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Pallet Tag Program Laboratory Report
Reading Rock
Cincinnati, OH

Project No. 2306-02 PTP

Prepared For:

PROSOCO

Prepared By:

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Project Testing Technician
AMT Laboratories

August 2023

Laboratory Report

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cc: Tim Quill, Technical Marketing Services, LLC
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Mark Donze, PROSOCO, Inc.
Jake Boyer, PROSOCO, Inc.
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SUBJECT: Reading Rock
Cincinnati, OH
Pallet Tag Evaluation

DATE: August 10, 2023
PROJECT: 2306-02 PTP

SAMPLES SUBMITTED: 6 types of RockCast masonry veneer precast concrete

Type	Label	Name	Color	Finish	Integral Water Repellent	Size
RockCast masonry veneer	“A”	“Shadow”	Black	Smooth	Yes	23.5” x 11.75” x 3.5”
RockCast masonry veneer	“B”	“Smokehouse”	Gray	Smooth	Yes	23.5” x 7.5” x 3.5”
RockCast masonry veneer	“C”	“Buff”	Buff	Split	Yes	23.5” x 7.5” x 4”
RockCast masonry veneer	“D”	“Loudon County”	Dark Red	Smooth	Yes	30” x 6” x 3.5”
RockCast masonry veneer	“E”	“Caliza”	Orange	Smooth	Yes	15.75” x 7.75” x 3.75”
RockCast masonry veneer	“F”	“Buff”	Buff	Smooth	Yes	23.5” x 7.5” x 4.5”

SUBMITTED BY: David Zawada
Reading Rock, Inc.
4600 Devitt Drive
Cincinnati, OH 45246

PURPOSE OF TEST:

- To determine the most appropriate PROSOCO, Inc. new construction cleaner(s) for the submitted samples.

- To determine the most appropriate PROSOCO, Inc. cleaner to remove the efflorescence present on the submitted samples (where applicable).

NOTE: Some of the submitted samples exhibited efflorescence staining upon arrival prior to any testing (as shown in the photograph below). Efflorescence removal testing was performed where adequate space was present.

Efflorescence Staining Present on Samples as Submitted

PRODUCTS EVALUATED:

New Construction Cleaning	**Dilution:**
Sure Klean® Light Duty Concrete Cleaner	1:2, 1:3, 1:6
Sure Klean® Custom Masonry Cleaner	1:4, 1:6
Sure Klean® Vana Trol®	1:6, 1:8, 1:10

Efflorescence Removal (Where Applicable)	**Dilution:**
Sure Klean® Light Duty Concrete Cleaner	1:2
Sure Klean® Custom Masonry Cleaner	1:4
Sure Klean® Vana Trol®	1:6

TEST METHODS: New Construction Cleaning

Sure Klean® Light Duty Concrete Cleaner, Sure Klean® Custom Masonry Cleaner, and Sure Klean® Vana Trol® were evaluated on the submitted samples to determine the optimal concentration of cleaner which leaves the external surface looking most like the natural through-body color of the masonry veneer.

Color uniformity was evaluated by comparing aggregate exposure and surface pigment alteration/removal of each cleaned surface compared to the natural through-body color of the masonry veneer.

Aggregate Exposure is the visual examination comparing aggregate exposure of the interior, through-body section of the masonry veneer to surfaces cleaned with selected product(s) at given dilutions.

Surface Pigment Alteration/Removal is the visual examination comparing the pigmentation of the interior, through-body section of the masonry veneer to surfaces cleaned with selected product(s) at given dilutions.

The following is the scale used for reporting results of both categories:
0 – **No change** compared to through-body
1 – **Slight change** compared to through-body
2 – **Moderate change** compared to through-body
3 – **Significant change** compared to through-body

NOTE: When cleaning integrally colored CMUs.

Integrally colored concrete masonry units (CMUs) frequently have high amounts of pigments concentrated on the surface of the cured concrete unit. Variation of surface pigment concentrations from one CMU to the next creates a blotchy appearance in the completed wall. Allowed to remain on the surface of the CMU, the weakly bound pigment will weather and streak, further detracting from the appearance of the completed CMU wall.

In addition to removing excess mortar and construction related soiling, the goal of any cleaning operation undertaken on an integrally colored CMU should include removal of unnaturally high concentrations of surface pigment. By revealing the natural through-body color on the integrally colored unit, the overall color uniformity and weathering resistance of the completed CMU wall is improved.

Cleaning Procedure:

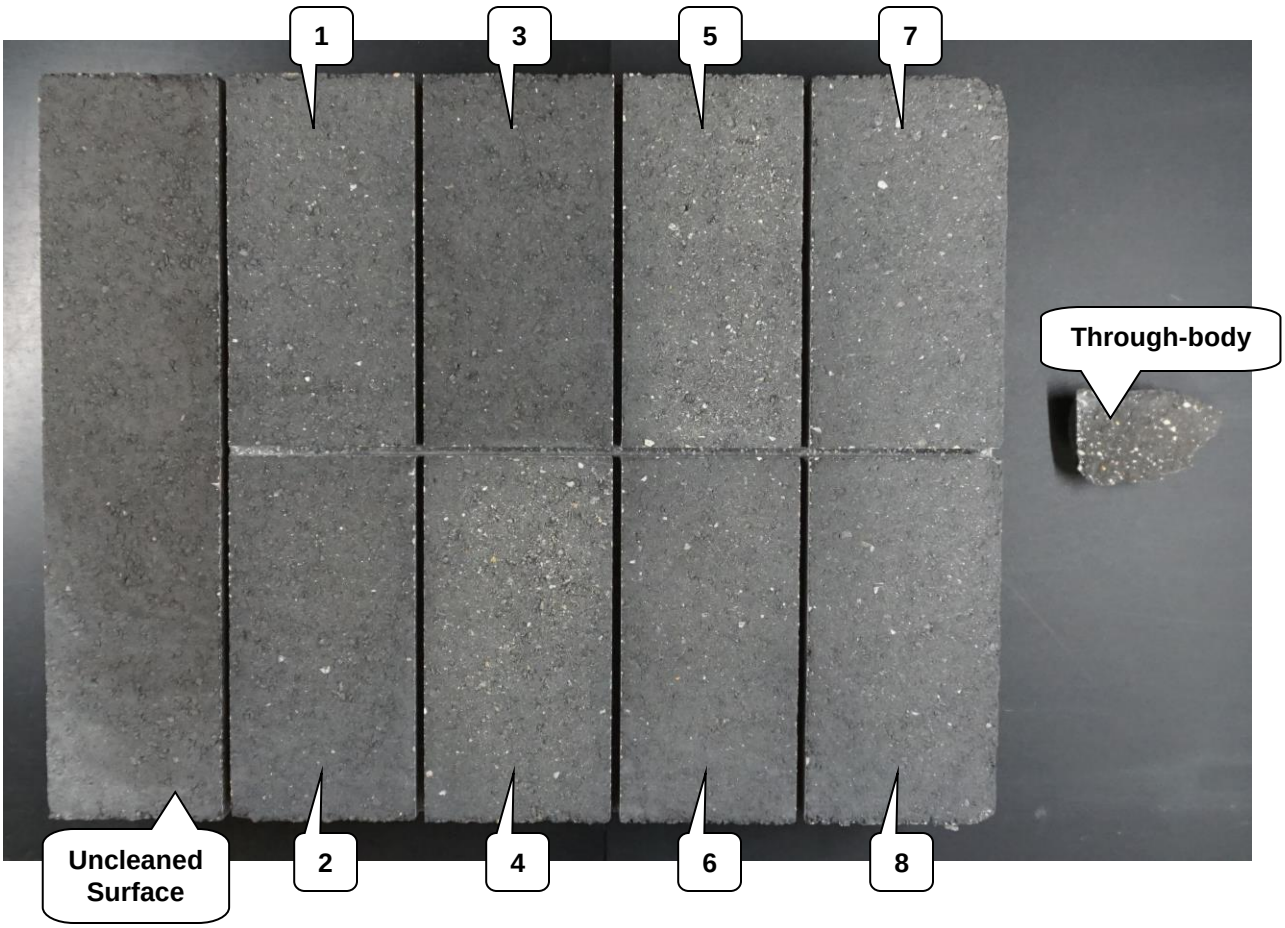
1. Pre-wet the surface and apply diluted cleaning solution according to PROSOCO, Inc. Product Guide instructions.
2. Allow for an appropriate dwell time and periodically agitate:
   Light Duty Concrete Cleaner.....5 minutes
   Custom Masonry Cleaner .....3 minutes
   Vana Trol®.....5 minutes
3. Reapply cleaning solution; do not let cleaner dry into masonry.
4. Rinse thoroughly with plenty of fresh water.*
5. Allow the sample to dry for at least 18 hours and visually examine.
6. Break the sample and compare the through-body surfaces to the cleaned surfaces for the best match.

*__Rinsing Equipment –__ Masonry washing equipment generating approximately 700-800 psi with a water flow rate of 8 gallons per minute delivered through a 40-degree fan spray tip was used for rinsing.

TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning

Name: "Shadow" RockCast Smooth Masonry Veneer				
Product	**Dilution**	**Key**	**Aggregate Exposure**	**Surface Pigment Alteration/Removal**
Light Duty Concrete Cleaner	1:2	1	2	2
Light Duty Concrete Cleaner	1:3	2	2	2
Light Duty Concrete Cleaner	1:6	3	1	1
Custom Masonry Cleaner	1:4	4	3	3
Custom Masonry Cleaner	1:6	5	3	3
Vana Trol®	1:6	6	2	2
Vana Trol®	1:8	7	2	2
Vana Trol®	1:10	8	2	2

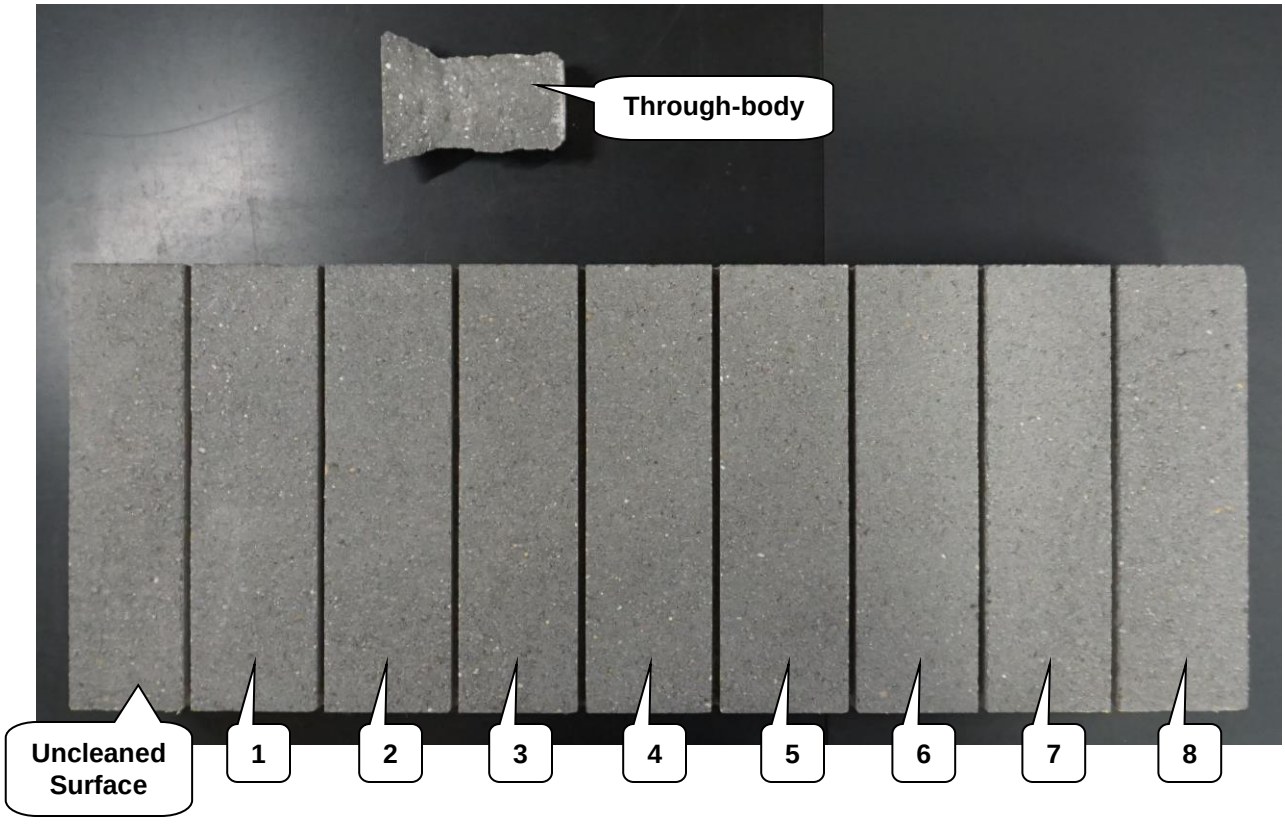
"Shadow" RockCast Smooth Masonry Veneer After Cleaning



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

Name: "Smokehouse" RockCast Smooth Masonry Veneer				
Product	**Dilution**	**Key**	**Aggregate Exposure**	**Surface Pigment Alteration/Removal**
Light Duty Concrete Cleaner	1:2	1	1	1
Light Duty Concrete Cleaner	1:3	2	1	1
Light Duty Concrete Cleaner	1:6	3	1	1
Custom Masonry Cleaner	1:4	4	1	1
Custom Masonry Cleaner	1:6	5	1	1
Vana Trol®	1:6	6	1	1
Vana Trol®	1:8	7	1	1
Vana Trol®	1:10	8	1	1

"Smokehouse" RockCast Smooth Masonry Veneer After Cleaning

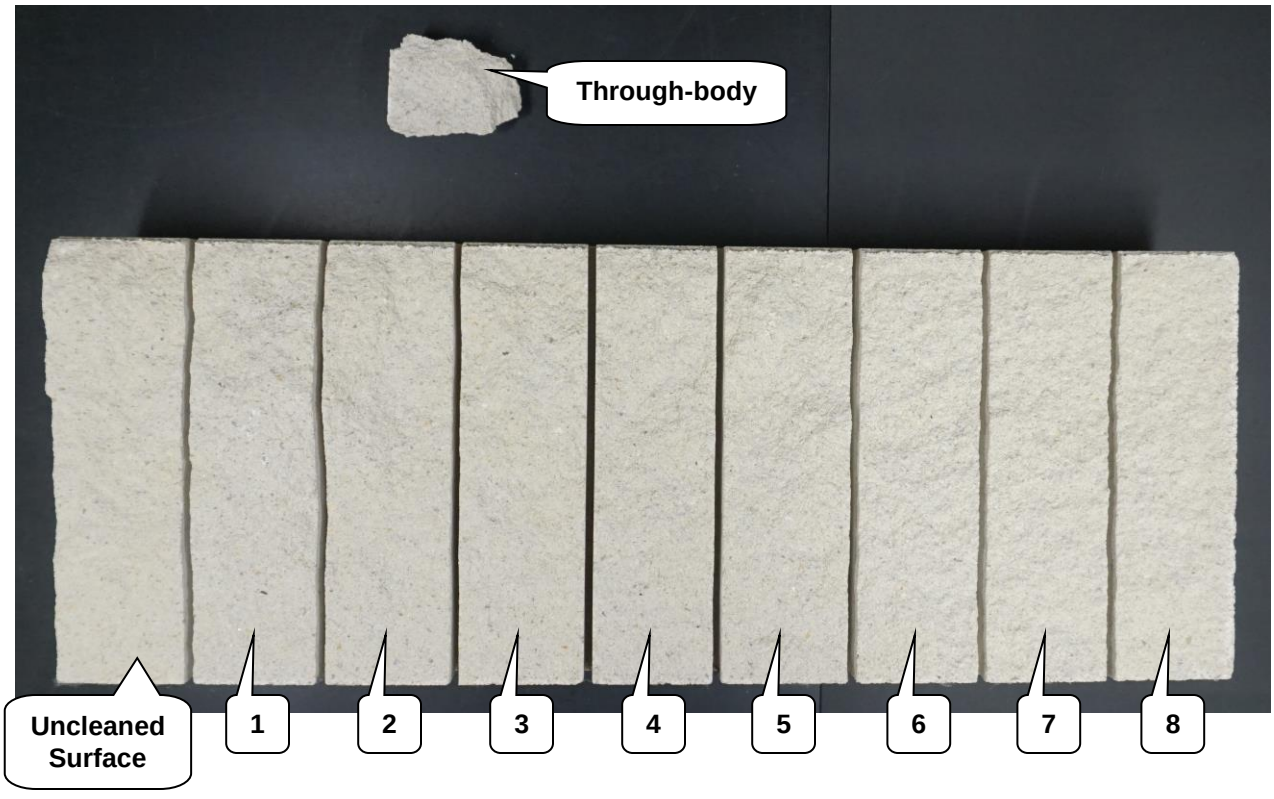


TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)

Name: "Buff" RockCast Split Masonry Veneer				
Product	**Dilution**	**Key**	**Aggregate Exposure**	**Surface Pigment Alteration/Removal**
Light Duty Concrete Cleaner	1:2	1	1	1
Light Duty Concrete Cleaner	1:3	2	1	1
Light Duty Concrete Cleaner	1:6	3	1*	1*
Custom Masonry Cleaner	1:4	4	1	1
Custom Masonry Cleaner	1:6	5	1	1
Vana Trol®	1:6	6	1	1
Vana Trol®	1:8	7	1	1
Vana Trol®	1:10	8	1*	1*

***NOTE: Very slight change compared to uncleaned surface.**

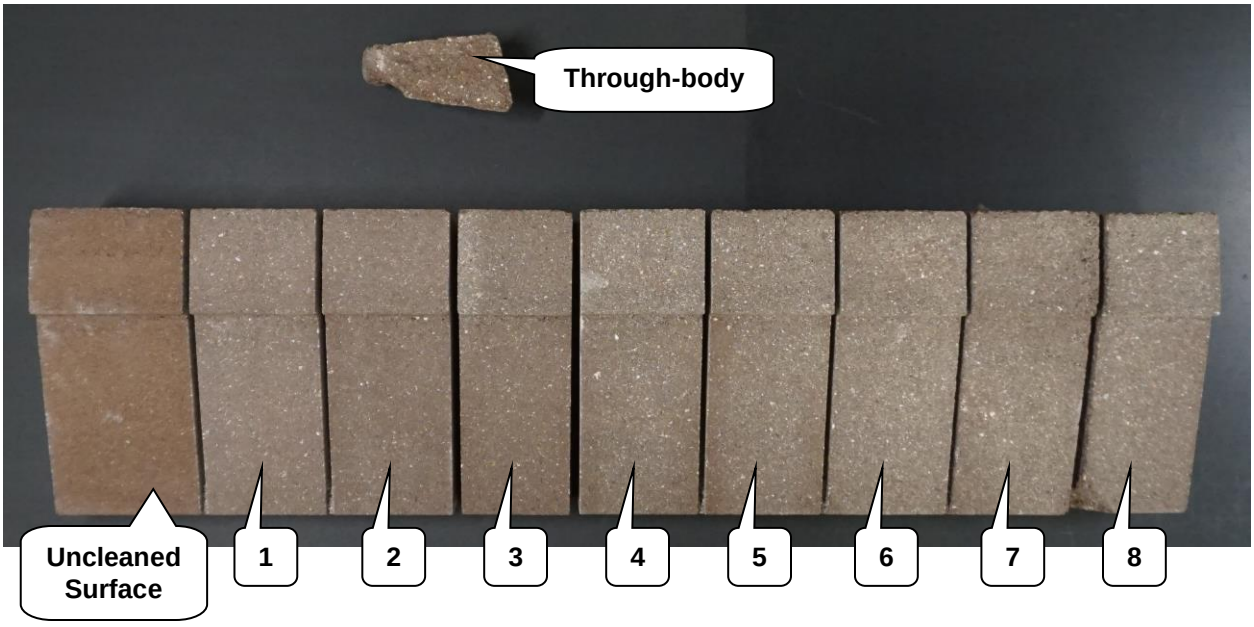
"Buff" RockCast Split Masonry Veneer After Cleaning



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

Name: "Loudon County" RockCast Smooth Masonry Veneer				
Product	**Dilution**	**Key**	**Aggregate Exposure**	**Surface Pigment Alteration/Removal**
Light Duty Concrete Cleaner	1:2	1	2	2
Light Duty Concrete Cleaner	1:3	2	1	1
Light Duty Concrete Cleaner	1:6	3	1	1
Custom Masonry Cleaner	1:4	4	3	3
Custom Masonry Cleaner	1:6	5	3	3
Vana Trol®	1:6	6	3	3
Vana Trol®	1:8	7	3	3
Vana Trol®	1:10	8	3	3

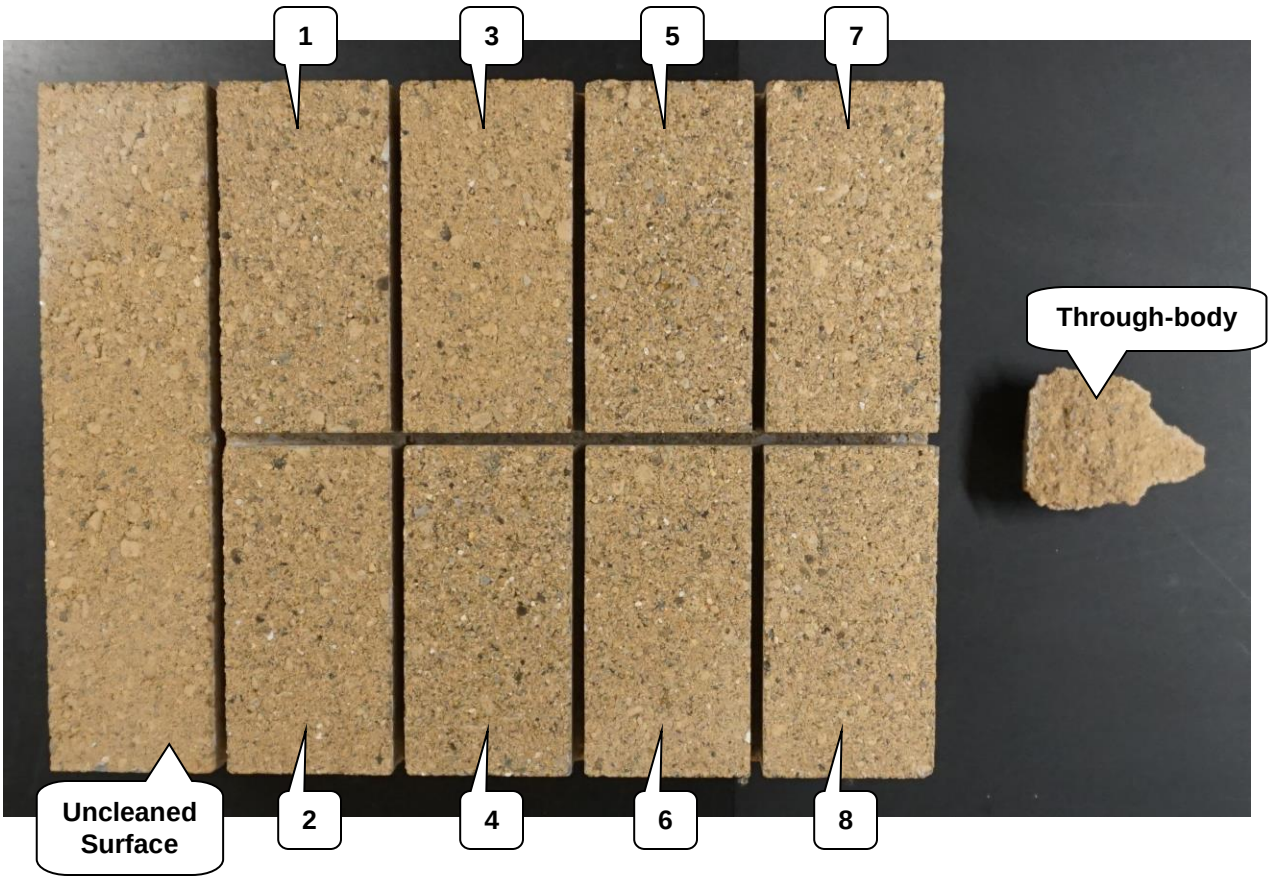
"Loudon County" RockCast Smooth Masonry Veneer After Cleaning



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

Name: "Caliza" RockCast Smooth Masonry Veneer				
Product	**Dilution**	**Key**	**Aggregate Exposure**	**Surface Pigment Alteration/Removal**
Light Duty Concrete Cleaner	1:2	1	2	2
Light Duty Concrete Cleaner	1:3	2	2	2
Light Duty Concrete Cleaner	1:6	3	1	1
Custom Masonry Cleaner	1:4	4	3	3
Custom Masonry Cleaner	1:6	5	3	3
Vana Trol®	1:6	6	2	2
Vana Trol®	1:8	7	2	2
Vana Trol®	1:10	8	2	2

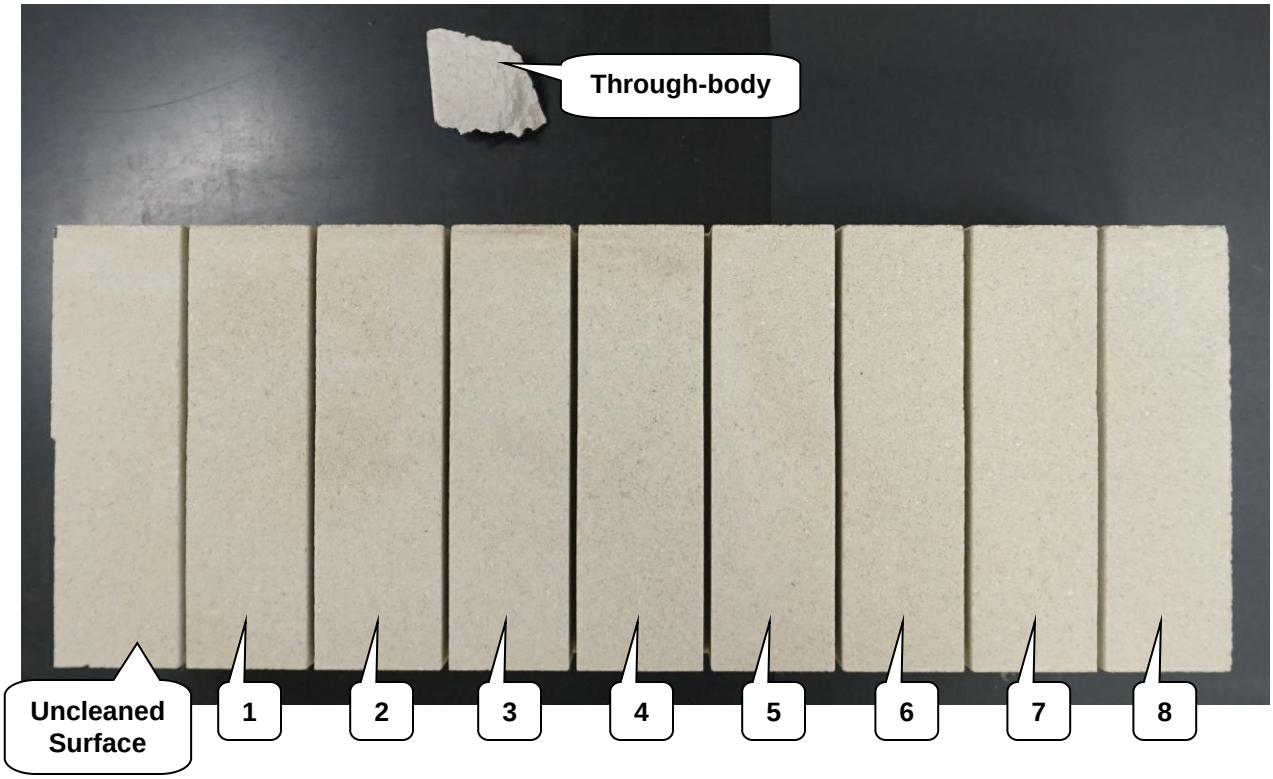
"Caliza" RockCast Smooth Masonry Veneer After Cleaning



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

Name: "Buff" RockCast Smooth Masonry Veneer				
Product	**Dilution**	**Key**	**Aggregate Exposure**	**Surface Pigment Alteration/Removal**
Light Duty Concrete Cleaner	1:2	1	1	1
Light Duty Concrete Cleaner	1:3	2	1	1
Light Duty Concrete Cleaner	1:6	3	1	1
Custom Masonry Cleaner	1:4	4	1	1
Custom Masonry Cleaner	1:6	5	1	1
Vana Trol®	1:6	6	1	1
Vana Trol®	1:8	7	1	1
Vana Trol®	1:10	8	1	1

"Buff" RockCast Smooth Masonry Veneer After Cleaning



CONCLUSIONS: New Construction Cleaning

In all of the cleaning tests conducted on the “Shadow” and “Caliza” samples, each dilution of Sure Klean® Light Duty Concrete Cleaner removed a slight to moderate amount of surface pigment, exposing a slight to moderate amount of aggregate. Each dilution of Sure Klean® Custom Masonry Cleaner removed a significant amount of surface pigment, exposing a significant amount of aggregate. Each dilution of Sure Klean® Vana Trol® removed a moderate amount of surface pigment, exposing a moderate amount of aggregate.

In all of the cleaning tests conducted on the “Smokehouse” and “Buff” (smooth and split finish) samples, each dilution of Sure Klean® Light Duty Concrete Cleaner, Sure Klean® Custom Masonry Cleaner, and Sure Klean® Vana Trol® removed a very slight to slight amount of surface pigment, exposing a very slight to slight amount of aggregate.

In all of the cleaning tests conducted on the “Loudon County” sample, each dilution of Sure Klean® Light Duty Concrete Cleaner removed a slight to moderate amount of surface pigment, exposing a slight to moderate amount of aggregate. Each dilution of Sure Klean® Custom Masonry Cleaner and Sure Klean® Vana Trol® removed a significant amount of surface pigment, exposing a significant amount of aggregate.

Each cleaner provided an accurate match to the through-body of the masonry veneer.

When choosing the most appropriate product for the desired result:

- For common construction and atmospheric staining – Test Sure Klean® Light Duty Concrete Cleaner
- For excess mortar and heavy efflorescence – Test Sure Klean® Custom Masonry Cleaner
- For new masonry surfaces that are subject to vanadium, manganese, and other metallic stains – Test Sure Klean® Vana Trol®

Use higher concentrations and surface agitation to maximize aggregate exposure. Use low concentrations and surface agitation to minimize aggregate exposure.

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 each type of RockCast masonry veneer submitted by Reading Rock, Cincinnati, OH are provided in the chart below. Recommendations are based on the cleaner and dilution that provided the best match to the through-body.

Sample	New Construction Cleaning
"Shadow" RockCast Smooth Masonry Veneer	Sure Klean® Light Duty Concrete Cleaner [2](1:2) or [2](1:3) or [1](1:6) OR Sure Klean® Vana Trol® [2](1:6) or [2](1:8) or [2](1:10)
"Smokehouse" RockCast Smooth Masonry Veneer	Sure Klean® Light Duty Concrete Cleaner (1:2) or (1:3) or (1:6) OR Sure Klean® Custom Masonry Cleaner (1:4) or (1:6) OR Sure Klean® Vana Trol® (1:6) or (1:8) or (1:10)
"Buff" RockCast Split Masonry Veneer	
"Loudon County" RockCast Smooth Masonry Veneer	Sure Klean® Light Duty Concrete Cleaner [2](1:2) or [1](1:3) or [1](1:6)
"Caliza" RockCast Smooth Masonry Veneer	Sure Klean® Light Duty Concrete Cleaner [2](1:2) or [2](1:3) or [1](1:6) OR Sure Klean® Vana Trol® [2](1:6) or [2](1:8) or [2](1:10)
"Buff" RockCast Smooth Masonry Veneer	Sure Klean® Light Duty Concrete Cleaner (1:2) or (1:3) or (1:6) OR Sure Klean® Custom Masonry Cleaner (1:4) or (1:6) OR Sure Klean® Vana Trol® (1:6) or (1:8) or (1:10)

NOTE: "1" indicates the recommended first choice and "2" indicates the recommended second choice.

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: Efflorescence Removal

Sure Klean® Light Duty Concrete Cleaner, Sure Klean® Custom Masonry Cleaner, and Sure Klean® Vana Trol® were evaluated to determine the optimal concentration of cleaner which removes the efflorescence from the submitted samples. The samples were visually examined following the cleaning procedure below.

Cleaning Procedure:

1. Pre-wet the surface and apply the cleaning solution according to PROSOCO, Inc. Product Data Sheet.
2. Allow for an appropriate dwell time and periodically agitate:
   Light Duty Concrete Cleaner.....5 minutes
   Custom Masonry Cleaner .....3 minutes
   Vana Trol®.....5 minutes
3. Reapply cleaning solution; do not let cleaner dry into masonry.
4. Rinse thoroughly with plenty of fresh water.*
5. Allow the sample to dry for at least 18 hours and visually examine.

*__Rinsing Equipment –__ Masonry washing equipment generating approximately 700-800 psi with a water flow rate of 8 gallons per minute delivered through a 40 degree fan spray tip was used for rinsing.

TEST RESULTS AND PHOTOGRAPHS: Efflorescence Removal

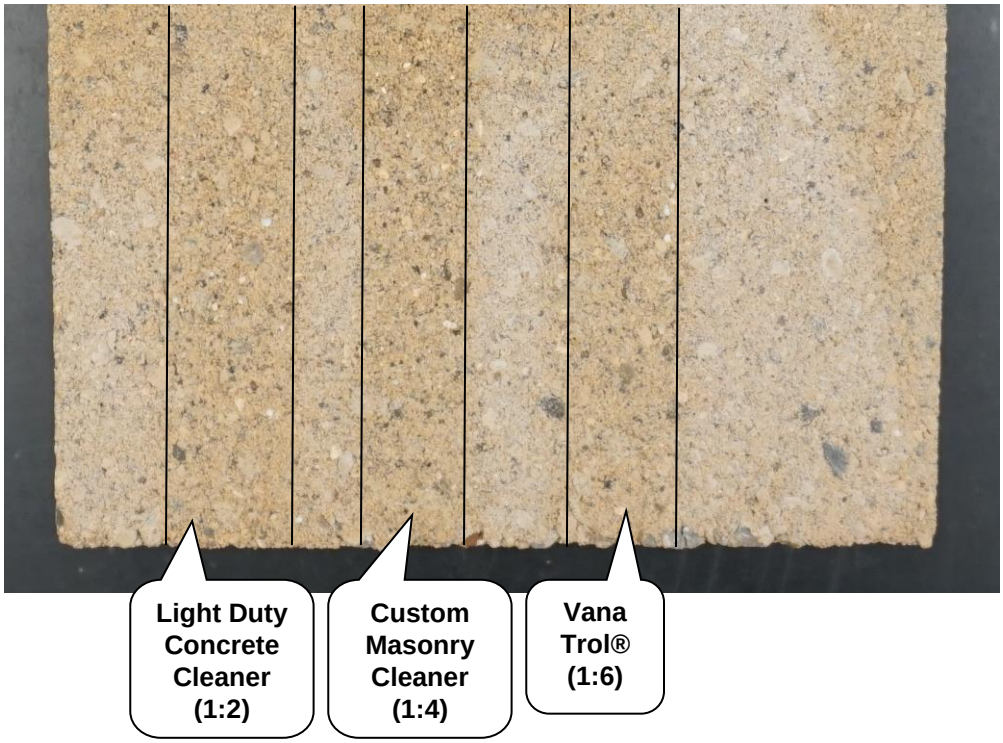
Name: “Shadow” RockCast Smooth Masonry Veneer		
Product	**Dilution**	**Percent Efflorescence Removal**
Sure Klean® Light Duty Concrete Cleaner	1:2	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%
Sure Klean® Vana Trol®	1:6	100%

Name: “Caliza” RockCast Smooth Masonry Veneer		
Product	**Dilution**	**Percent Efflorescence Removal**
Sure Klean® Light Duty Concrete Cleaner	1:2	100%
Sure Klean® Custom Masonry Cleaner	1:4	100%
Sure Klean® Vana Trol®	1:6	100%

TEST RESULTS AND PHOTOGRAPHS: Efflorescence Removal (cont.)

"Caliza" RockCast Smooth Masonry Veneer Before Cleaning

"Caliza" RockCast Smooth Masonry Veneer After Cleaning



CONCLUSIONS: Efflorescence Removal

In the efflorescence removal tests conducted, all three cleaners at the specified dilutions were very effective in removing the staining from the submitted samples (where applicable). Worth noting, each new construction cleaner resulted in some level of surface pigment removal, exposing a corresponding amount of aggregate as previously noted in the "New Construction Cleaning" section of the report. For this reason, while Sure Klean® Custom Masonry Cleaner diluted with four parts water was effective in removing the efflorescence from the surface of the samples, it is not recommended for use on the tested samples due to the level of surface pigment removal and aggregate exposure observed during New Construction Cleaner testing.

It is recommended that the cleaner 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: Efflorescence Removal

Recommendations for removing the efflorescence from each type of RockCast masonry veneer (where applicable) submitted by Reading Rock, Cincinnati, OH are provided in the chart below.

Sample	Efflorescence Removal
"Shadow" RockCast Smooth Masonry Veneer	Sure Klean® Light Duty Concrete Cleaner (1:2) OR Sure Klean® Vana Trol® (1:6)
"Caliza" RockCast Smooth Masonry Veneer	

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
QC/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.