



PRODUCT TESTING SERVICE

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

June 20, 2013

Patriot Timber Products Inc
Attn: Paula Hilemn
PO Box 19065
Greensboro, NC 27419

Dear Ms. Hilemn,

Tile Council of North America has tested the samples you submitted. Test report TCNA-161-13 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



PRODUCT TESTING SERVICE

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

TCNA TEST REPORT NUMBER: TCNA-161-13

PAGE: 1 OF 5

TEST REQUESTED BY: **Patriot Timber Products Inc**
Attn: Paula Hilemn
PO Box 19065
Greensboro, NC 27419

TEST SUBJECT MATERIAL: Identified by client as: “SurePly Premium UL”

TEST DATE: May 29, 2013 – May 30, 2013

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

TEST AND MATERIAL DESCRIPTION:

As per client’s request, the following materials have been used for the preparation of the testing pads.

Item #	Product name and size	Provided By:
1	APA rated “Exposure 1” plywood subfloor; 23/32” thick OSB; T&G	TCNA
2	SurePly Premium Undelayment	Patriot Timber Products Inc
3	TCNA High Performance ANSI A118.4/ A118.11 Mortar	TCNA
4	12" x 12" Crossville porcelain tiles	TCNA
5	Custom Polyblend sanded grout	TCNA

TYPE OF INSTALLATION:

All the materials used were specified by the client and the tested assembly was built per the client’s instructions. The installation was a porcelain tile over SurePly Premium underlayment, over plywood.

The 12" x 12" Crossville porcelain tiles were installed over the SurePly Premium underlayment using “TCNA High Performance ANSI A118.4/ A118.11 Mortar” thin-set mortar. Further details about the installation are provided below.

Base and Underlayment:

The installation of the plywood subfloor and SurePly Premium underlayment was performed by a TCNA representative according to the instructions provided by the client. The installation procedure followed by the technician is outlined below.

Katelyn Simpson
Laboratory Manager

6/20/13
Date



PRODUCT TESTING SERVICE

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

TCNA TEST REPORT NUMBER: TCNA-161-13

PAGE: 2 OF 5

Base and Underlayment:

The plywood subfloor was nailed to four 2" x 2" joists spaced 16" O.C. to simulate the support provided in an actual installation. The tongue and groove 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.

The SurePly Premium UL was cut with a seam positioned 15" off the centerline of the system and perpendicular to the joist. The seam was lightly abutted. The SurePly Premium was stapled to plywood subfloor using 3/16" staples. The staples were placed 4" OC in the field and 2" along the perimeter. Special care was taken to follow the stapling instructions provided by the client.

Tile preparation:

Any required cutting of the 12" x 12" x 0.375" tile was done on a wet saw by TCNA representative.

Tile and Grout:

All tile installation and grouting was performed by a TCNA representative. The installation procedure followed by the technician is outlined below.

TCNA High Performance ANSI A118.4/ A118.11 thin-set mortar was mixed per manufacturer's instructions (mix ratio 20.9:100) and was troweled over the SurePly Premium UL with a 1/4" x 3/8" notched trowel. The thin-set was combed with the notched side to form parallel ridges. The tiles were back buttered to ensure proper coverage. Once set, the installation was allowed to cure for 24 hours before grouting.

Custom Polyblend sanded grout was mixed with water per manufacturer's instructions (mix ratio 17:100) was forced into the 1/4" grout joints with a rubber float. 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. The grouted installation was subsequently allowed to cure for 64 days.

Katelyn Simpson
Laboratory Manager

6/20/13
Date



PRODUCT TESTING SERVICE

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

TCNA TEST REPORT NUMBER: TCNA-161-13

PAGE: 3 OF 5

Figure 1: Tile layout – Each tile was 12" x 12" x 0.375" with perimeter pieces cut to accommodate for the ASTM C627 testing apparatus.

TEST RESULTS:

The installation completed six cycles with no evidence of damage to the tiles or grout joints. At the completion of cycle seven (hard rubber wheels, three hundred pounds per wheel) there was one cracked grout joint. The test went on to continue the remaining seven cycles without further damage. All evaluation criteria were based on 8 tiles and 8 grout joints in the wheel path of the Robinson-Type Floor Tester.

CONCLUSION:

In accordance with the Performance-Level Requirement Guide and Selection Table of the 2013 *TCNA Handbook for Ceramic, Glass, and Stone Tile Installation* (page 40), the installation is classified “EXTRA HEAVY”.

Katelyn Simpson
Laboratory Manager

6/20/13
Date

TCNA TEST REPORT NUMBER: TCNA-161-13

PAGE: 4 OF 5

Appendix: Photos



Image 1: Full assembly of the installed 12"x 12" Crossville Porcelain tile after testing (Figure 1)



Katelyn Simpson
Laboratory Manager

6/20/13
Date



Image 2: Cracked grout joint



Katelyn Simpson
Laboratory Manager

6/20/13
Date