



PRODUCT TESTING SERVICE

100 Clemson Research Blvd. □ Anderson, SC 29625 □ Tel (864) 646-TILE □ Fax (864) 646-2821

April 29, 2016

Nue Tile LLC
Attn: Joe D'Agostino
1148 Meadow Lane
Grand Island, NY 14072

Dear D'Agostino,

Tile Council of North America has tested the samples you submitted. Test report TCNA-108-16 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



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TCNA TEST REPORT NUMBER: TCNA-108-16

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TEST REQUESTED BY: Nue Tile LLC

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: "Tile Release System"

TEST DATE: 4/7/2016 - 4/8/2016

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	Concrete base with a smooth finish Nominal Size: 48" x 48" x 2" (1219 mm x 1219 mm x 51 mm)	N/A	TCNA
2	12" x 12" Polished porcelain tiles (Regal Chocolate Brown)	68101	Nue Tile LLC
3	Mapei UltraFlex 3 Thin-set Mortar	J28H543 01067	Nue Tile LLC
4	Nue Tile Release Spray Adhesive	060314P-2	Nue Tile LLC
5	Nue Tile Release System	N/A	Nue Tile LLC
6	12" x 12" Porcelain Tiles (Regal Grey Matte)	56412	Nue Tile LLC
7	Mapei Flexcolor CQ Grout	J07J527 28115	Nue Tile LLC

Substrate: Subfloor Type: Concrete, A 48" x 48" x 2" concrete base was prepared and cured for a minimum of 28 days prior to testing.

First Layer of Tile: The tile was installed by a TCNA representative.

Tile Type: 12" x 12" Polished Porcelain tiles (Regal Chocolate Brown)

Setting Material: Mapei Ultraflex 3 Thinsset

Mix Ratio: 25:100 by weight

Trowel Size: 1/4" x 3/8"

Installation Notes: 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.

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Grout: The grout was installed by a TCNA representative.

Grout Type: Mapei Flexcolor CQ grout
Mix Ratio: Ready to use, premixed grout
Grout Joint Size: 3/16"

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 24 hours before proceeding with installation of the second layer of the system.

Underlayment: The underlayment was installed by a TCNA representative.

Product Name: Nue Tile Release System

Installation Notes: Nue Tile Release spray adhesive was applied to the 12" x12" polished porcelain tiles per manufacturer's instructions. The adhesive was allowed to become tacky for forty minutes before applying the Tile Release System. The Tile Release system was laid with full pieces along each corner of the system and smaller pieces were cut in between the larger pieces. Special care was taken to leave a 1/8" gap between sheets. Each piece laid at a 15 degree angle to the system as to not align the grout joints and the underlayment seam. Once in place, each piece was rolled with a hand roller. The test pad was tiled immediately after laying the Tile Release System.

Second Layer of Tile: The tile was installed by a TCNA representative.

Tile Type: 12" x 12" Porcelain Tiles (Regal Grey Matte).
Setting Material: Mapei Ultraflex 3 Thin-set Mortar
Mix Ratio: 25:100 by weight
Trowel Size: 1/4" x 3/8"

Installation Notes: 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. Special care was taken not to overlap grout joint from the bottom layer. The assembly was cured 24 hours before grouting.

Grout: The grout was installed by a TCNA representative.

Grout Type: Mapei Flexcolor CQ grout
Mix Ratio: Ready to use, premixed grout
Grout Joint Size: 3/16"

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 28 days.

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TEST RESULTS:

Cycle	Wheels	Weight (lb)	Observations
1	Soft Rubber	100	No visible damage
2		200	No visible damage
3		300	No visible damage
4		300	No visible damage
5	Hard Rubber	100	No visible damage
6		200	No visible damage
7		300	No visible damage
8		300	1 chipped tile
9	Steel	50	No additional damage
10		100	No additional damage
11		150	No additional damage
12		200	No additional damage
13		250	No additional damage
14		300	1 additional chipped tile

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 one or more of the following criteria is met:

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.*

PHOTOS:



Image 1: Full assembly after testing



Image 2: Chipped tile



Image 3: Chipped tile



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TILE REMOVAL: (Not Part of ASTM C627 standardized testing)

The client requested that a pry-bar and hammer be used to lift the tiles off the test pad and to record the time it took for removal and how many full pieces of tile were removed from the system. The tile removal took approximately 5 minutes and all pieces of tile were removed without breakage. Image below shows the tiles after removal from the test pad.



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Katelyn Simpson
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4/29/2016