



**PRODUCT PERFORMANCE TESTING LABORATORY**

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March 27, 2018

Laticrete International  
Attn: Steve Fine  
1 Laticrete Park N.  
Bethany, CT 06524

Dear Mr. Fine,

Tile Council of North America has tested the samples you submitted. Test report TCNA-0094-18 is enclosed. If you have any questions or concerns, please contact us.

Best Regards,

TILE COUNCIL OF NORTH AMERICA, INC.

Katelyn Simpson  
Laboratory Manager  
Enclosures



**TCNA TEST REPORT NUMBER:** TCNA-0094-18 **PAGE:** 1 OF 5

**TEST REQUESTED BY:** Laticrete International

**TEST PROCEDURE:** ASTM C627: "A Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester"

Informal Test Method Description: This test method covers the evaluation of ceramic floor tile installation systems, using the Robinson-type floor tester. This test method consists of preparing an installation assembly to simulate the type of installation under consideration, subjecting it to various cycles on a Robinson-type floor tester, and evaluating the results in a prescribed manner.

This summary is provided for the reader's convenience and is not a complete description of the method. See ASTM C627 for all method details and information.

**TEST SUBJECT MATERIAL:** Identified by client as: "LATICRETE STRATA\_HEAT with LATICRETE NXT LEVEL PLUS"

**TEST DATE:** 3/15/2018 – 3/16/2018

**TEST ASSEMBLY SET-UP:**  
All the materials used were specified by the client and the tested assembly was built per the client's instructions.

**Materials:**

As per client's request, the following materials were used for the preparation of the test assembly.

Item #	Product name and size	Product Code	Provided By:
1	23/32" T&G	N/A	TCNA
2	Laticrete STRATA_HEAT Mat	N/A	Laticrete
3	Laticrete STRATA_HEAT Wire	N/A	Laticrete
4	Laticrete NXT Level Plus	0901-0055-21	Laticrete
5	Laticrete 254 Platinum	0254-0050-21	Laticrete
6	Laticrete STRATA_HEAT Thermal Packet	N/A	Laticrete
7	12" x 12" Crossville Porcelain	A850	TCNA
8	Laticrete Permacolor Select Grout	2600-012-2 Color: D#631878	Laticrete

**Substrate:** The substrate was prepared by a TCNA representative.

Subfloor type: Wood

Joist Spacing: 19.2" OC

Wood thickness and type: 23/32" T&G

2<sup>nd</sup> layer thickness and type: N/A

Installation notes: The seam was positioned 15" off the centerline of the system and perpendicular to the joist. The subfloor was nailed to the joists with 2" ring shank nails set at six-inch centers on the perimeter joists and twelve-inch centers on the intermediate joists. A 1/4" bead of construction adhesive was applied to each joist prior to nailing. 2" tall borders were placed around the perimeter of the tested area.





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**Underlayment:** The underlayment was installed by a TCNA representative.

Product Name: Laticrete STRATA\_HEAT Mat and Laticrete NXT Level Plus

Installation Notes: Laticrete 254 Platinum was mixed per manufacturer specification (22.9:100 by weight) and applied to the surface of the test using a 1/4" x 3/16" V-notched trowel. The thin-set was first keyed in with the flat side of the trowel then combed with the notched side to form parallel ridges. The mat was cut into 2 pieces (37-1/2" x 43-3/4" and 8-7/8" x 43-3/4") and laid into the thin-set with an abutted seam. Using the flat side of the trowel, the mat was pressed into the thin-set to ensure proper coverage. STRATA\_HEAT Wire was installed into the mat following client instructions. The system was allowed to cure 24 hours. Laticrete NXT Level Plus was mixed per client specification (20.9:100) and poured to 1/2" depth and allowed to cure for 24 hours before tiles were installed.

**Tile:** The tile was installed by a TCNA representative.

Tile Type: 12" x 12" Crossville Porcelain

Setting Material: Laticrete 254 Platinum Thin-set and Laticrete STRATA\_HEAT Thermal Packet (mixed)

Mix Ratio: 26.0:100 by weight

Trowel Size: square-notch trowel

Installation Notes: Laticrete STRATA\_HEAT Thermal Packets (x2) were mixed with a 50 lb bag of Laticrete 254 Platinum, per the client's specification. The thin-set was first keyed in with the flat side of the trowel then combed with the notched side to form parallel ridges. The tiles were back buttered with a skim coat to ensure proper coverage. The assembly was cured 24 hours before grouting.

**Grout:** The grout was installed by a TCNA representative.

Grout Type: Laticrete Permacolor Select Grout

Mix Ratio: 17.6:100 by weight

Grout Joint Size: 1/4"

Installation Notes: A grout float was used to force the grout into the joints. Excess grout was removed with the edge of the float. The grout was allowed to set up for approximately 20 minutes before the installation was cleaned with a sponge and water.

Cure Time: The grouted installation was allowed to cure for 30 days.





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**TEST RESULTS:**

Cycle	Wheels	Weight (lb)	Observations
1	Soft Rubber	100	No damage observed, maximum deflection 0.007"
2		200	No damage observed, maximum deflection 0.010"
3		300	No damage observed, maximum deflection 0.018"
4		300	No damage observed, maximum deflection 0.019"
5	Hard Rubber	100	No damage observed, maximum deflection 0.011"
6		200	No damage observed, maximum deflection 0.017"
7		300	No damage observed, maximum deflection 0.022"
8		300	No damage observed, maximum deflection 0.027"
9	Steel	50	No damage observed, maximum deflection 0.010"
10		100	No damage observed, maximum deflection 0.014"
11		150	No damage observed, maximum deflection 0.016"
12		200	No damage observed, maximum deflection 0.021"
13		250	No damage observed, maximum deflection 0.024"
14		300	No damage observed, maximum deflection 0.027"

*Note: Per ASTM C627, section 10, criteria for failure is based on the number of tiles or grout joints damaged during cycling.*

*Cycling of a test assembly is stopped when the damage observed exceeds one or more of the following criteria:*

*Chipped Tile—5 % of the tile in the wheel path or one tile, whichever is greater.*

*Broken Tile—3 % of the tile in the wheel path or one tile, whichever is greater.*

*Loose Tile—3 % of the tile in the wheel path or one tile, whichever is greater.*

*Popped-Up Grout Joint—5 % of the joints in the wheel path or one joint, whichever is greater.*

*Cracked Grout Joint—5 % of the joints in the wheel path or one joint, whichever is greater.*

*Powdered Grout Joints—5 % of the joints in the wheel path or one joint, whichever is greater.*

**HANDBOOK CLASSIFICATIONS\*:**

Classification	Cycles
Residential	Passes cycles 1-3
Light	Passes cycles 1-6
Moderate	Passes cycles 1-10
Heavy	Passes cycles 1-12
Extra Heavy	Passes cycles 1-14

*\*For more detailed information, refer to the TCNA Handbook for Ceramic, Glass, and Stone Tile Installation.*

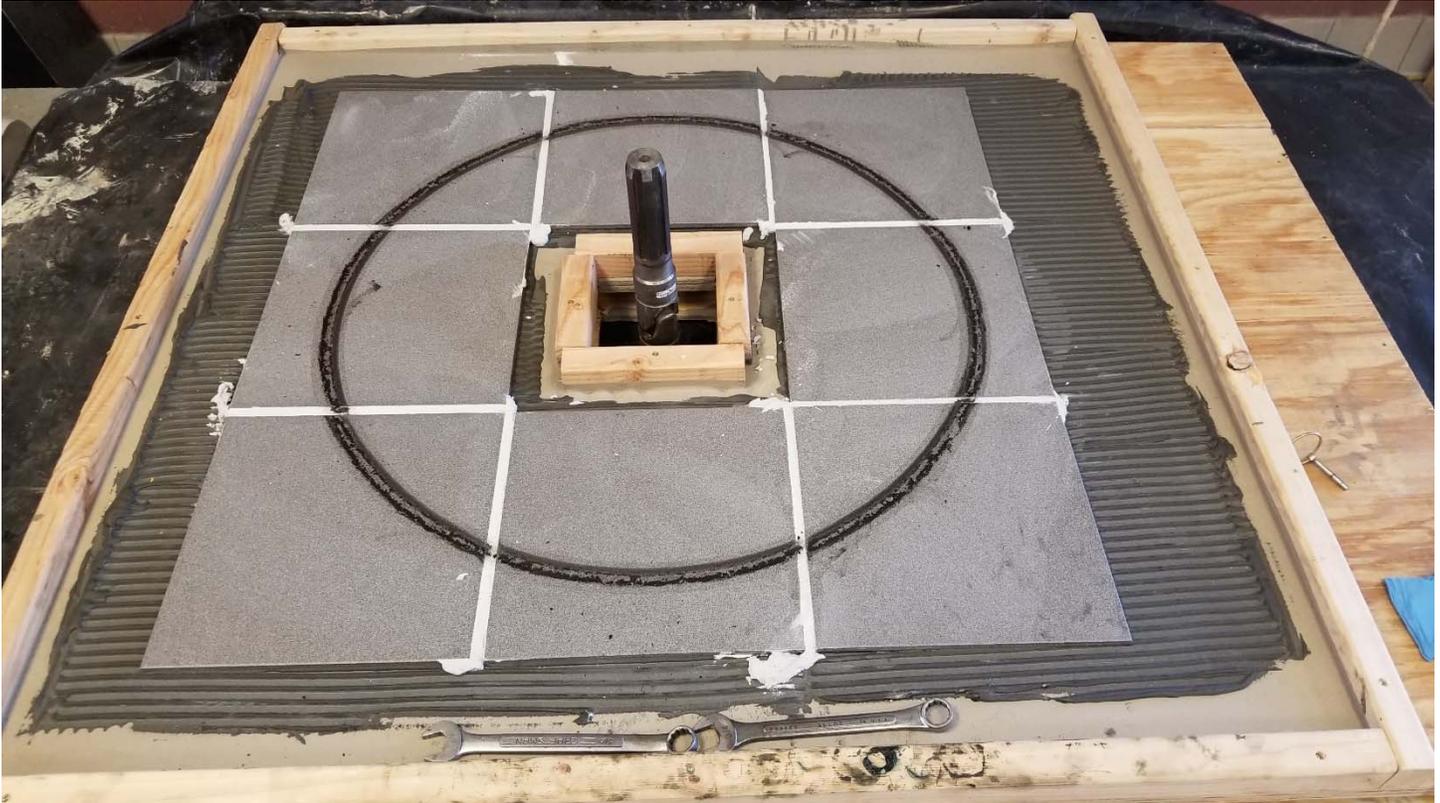


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**PHOTOS:**



**Image 1:** Full assembly after testing



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3/27/2018

