



PRODUCT TESTING SERVICE

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TCNA TEST REPORT NUMBER: TCNA-357-06 (B) PAGE: 1 OF 2

TEST REQUESTED BY: Keene Building Products
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TEST SUBJECT MATERIAL: Identified by client as: STEP SOFT 05 035 membrane

TEST DATE: 12/28/06-12/29/06

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 concrete base was prepared using the following materials:

- 1) A 42" x 42" x 2" concrete base with a smooth finish
- 2) Acrylic Pro mastic
- 3) STEP SOFT 05 035 membrane
- 4) Custom Flexbond Thin-set
- 5) 12" x 12" Crossville porcelain tiles (1/4" grout joints)
- 6) Laticrete 1500 Tri-Poly fortified sanded grout with Laticrete 1776 admix

Base and Underlayment:

Acrylic Pro mastic was troweled over the concrete base per manufacturer's instruction with a 1/16" x 1/16" V-notched trowel. The STEP SOFT 05 035 membrane was laid on top of the mastic and rolled with a 50-pound roller. The installation was then allowed to cure for 24 hours before setting the tile.



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Tile and Grout:

Thin-set mixed with water per manufacturer's instructions was troweled over the plywood subfloor 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 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 admixture was forced into the 1/4" 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 cycling as defined in ASTM C-627. The deflection of the plywood subfloor was measured under the wheel path midway between the 16" O.C. joists.

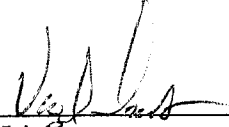
TEST RESULTS:

The installation completed five cycles with no evidence of damage. At the completion of cycle six (hard rubber wheels, two hundred pounds per wheel) there were four cracked grout joints. At that point, the damage constituted failure of the installation according to the evaluation criteria of ASTM C627. *

* 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 of the 2006 TCNA Handbook for Ceramic Tile Installation (page 15), the installation is classified as "RESIDENTIAL" for "kitchens, bathrooms, and foyers."



Virgil Irick
Director of Laboratory Services

2/13/07
Date