

Pallet Tag Program Laboratory Report

> Glen-Gery Adel Plant Adel, IA



Project No. 2403-07 PTP

Prepared For:



## Prepared By:

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June 2024



# LABORATORY REPORT

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- FOR: Steve German, Glen-Gery cc: Steve Long Guy Mazza, PROSOCO, Inc. Jake Boyer, PROSOCO, Inc.
- SUBJECT: Glen-Gery Adel Plant Adel, IA Pallet Tag Evaluation

DATE: June 27, 2024 PROJECT: 2403-07 PTP

#### **SAMPLES SUBMITTED:** 3 types of clay brick

Sample	Name	Туре	Color Per Website	Texture/Finish Per Website	Size
(10) Brick	"Autumn Haze"	Facebrick	Red	Wirecut	7-5/8" x 2-1/4"
(10) Brick	"Aztec White"	Facebrick	Grey	Rough	7-5/8" x 2-1/4"
(10) Brick	"Hearthside Velour"	Facebrick	Brown	Velour	7-5/8" x 2-1/4"

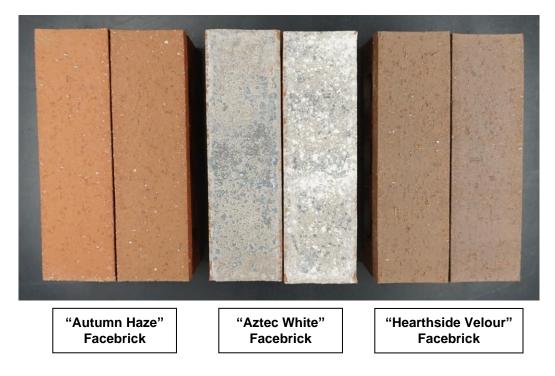
SUBMITTED BY: Phil Bazan Plant Manager Glen-Gery Adel Plant 204 Brickyard Drive Adel, IA 50003



#### PURPOSE OF TEST:

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

NOTE: The "Autumn Haze", "Aztec White", "Hearthside Velour", and "Willow Ash" facebrick exhibited a variation in color or surface finish upon arrival prior to any testing (as shown in the photograph below).



#### Variation in Color or Surface Finish Present as Submitted



#### **PRODUCTS EVALUATED:**

New Construction Cleaning	Dilution:
Sure Klean® 600	1:6, 1:8
Sure Klean® Vana Trol®	1:6, 1:8

Adverse Effects	Dilution:
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.

<u>Surface Finish Removal</u> 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.

<u>Substrate Deterioration</u> 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.

<u>Color Change</u> is the visual examination comparing the color of the uncleaned surface to the 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.

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.
- 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.

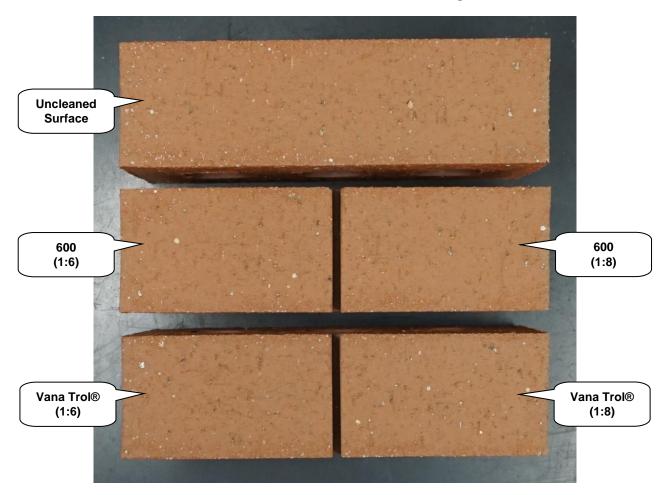
\*Rinsing Equipment – A garden hose with an adjustable nozzle set for a narrow stream of water was used for rinsing because the manufacturer recommends psi values below 400 for the majority of the submitted brick.



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

Name: "Autumn Haze" Facebrick					
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

## "Autumn Haze" Facebrick After Cleaning

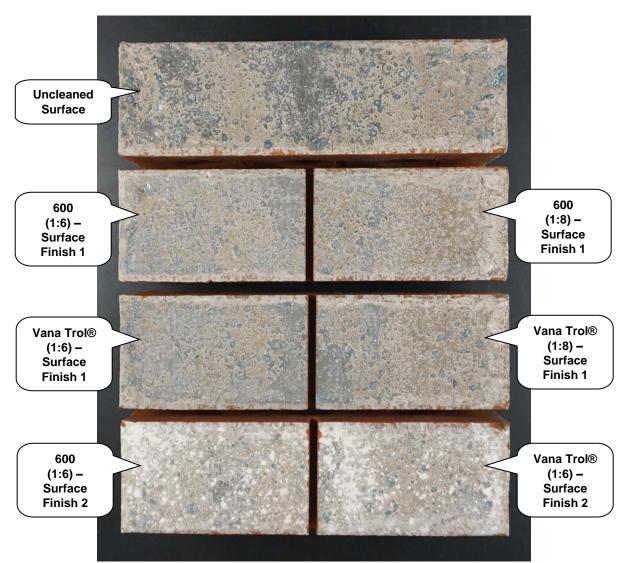




## TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)

Name: "Aztec White" Facebrick						
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining	
600 – Surface Finish 1	1:6	0	0	1	0	
600 – Surface Finish 2	1:6	0	0	1	0	
600 – Surface Finish 1	1:8	0	0	1	0	
Vana Trol® – Surface Finish 1	1:6	0	0	1	0	
Vana Trol® – Surface Finish 2	1:6	0	0	1	0	
Vana Trol® – Surface Finish 1	1:8	0	0	1	0	

#### "Aztec White" Facebrick After Cleaning



Due to the substantial variation present in the surface finish of the "Aztec White" facebrick, previously noted on page 2, an additional sample was tested with the higher concentration of each new construction cleaner to ensure both surface finish variations were not adversely affected by either cleaner.



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

Name: "Hearthside Velour" Facebrick					
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

## "Hearthside Velour" Facebrick After Cleaning





#### **CONCLUSIONS: New Construction Cleaning**

In the cleaning tests conducted, neither Sure Klean® 600 nor Sure Klean® Vana Trol® caused any change to the appearance of the "Autumn Haze" or "Hearthside Velour" facebrick.

A slight color change was observed when either dilution of Sure Klean® 600 or Sure Klean® Vana Trol® were applied to the "Aztec White" facebrick. After cleaning, the color of the metallic spots appeared altered. If this slight color change is undesirable, it is recommended these new construction cleaners not be used.

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®

Worth noting, the Product Data Sheet for Sure Klean® 600 states, "may not be suitable for cleaning buffcolored brick and brick, stone, or tile with manganese or other metallic additives."

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, Adel, IA 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
"Autumn Haze" Facebrick	<sup>1</sup> Sure Klean® 600 (1:6) or (1:8) OR <sup>2</sup> Sure Klean® Vana Trol® (1:6) or (1:8)
"Aztec White" Facebrick	<sup>1</sup> Sure Klean® Vana Trol® (1:6) or (1:8)* OR <sup>2</sup> Sure Klean® 600 (1:6) or (1:8)*
"Hearthside Velour" Facebrick	<sup>1</sup> Sure Klean® 600 (1:6) or (1:8) OR <sup>2</sup> Sure Klean® Vana Trol® (1:6) or (1:8)

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.

\*If a slight color change (noted on page 6 and 8) is undesirable, it is recommended these new construction cleaners not be used on the "Aztec White" facebrick.

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. specialty 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:

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

<u>Substrate Deterioration</u> 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.

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

**<u>Staining</u>** 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	
	White Scum Remover	
	ReVeal	
	Restoration Cleaner	
	Klean 'N Release Cleaner	
2	Peapply cleaning colution: do not lot cleanor dry into the brick	

- Reapply cleaning solution; do not let cleaner dry into the brick.
  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.

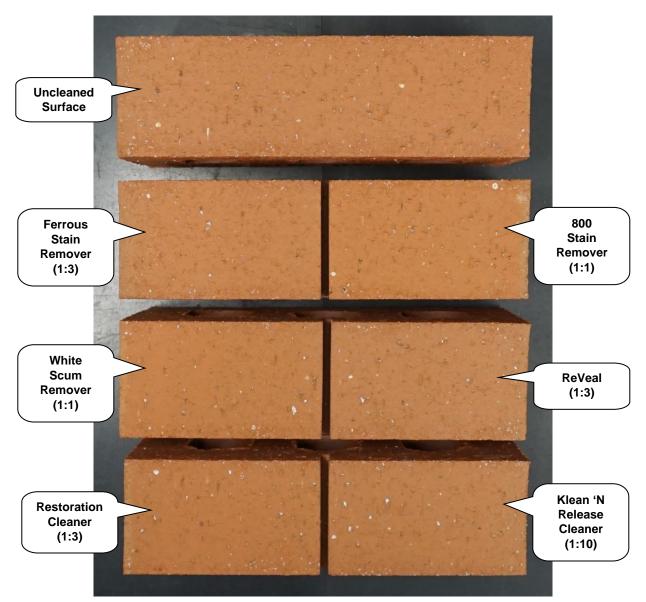
\***Rinsing Equipment** – A garden hose with an adjustable nozzle set for a narrow stream of water was used for rinsing because the manufacturer recommends psi values below 400 for the majority of the submitted brick.



#### **TEST RESULTS AND PHOTOGRAPHS: Adverse Effects**

Name: "Autumn Haze" Facebrick					
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

## "Autumn Haze" Facebrick After Cleaning

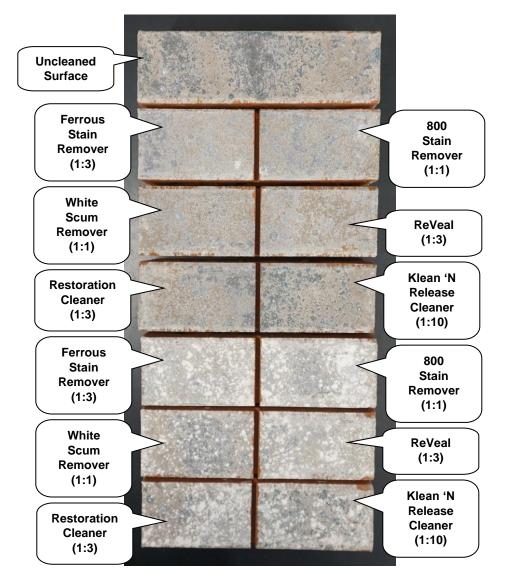




### TEST RESULTS AND PHOTOGRAPHS: Adverse Effects (cont.)

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

#### "Aztec White" Facebrick After Cleaning



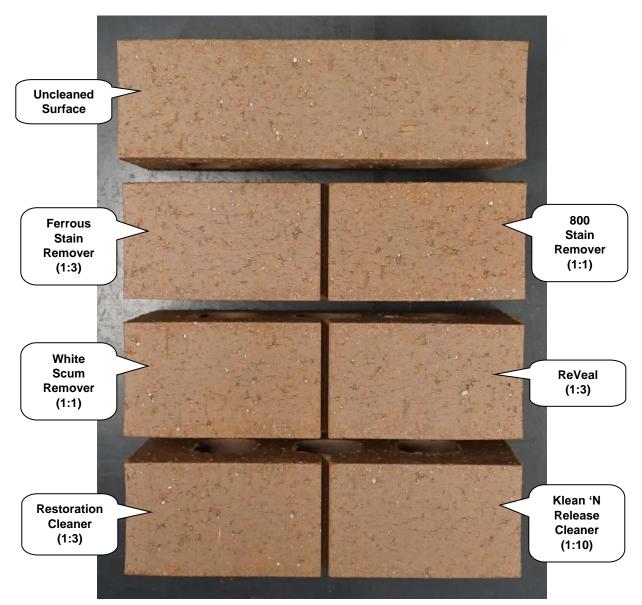
Due to the substantial variation present in the surface finish of the "Aztec White" facebrick, previously noted on page 2, additional samples were tested to ensure both surface finish variations were not adversely affected by either cleaner.



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

Name: "Hearthside Velour" Facebrick					
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

## "Hearthside Velour" Facebrick After Cleaning





#### **CONCLUSIONS: Adverse Effects**

In the cleaning tests conducted, none of the specialty cleaners caused any change to the appearance of the "Autumn Haze" or "Hearthside Velour" facebrick.

A slight color change was observed when Sure Klean® Ferrous Stain Remover, Sure Klean® 800 Stain Remover, Sure Klean® White Scum Remover, Sure Klean® ReVeal, and Sure Klean® Restoration Cleaner were applied to the "Aztec White" facebrick. After cleaning, the color of the metallic spots appeared altered. If this slight color change is undesirable, it is recommended these specialty cleaners not be used.

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, Adel, IA are provided in the chart below.

Sample	Specialty Cleaning
"Autumn Haze" Facebrick	Sure Klean® Ferrous Stain Remover (1:3)* OR
"Aztec White" Facebrick	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)*
"Hearthside Velour" Facebrick	OR Enviro Klean® Klean 'N Release Cleaner (1:10)

\*If a slight color change (noted on page 12 and 14) is undesirable, it is recommended these specialty cleaners not be used on the "Aztec White" facebrick.

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. Quese Conadol

J. Lucas Comadoll Chemist

ALL SAMPLES SUPPLIED FOR THE ABOVE EVALUATION WILL BE DISPOSED OF <u>THIRTY (30) DAYS</u> 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 <u>THIRTY</u> (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.