



PRODUCT TESTING SERVICE

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

August 7, 2006

Southern Cross Building Products, LLC
Attn: Rodrigo Vera
1445 N. Congress Ave. # 6
Delray Beach, FL 33445

Dear Mr. Vera,

Tile Council of North America has tested the samples you submitted. Test report TCNA-083-06 is enclosed; please review the results carefully. If you have any questions or concerns, please contact us.

Best Regards,

TILE COUNCIL OF NORTH AMERICA, INC.

Virgil Irick
Director of Laboratory Services
Enclosures



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TCNA TEST REPORT NUMBER: TCNA-083-06 PAGE: 1 OF 2

TEST REQUESTED BY: Southern Cross Building Products, LLC
Attn: Rodrigo Vera / Zack Cooke
1445 N. Congress Ave. # 6
Delray Beach, FL 33445

TEST SUBJECT MATERIAL: Identified by client as: GREEN E-Board

TEST DATE: 6/28/06-6/29/06

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

Materials:

A thin-set installation over a 48" x 49 1/2" plywood base was prepared using the following materials:

- 1) APA rated "Exposure 1" tongue and groove plywood subfloor; 3/4" thick
- 2) Mapei Ultra Flex polymer modified thin-set mortar
- 3) GREEN E-Board
- 4) 8" x 8" Crossville porcelain tile; (3/16" grout joints)
- 5) Mapei Ultra Color sanded grout

Base and Underlayment:

The tongue and groove plywood subfloor was nailed to four 2" x 2" joists spaced 16" O.C. to duplicate the support provided in an actual installation. Prior to nailing the subfloor, a 1/4" bead of construction adhesive was applied to each joist. The tongue and groove seam was located at the centerline of the installation, perpendicular to the joists. The plywood subfloor was nailed to the joists with 2" ring shank nails set at six-inch centers on the perimeter joists and twelve-inch centers at the intermediate joists.

Thin-set mortar, mixed with water per manufacturer's instructions, was troweled over the plywood subfloor with a 1/4" x 1/4" square-notched trowel. Three sheets of GREEN E-Board (23 3/4" x 13"; 23 3/4" x 13"; 47 1/2" x 36 1/4") were immediately installed in a brick pattern over the thin-set with a 1/4" seam parallel to the joists. 1 5/8" galvanized roofing nails were used to further adhere the board to the subfloor. The nails were spaced 6" O.C. at the perimeter and 8" O.C. throughout the field. The seam was taped with 2" fiberglass mesh tape and keyed with mortar prior to tiling. The system was then allowed to cure for 24 hours before setting the tile.



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Tile and Grout:

Thin-set mortar, mixed with water per manufacturer's instructions, was troweled over the GREEN E-Board with a 1/4" x 3/8" U-notched trowel. The thin-set mortar was first keyed in with the flat side of the trowel and then combed with the notched side to form parallel ridges. The porcelain tiles were set in the thin-set by pressing down and sliding the tiles in a direction perpendicular to the combed ridges. A beat-in block and rubber mallet were used to reduce lippage between tiles. After the tiles were installed, the thin-set was allowed to cure for 24 hours before grouting.

Sanded grout, mixed with water per manufacturer's instructions, was forced into the 3/16" grout joints with a rubber float. Excess grout was removed with the edge of the float by holding the float at a 90° angle. The grout was allowed to set up for approximately 20 minutes before the installation was cleaned with a sponge and clean water. The grouted installation was subsequently allowed to cure for 28 days.

At the end of the cure period, the installation was subjected to load cycling as defined in ASTM C-627. The deflection of the plywood subfloor was measured in the wheel path, midway between the 16" O.C. joists.


TEST RESULTS:

The installation completed fourteen cycles with no evidence of damage to the tile or grout joints. The maximum deflection of the plywood subfloor during cycling was approximately 0.026".

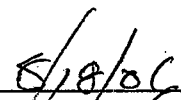
* All evaluation criteria were based on 18 tiles and 22 grout joints in the wheel path of the Robinson-Type Floor Tester.

CONCLUSION:

In accordance with the Performance-Level Requirement Guide of the 2006 Handbook for Ceramic Tile Installation (Page 15), the installation is rated as "EXTRA HEAVY" for "extra heavy and high-impact use in food plants, dairies, breweries, and kitchens".



Virgil Irick
Director of Laboratory Services



Date