



US BRICK

BORN HERE. BUILT HERE.

September 26, 2025

Lex Cairns
Masonry Products & Foster Taylor Fireplaces
Email: lex@masonryproducts.com

RE: Job: DAMMON ENG - PHJ LAW
Products: US Brick – Belle Meade, King-size

To whom it may concern:

This is to certify that US Brick's Belle Meade king-size products are manufactured to comply with ASTM C652/Type HBS or C216/Type FBS, Grade SW specifications.

If we can be of further assistance, please don't hesitate to call.

Respectfully,

David Johnson
Director of Continuous Improvement

Attachments:

- Test Reports
- Cleaning Recommendations
- Safety Data Sheet

TEST REPORT

100 Clemson Research Blvd.
Anderson, SC 29625
(864) 656-1094
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www.brickandtile.org



Results of Tests on brick Conducted in accordance with C67/C67M - 23a Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile

09/25/2024

Name:	US Brick Old St Rt. 22 Gleason, TN 38229	Plant:	Gleason TN
Phone:	8039681561	Sampled Date:	9/9/2024
Report Number:	13138-32569	Received Date:	9/9/2024
		Fired Date:	9/9/2024
		Product Code:	
		Lot Number:	
Description: Buff Body w/Manganese			

Absorption	1	2	3	4	5	Average	Test Date
24 Hour Cold Water (%)	10.1	9.4	9.3	10.5	10.1	9.9	9/16/2024
5 Hour Boiling Water (%)	13.7	13.6	13.4	14.3	13.6	13.7	
Saturation Coefficient	0.73	0.69	0.69	0.73	0.75	0.72	

Compressive Strength	1	2	3	4	5	Average	Test Date
psi	10,210	10,040	10,060	8,860	7,520	9,340	9/18/2024

IRA (Oven Dried Method)	6	7	8	9	10	Average	Test Date
g/min/30 in. ²	36.5	42.2	35.3	40.6	34.2	37.8	9/18/2024

Efflorescence	11	12	13	14	15	Test Date
Efflorescence Detection	Not Effloresced	Not Effloresced	Not Effloresced	Not Effloresced	Not Effloresced	9/20/2024

Void Area	1	2	3	4	5	6	7	8	9	10	Average	Test Date
Void Area (%)	24	24	23	24	24	24	24	24	24	24	24	9/23/2024

The brick represented by the test results shown here comply with the physical property requirements of the standards listed below:

ASTM C216 - 23 Standard Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale)
Grade: SW, MW


Katherine Hill, Quality Manager

**The temperature and humidity of the Bishop Materials Laboratory is constantly kept between 60 -90F, and 30-70% RH
The results shown above apply only to the samples tested, which are provided by the customer.
This test report shall not be reproduced except in full, without written approval of the laboratory.*



Cleaning brick masonry after installation is a routine practice. Selecting the proper cleaner and cleaning methods for your project is crucial to avoid issues which can result from improper cleaning. US Brick offers the following guidelines for cleaning new masonry. Due to the diverse nature of cleaning solutions, procedures and problems, US Brick cannot accept responsibility for the final success or effectiveness of these procedures.

[The Brick Industry Association](#) offers detailed guidelines for cleaning brickwork. Please refer to their [Technical Note 20](#) for comprehensive instructions and references.

	Cleaning Method	Recommended Cleaners
RED BODY OR RED FLASHED BRICKS	<ul style="list-style-type: none"> ✓ Bucket and Brush ✓ Pressurized Water: <u>100-400 psi</u>, 25-60 degree fan nozzle at > 2ft. ✓ Chemical Cleaners 	<p>Proprietary Masonry Cleaners:</p> <ul style="list-style-type: none"> ✓ PROSOCO SureKlean 600 ✓ PROSOCO SureKlean Vana Trol ✓ EaCo Chem NMD 80 <p><i>*Never use unbuffered muriatic acid solution*</i></p>
WHITE, TAN, BUFF, GRAY, PINK, BROWN, IRON SPOT BRICKS	<ul style="list-style-type: none"> ✓ Bucket and Brush ✓ Pressurized Water: <u>100-400 psi</u>, 25-60 degree fan nozzle at > 2ft. ✓ Chemical Cleaners 	<p>Sensitive Brick Cleaners Only:</p> <ul style="list-style-type: none"> ✓ PROSOCO SureKlean Vana Trol ✓ EaCo Chem NMD 80 <p><i>*Never use unbuffered muriatic acid solutions. See Vanadium Notes pg. 3.*</i></p>
BRICKS WITH SAND & SLURRY COATINGS, AND CUT & ROLLBACK TEXTURES (<i>Gentlest cleaning method</i>)	<ul style="list-style-type: none"> ✓ Bucket and Brush ✓ DO NOT use pressurized water. ✓ Chemical Cleaners 	<p>Refer to the approved cleaners above based on brick color.</p> <ul style="list-style-type: none"> ✓ Use Sensitive Brick Cleaners for bricks with heavy white, black, or gray coatings regardless of body color.
COLORED MORTARS	<ul style="list-style-type: none"> ✓ Method is generally controlled by brick category 	<p>Most manufacturers of colored mortars do not recommend chemical cleaning solutions. Unbuffered acids and some proprietary cleaners tend to bleach colored mortars.</p> <ul style="list-style-type: none"> ✓ Mild detergent solutions are recommended.

If you have questions regarding whether a specific cleaner is safe to use on your product, please contact your US Brick Representative for assistance.



New Masonry Best Practices:

When constructing new brick masonry, it is important to use construction practices that will minimize the amount of cleaning required. The following are some general practices that can be used to construct a cleaner wall:

- Store brick off the ground and under a waterproof covering on-site before installation to protect from mud and moisture.
- Cover wall openings and tops of walls at the end of the workday and during other work stoppages to prevent mortar joint washout and entry of water into the completed masonry from rain.
- Reduce mud and mortar splatters on the foundation by placing pine straw or plastic at the base of the wall before landscaping.
- Remove mortar at the end of each day by brushing walls with a non-metallic medium-soft bristle brush.
- Select the gentlest cleaning method which will effectively clean the brickwork - beginning with the Bucket and Brush Method. Always test any cleaning method on a small area before cleaning the entire surface.

Cleaning with Chemicals:

- Saturate walls with water before applying a cleaning agent. This reduces the amount of cleaner absorbed by the wall and prevents acid from penetrating deep into the bricks.
- Apply an approved masonry cleaner (referencing the table on page 1):
 - ◆ Always wear the prescribed PPE when handling chemical cleaners.
 - ◆ Follow the cleaner manufacturer's recommendations for application and dwell time.
 - ◆ Do not allow the cleaner to dry in the wall.
 - ◆ **Applying cleaners with high pressure can drive the chemicals deeper into the bricks and mortar. DO NOT use "high pressure" spray** to apply cleaning solution or when rinsing down the walls.
 - ◆ Use a medium-soft non-metallic brush to scrub areas with excess mortar build-up rather than applying more cleaner.
- Rinse walls thoroughly from top to bottom with large amounts of low-pressure clean water. It is important to ensure all the cleaner is flushed from the wall to prevent acid burn, manganese bleeding and vanadium staining.
- If staining or efflorescence develops after cleaning, **DO NOT** reclean the masonry with the same cleaning agent until consulting with your sales representative. When recleaning is commenced, work on a sample wall area only in order to verify a new cleaning procedure.

Pressurized Water:

Cleaning with pressurized water can damage bricks with surface coatings and new mortar joints. Bricks without sand and surface coatings can be cleaned with pressurized water once mortar has dried for 7 days and has hardened following the below guidelines:

- Pressurized water should be regulated to 100-400 psi when cleaning new brickwork
- Use a 25-60 degree fan tip nozzle at a distance of no closer than 2 feet
- Test the cleaning method on a small area before cleaning the entire wall

Common Issues Caused by Improper Cleaning Techniques:

Vanadium Staining:

Many white or buff clay deposits naturally contain traces of a metal called vanadium. During kiln firing, vanadium separates from the clay and crystallizes as metallic salts. Similar to other types of efflorescence, when vanadium salts dissolve they migrate to the brick's surface, leaving visible stains as the bricks dry. Vanadium stains typically appear green but can also be yellow, brown, or purple. These stains are neither permanent or harmful and they do not indicate any defect of the brick(s). The most common causes are due to trapped moisture and/or use of acidic new masonry cleaners on light-bodied bricks. Acidic masonry cleaners designed to remove mortar smears often inadvertently dissolve internal vanadium salts, causing them to deposit visibly on the surface as the brick dries. Additionally, moisture trapped due to improper storage or inadequate wall protection during construction can similarly dissolve internal vanadium salts, causing them to surface upon drying. Vanadium stains will generally wash off by itself over time, but their removal can be hastened by use of the proper chemical treatments noted below. In general, it is always best practice to protect brick from excessive moisture exposure during on-site storage and construction. This includes storing bricks off the ground and under protective covers, as well as ensuring partially built walls are adequately protected from water infiltration during construction. Never use or permit the use of highly concentrated, unbuffered hydrofluoric or hydrochloric (muriatic) acid solutions to clean buff or white body bricks.



US Brick recommends only [EaCo Chem NMD 80](#) or [PROSOCO SureKlean Vana Trol](#) for cleaning new masonry surfaces that are susceptible to vanadium stains due to their natural clay composition (white and buff body bricks), including but not limited to: [Belle Meade](#), [St. Lorain](#), [Titan](#), and [Sterling](#). These cleansers are recommended to simplify initial cleaning, minimize potential staining, and can also be used to remove existing stains following the manufacturers' instructions. In rare cases where staining persists after routine cleaning, [EaCo Chem's OneRestore®](#) may be applied as a targeted treatment. This is a versatile, professional cleaner that will effectively remove metal or mineral oxide stains when used in accordance with the manufacturers' instructions. If you have questions about whether a specific cleaner is safe to use on your product, please contact your US Brick representative directly for assistance. US Brick is not responsible for damages due to improper cleaning solutions or applications.

Manganese Bleeding:

Manganese is a natural pigment commonly used in brick manufacturing to achieve a darker color. Manganese stains can occasionally occur in bricks containing manganese compounds. This type of stain is most often caused by improper cleaning with strong acidic solutions or the failure to pre-wet the bricks before application. Though not as common, excessive rain during construction can also trigger manganese bleeds. These stains are typically tan or brown in appearance, often referred to as "tobacco stains." US Brick recommends a sensitive masonry cleaner such as [PROSOCO SureKlean Vana Trol](#) or [EaCo Chem NMD 80](#) when cleaning new masonry that contains manganese (brown, tan, or gray bricks) to help





avoid manganese bleeding. In cases where manganese staining persists after routine cleaning, [EaCo Chem's OneRestore®](#) may be used following the manufacturer's instructions as an effective treatment. US Brick is not responsible for damages due to improper cleaning solutions or applications.

Acid Burns:

Acid burn occurs when strong cleaners such as unbuffered muriatic acid solutions are used to clean masonry. Acid burn is also seen when bricks are not soaked before cleaning or when cleaning solutions are not thoroughly rinsed from the wall. Acid burn can leave a hazy, discolored stain on bricks and often causes discoloration in the mortar. Using approved cleaners and following the manufacturer's instructions will prevent this problem.



Aggressive Cleaning:

Cleaning methods such as abrasive blasting or high pressure water cleaning, can etch mortar joints and remove the outer surface of brick, resulting in permanent damage for any brick with sand or slurry surface coatings. The use of high-pressure water is not recommended for bricks with surface coatings. Select the gentlest method (reference table pg. 1) to effectively clean the bricks and always test the method on a small area before cleaning the entire wall.



Conclusion: Using the proper cleaning method is the key to avoiding common issues and maintaining the beauty of your home or building. The selection of effective cleaning solutions, as well as the use of consistent and appropriate cleaning procedures throughout the job, is essential to successful cleaning and cannot be overemphasized. Improper cleaning practices can cause a host of problems that in severe cases cannot be repaired. These guidelines do not address specific safety issues related to various methods of cleaning brick masonry. Beware that cleaning agents and processes may be hazardous and may cause injury if used carelessly or inappropriately. Cleaning operations should be performed only by personnel trained to handle the safety risks associated with the work and following the label instructions.

SECTION 7 - Handling and Storage

Handling: Avoid contact with eyes. Do not breathe dust. If you need to saw, use a wet saw.

Storage: Store on hard, compacted surface in well ventilated area.

SECTION 8 - Exposure Controls/ Personal Protection

Exposure: Aluminum Silicates - 15 mg/m³ Quartz - .025 mg/m³
Manganese Oxides - 0.2mg/m³ Chromium Oxides - 0.05mg/m³

Controls: Use of wet sawing methods is recommended anytime that brick must be cut.

Ventilation : Provide adequate ventilation to maintain exposure below listed levels.

Personal Protection: Safety glasses should be worn. If sawing, wear NIOSH approved dust mask.

SECTION 9 - Physical and Chemical Properties

Physical state:	Solid	Vapor point:	NA
Odor:	Odorless	Ignition Temp:	NA
Melting point:	NA	Specific Gravity:	NA
Boiling point:	NA	Solubility in Water:	Insoluble
Flammability:	Not flammable		

SECTION 10 - Stability and Reactivity

Stability: Stable under normal conditions

Reactivity: No known reactions.

SECTION 11 - Toxicology Information

Acute toxicity : Not classified

Quartz {14808-60-7} :

IARC Group - 1-Carcinogenic to humans

National Toxicology Program - 2-Known Human Carcinogens

Manganese Dioxide (1313-13-9) :

LD50 oral rat - >3478 mg/kg

Chromium Oxide {Cr₂O₃} (1308-38-9) :

LD 50 oral rat - >15000 mg/kg

LCS0 inhalation rat - >5.41 mg/l/4h

SECTION 12 - Ecological Information

Ecology - general Long term effects in an aquatic environment are not known.

Bioaccumulative Potential : Not known

SECTION 13 - Disposal Considerations

Waste Disposal : Brick as shipped is considered a non-hazardous waste. It should be disposed of according to local and state requirements.

SECTION 14 - Transportation Information

Proper name: Brick

Hazard Class: Brick as shipped are not hazardous per DOT regulations.

SECTION 15 - Regulatory Information

SARA 311/312 : Brick as shipped are not a Section 311/312 reportable product.

SARA 313: Brick as shipped are not subject to Toxic Chemical Release Inventory requirements.

SECTION 16 - Other Information

Date of Issue : Aug-21

US Brick LLC considers our product an "article" as defined in 30 CFR 1200(b)(g)(iv) and 40 CFR 372.38. As an article, an SDS is not required and the product is exempt from all other requirements of the hazard communication standard. OSHA requires an SOS for brick because it is occasionally dry sawed. We recommend only wet sawing of brick.

This product contains Crystalline Silicia, Quarts and may also contain trace amounts of other chemicals known to cause cancer, birth defects or other reproductive harm

This SOS was prepared with information believed accurate at the time of preparation and was prepared and provided in good faith. However, US Brick LLC assumes no responsibility as to the accuracy or suitability of such information and no warranty expressed or implied is made.