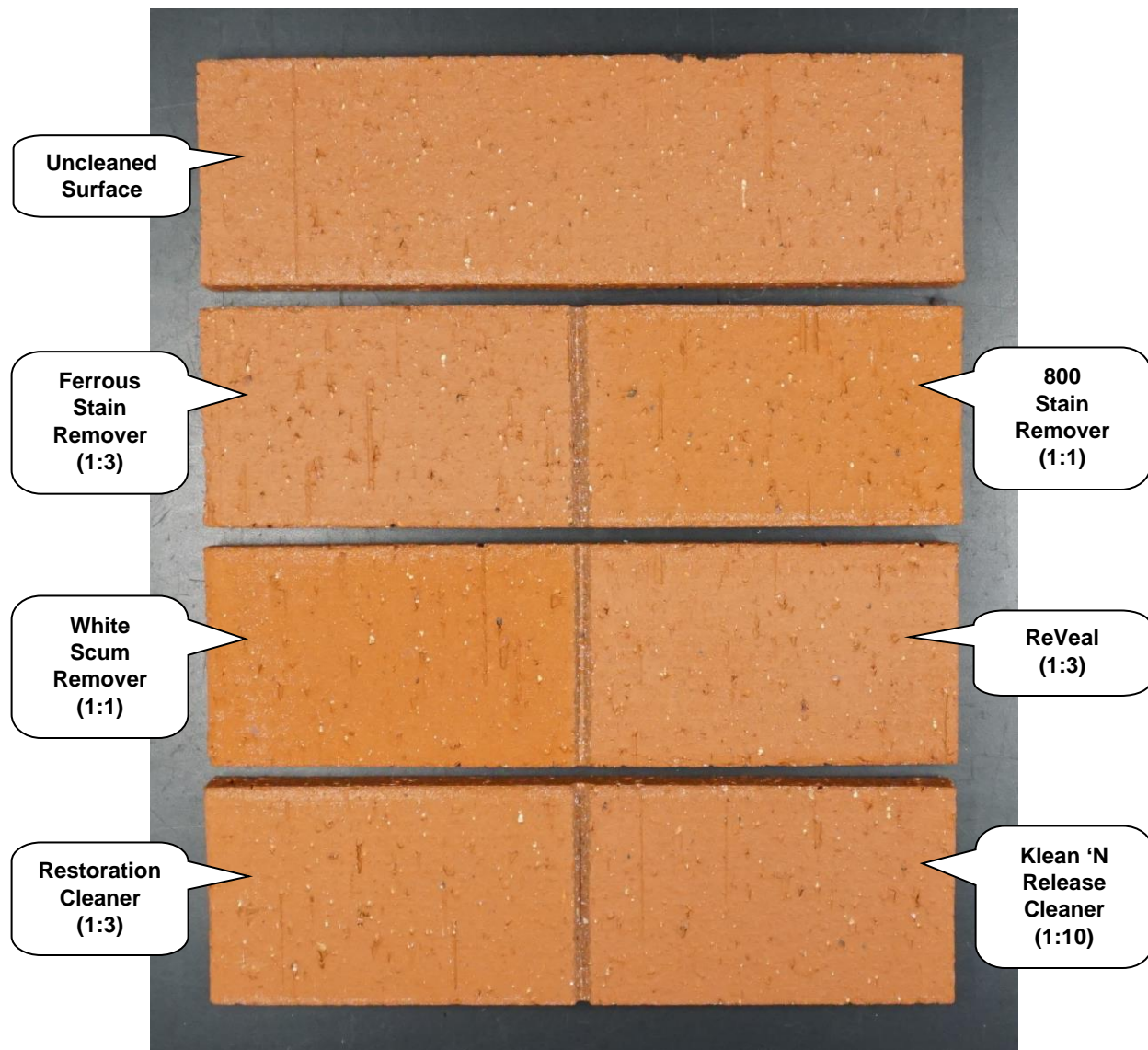
**"Feldhaus 100 Classic Cream Smooth" Thin Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Feldhaus 401 Classic Red Velour" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	1	0
White Scum Remover	1:1	0	0	2	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

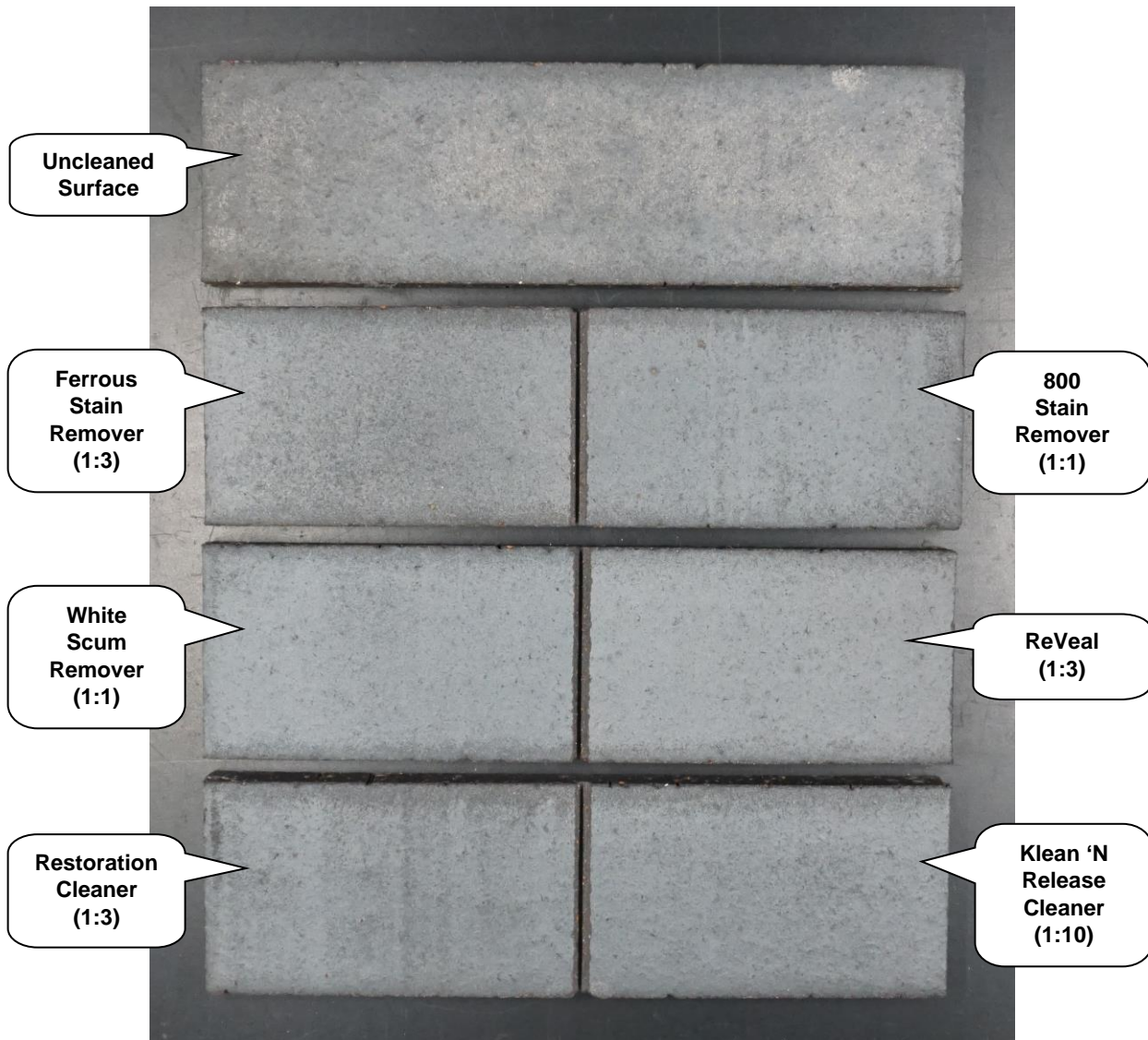
**"Feldhaus 401 Classic Red Velour" Thin Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Feldhaus 511 Onyx Smooth" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	0	0
White Scum Remover	1:1	0	0	0	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

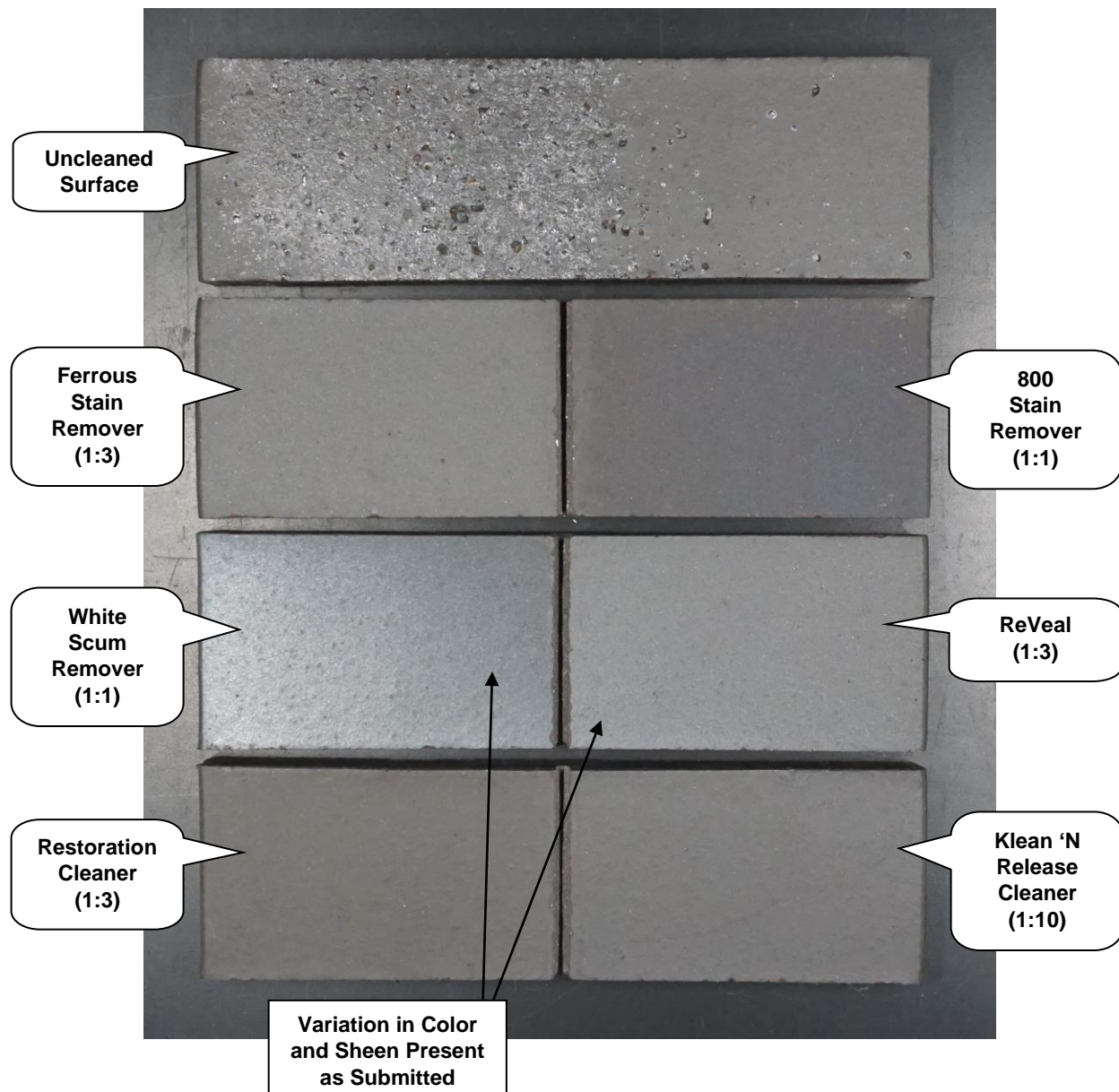
**"Feldhaus 511 Onyx Smooth" Thin Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Feldhaus 567 Coal Brindle Smooth" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	2	0
White Scum Remover	1:1	0	0	0	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

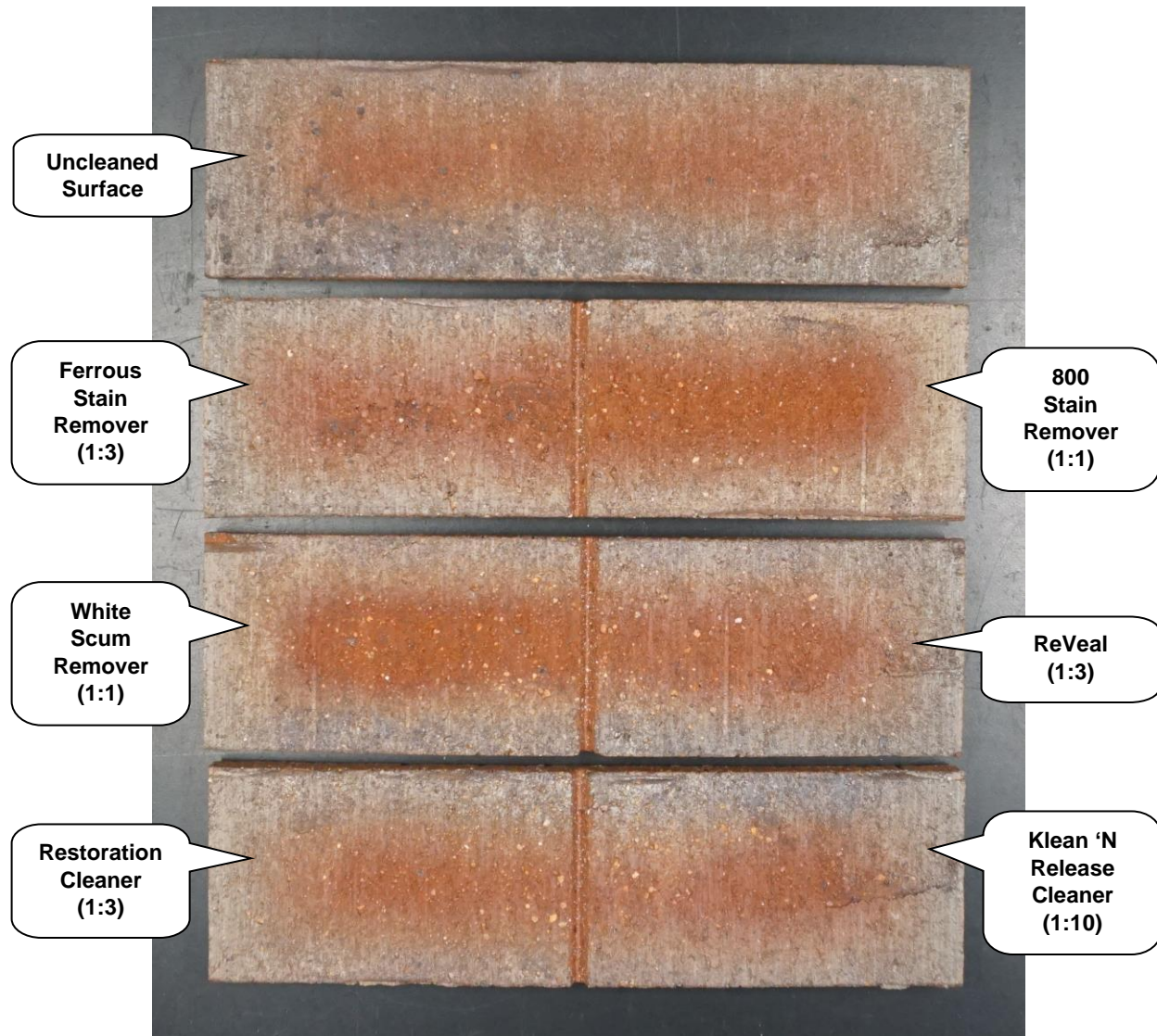
**"Feldhaus 567 Coal Brindle Smooth" Thin Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Feldhaus 664 Deep Wine Handform" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	0	0
White Scum Remover	1:1	0	0	0	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

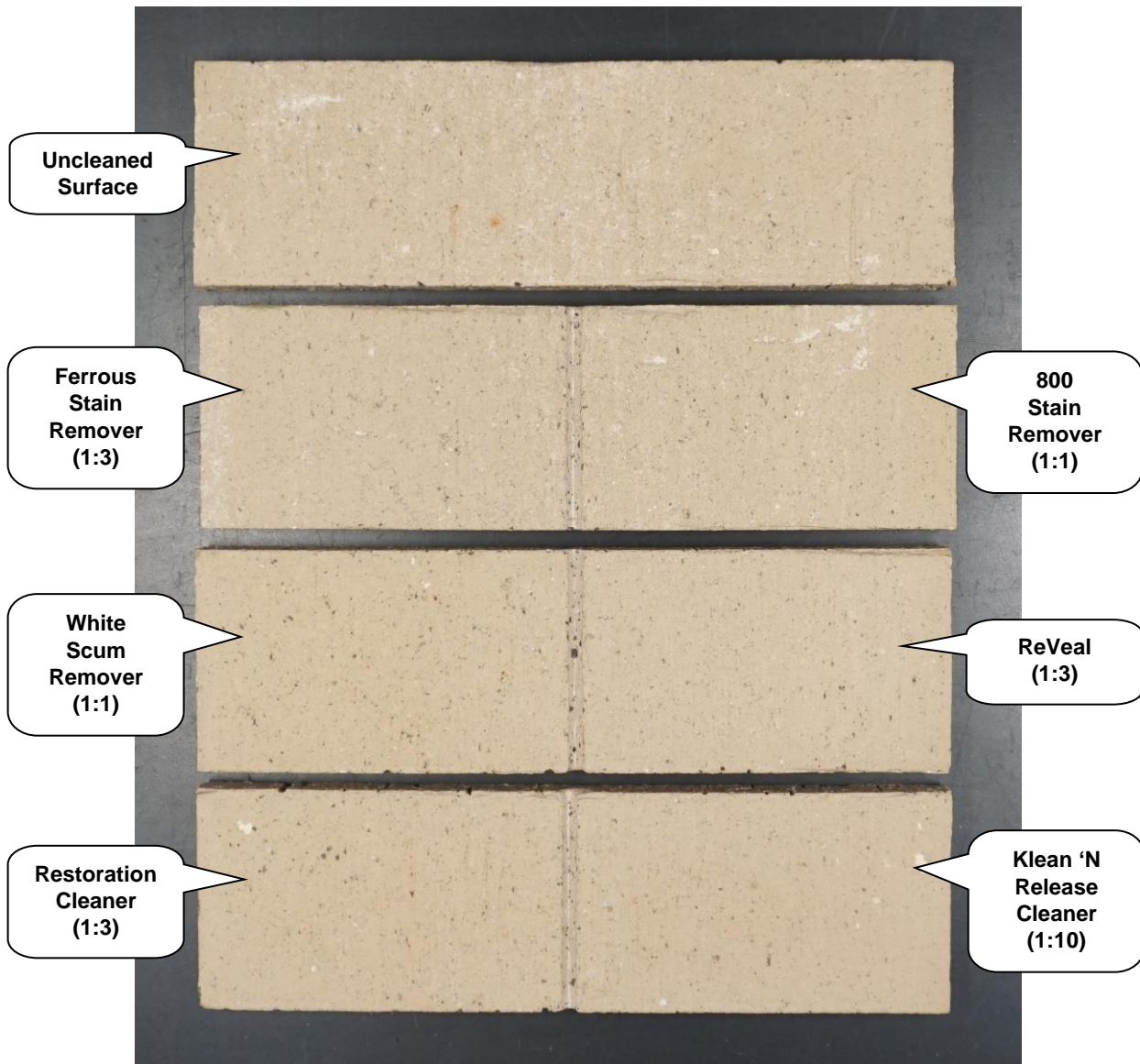
**"Feldhaus 664 Deep Wine Handform" Thin Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Feldhaus 764 Gray White Waterstruck" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	0	0
White Scum Remover	1:1	0	0	0	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

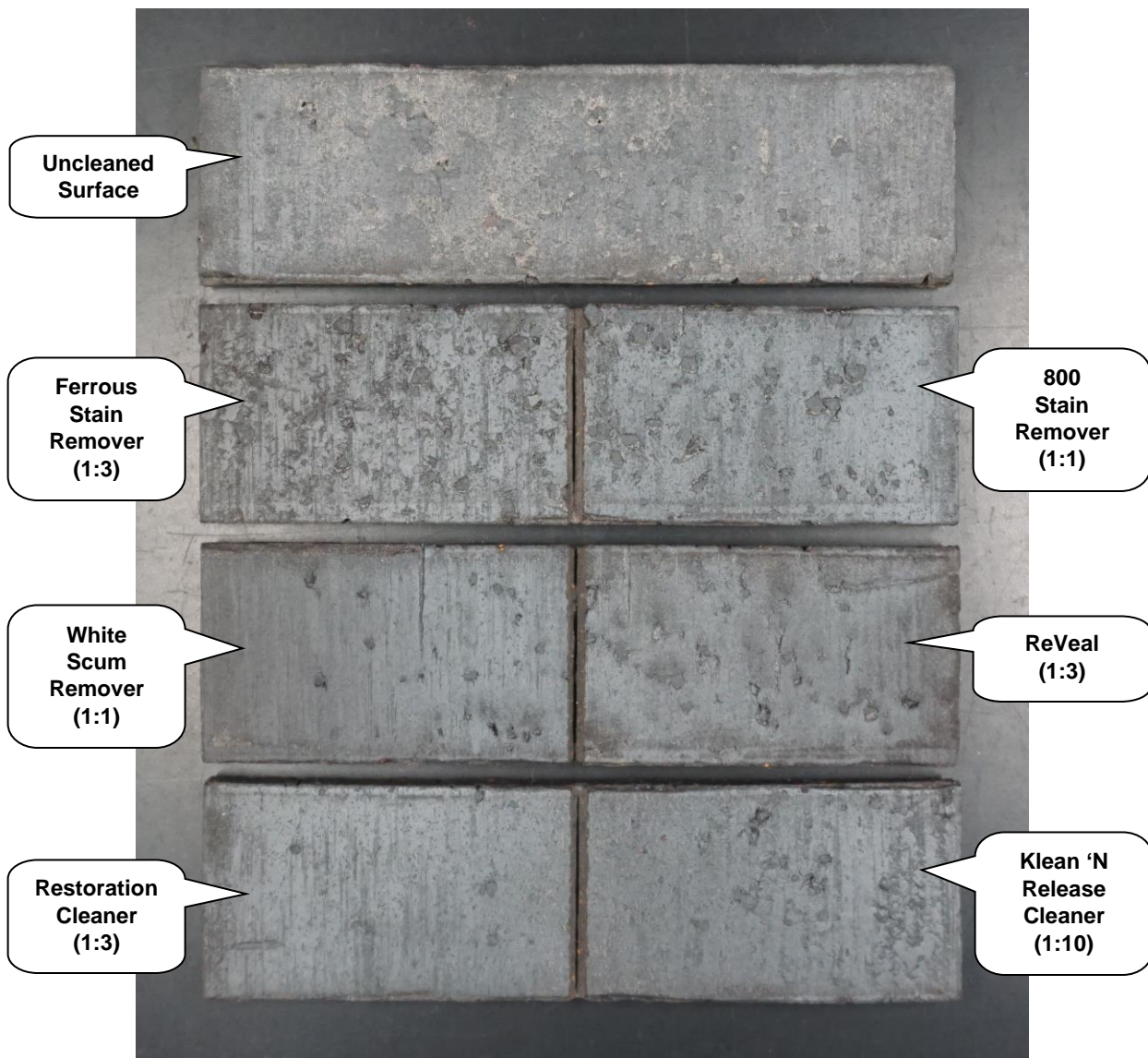
**"Feldhaus 764 Gray White Waterstruck" Thin Brick After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Feldhaus 777 Onyx Waterstruck" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	0	0
White Scum Remover	1:1	0	0	0	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

**"Feldhaus 777 Onyx Waterstruck" Thin Brick After Cleaning**

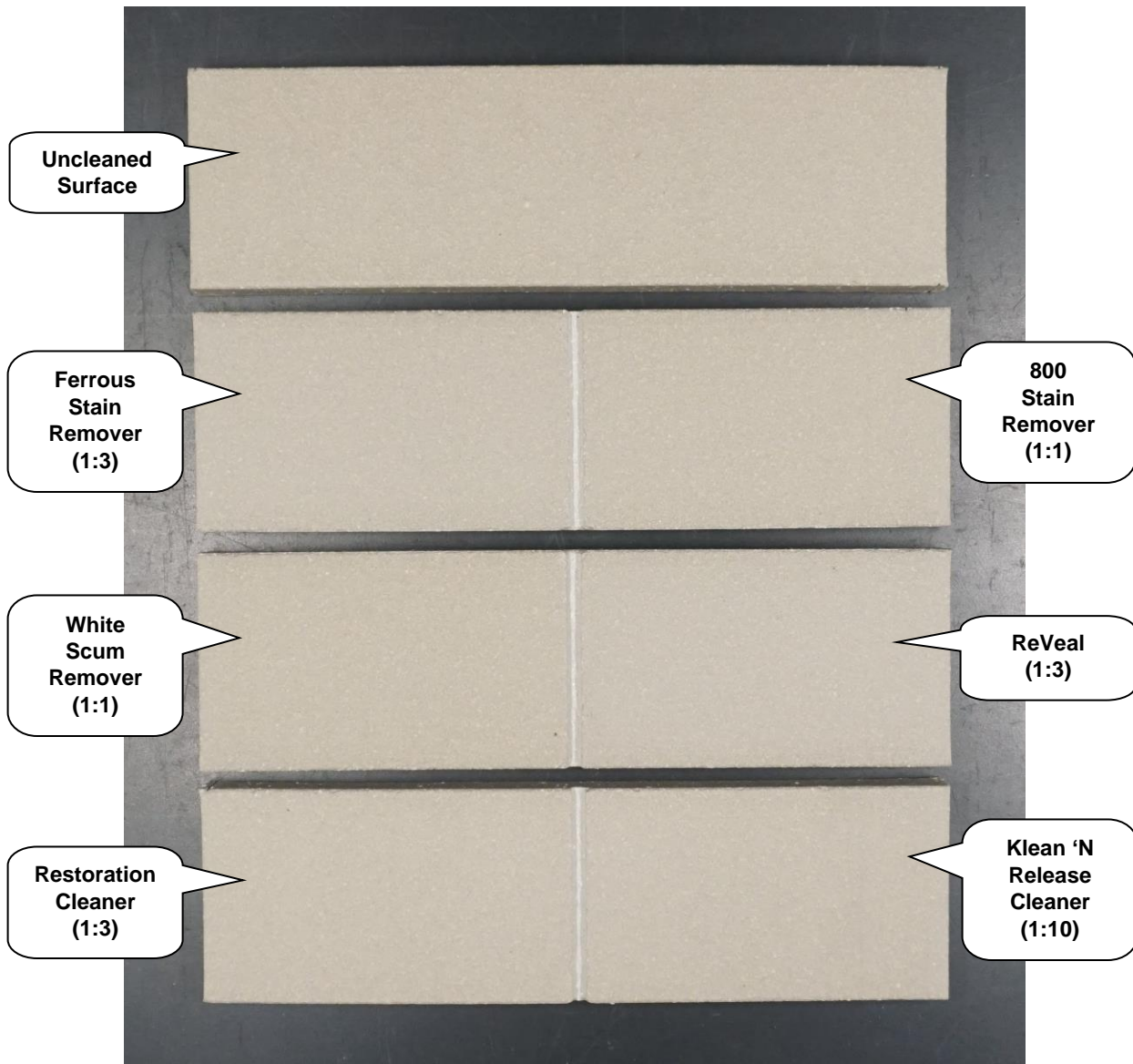




**TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)**

<b>Name: "Feldhaus 800 Classic Gray Smooth" Thin Brick</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Ferrous Stain Remover	1:3	0	0	0	0
800 Stain Remover	1:1	0	0	0	0
White Scum Remover	1:1	0	0	0	0
ReVeal	1:3	0	0	0	0
Restoration Cleaner	1:3	0	0	0	0
Klean 'N Release Cleaner	1:10	0	0	0	0

**"Feldhaus 800 Classic Gray Smooth" Thin Brick After Cleaning**



## CONCLUSIONS: Adverse Effects

In most of the adverse effects tests conducted, the majority of the cleaners did not cause any change to the appearance of the submitted brick.

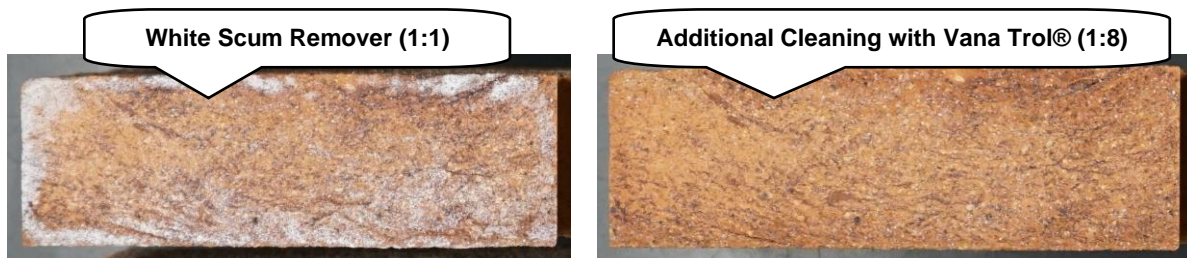
A slight amount of surface finish removal and substrate deterioration was observed when cleaning the “Arno Textured”, “Marana Textured”, “Piave Textured”, and “Potenza Textured” Solid Brick with all of the cleaning products. A slight to significant amount of surface finish removal was observed with all of the cleaning products on the “Marana Raw” Solid Brick.

A slight to moderate color change was observed when Sure Klean® 800 Stain Remover was applied to the “Romero” Cored Brick, “Arno Raw” Solid Brick, “Feldhaus 401 Classic Red Velour” Thin Brick, and “Feldhaus 567 Coal Brindle Smooth” Thin Brick. A moderate to significant color change was observed when Sure Klean® White Scum Remover was applied to “Romero” Cored Brick and “Feldhaus 401 Classic Red Velour” Thin Brick. Therefore, these cleaners are not recommended for use on these brick types.

Sure Klean® 800 Stain Remover and Sure Klean® White Scum Remover resulted in a white haze (stain) forming on the surface of the “Piave Textured” Solid Brick. Sure Klean® Ferrous Stain Remover, Sure Klean® 800 Stain Remover, and Sure Klean® White Scum Remover resulted in a white haze (stain) forming on the surface of the “Potenza Textured” Solid Brick. Therefore, these cleaners are not recommended for use on these brick types.

Sure Klean® Vana Trol® diluted with eight parts water was tested in order to determine if it would remove this white haze. It was successful in removing the white haze completely, as seen in the photographs below.

### “Potenza Textured” Solid Brick After Additional Cleaning



When choosing the most appropriate product for the desired result:

- For removal of iron, manganese, vanadium, straw stains, acid burns, and other metallic discolorations from brick, stone, and masonry surfaces – test Sure Klean® Ferrous Stain Remover
- For removal of green vanadium stains, straw stains, acid burns, and other metallic discolorations from most masonry surfaces – test Sure Klean® 800 Stain Remover
- For removal of salt scums (carbonates and sulfates) from clay brick and tile surfaces without discoloring or alter the surface – test Sure Klean® White Scum Remover
- For removal of stubborn atmospheric and carbon staining on masonry and stone – test Sure Klean® ReVeal
- For a concentrated compound able to loosen and dissolve dirt, paint oxidation, carbon buildup, and other atmospheric pollutants – test Sure Klean® Restoration Cleaner
- For delicate substrates and all-purpose cleaning – test Enviro Klean® Klean ‘N Release Cleaner

It is recommended that the selected cleaners always be used in the lowest possible concentration. Apply all products in accordance with the manufacturer’s recommendations provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate cleaning product and procedures for a particular project. See product literature for additional application and product information.

**RECOMMENDATIONS: Adverse Effects**

Recommendations for cleaning each type of brick submitted by Glen-Gery, Shoemakersville, PA are provided in the chart below.

Sample	Adverse Effects
"Azul" Cored Brick	Sure Klean® Ferrous Stain Remover (1:3) OR Sure Klean® 800 Stain Remover (1:1) OR Sure Klean® White Scum Remover (1:1) OR Sure Klean® ReVeal (1:3) OR Sure Klean® Restoration Cleaner (1:3) OR Enviro Klean® Klean 'N Release Cleaner (1:10)
"Castellana" Cored Brick	
"Arno Textured" Solid Brick	
"Marana Textured" Solid Brick	
"Brenta Raw" Solid Brick	
"Livenza Raw" Solid Brick	
"Marana Raw" Solid Brick	
"Piave Raw" Solid Brick	
"Potenza Raw" Solid Brick	
"Feldhaus 100 Classic Cream Smooth" Thin Brick	
"Feldhaus 511 Onyx Smooth" Thin Brick	
"Feldhaus 664 Deep Wine Handform" Thin Brick	
"Feldhaus 764 Gray White Waterstruck" Thin Brick	
"Feldhaus 777 Onyx Waterstruck" Thin Brick	
"Feldhaus 800 Classic Gray Smooth" Thin Brick	

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

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

**RECOMMENDATIONS: Adverse Effects (cont.)**

Recommendations for cleaning each type of brick submitted by Glen-Gery, Shoemakersville, PA are provided in the chart below.

Sample	Adverse Effects
"Arno Raw" Solid Brick	Sure Klean® Ferrous Stain Remover (1:3) OR Sure Klean® White Scum Remover (1:1) OR Sure Klean® ReVeal (1:3)
"Feldhaus 567 Coal Brindle Smooth" Thin Brick	OR Sure Klean® Restoration Cleaner (1:3) OR Enviro Klean® Klean 'N Release Cleaner (1:10)
"Romero" Cored Brick	Sure Klean® Ferrous Stain Remover (1:3) OR Sure Klean® ReVeal (1:3)
"Piave Textured" Solid Brick	OR Sure Klean® Restoration Cleaner (1:3) OR Enviro Klean® Klean 'N Release Cleaner (1:10)
"Feldhaus 401 Classic Red Velour" Thin Brick	OR Enviro Klean® Klean 'N Release Cleaner (1:10)
"Potenza Textured" Solid Brick	Sure Klean® ReVeal (1:3) OR Sure Klean® Restoration Cleaner (1:3) OR Enviro Klean® Klean 'N Release Cleaner (1:10)

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

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



J. Lucas Comadoll  
 Project Testing Technician

**ALL SAMPLES SUPPLIED FOR THE ABOVE EVALUATION WILL BE DISPOSED OF THIRTY (30) DAYS AFTER THE ISSUE DATE OF THIS REPORT. IF SAMPLES ARE TO BE RETAINED FOR ADDITIONAL TESTING OR RETURNED TO THE SENDER, PROVIDE WRITTEN INSTRUCTIONS TO THE LABORATORY WITHIN THIRTY (30) DAYS OF THE ISSUE DATE OF THIS REPORT.**

Recommendations made within this report are based on laboratory test applications and observations. Final determination of the suitability of a product and/or procedure should be made only after thorough job testing on actual surfaces.