TCNA
TILE COUNCIL OF NORTH AMERICA, INC.
PRODUCT TESTING SERVICE
100 Clemson Research Blvd. Anderson, SC 29625 Tel (864) 646-TILE Fax (864) 646-2821

May 20, 2009

Noble Company
Attn: Jim Wadaga
P.O. Box 350
Grand Haven, MI 49417

Dear Mr. Wadaga,

Tile Council of North America has tested the samples you submitted. Test report TCNA-014-09 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


This report is confidential and has been prepared for the exclusive use of the client. It is not an endorsement, approval, certification, or criticism of any product by TCNA. This report shall not be published in any form without prior written consent of TCNA.

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# PRODUCT TESTING SERVICE

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**TEST REPORT NUMBER:** TCNA-014-09 

**TEST REQUESTED BY:** Noble Company
Attn: Jim Wadaga
P.O. Box 350
Grand Haven, MI 49417

**TEST SUBJECT MATERIAL:** Identified by client as: Noble Wall Seal

**TEST DATES:** 1/30/09-5/18/09

## ANSI SPECIFICATIONS FOR LOAD BEARING, BONDED, WATERPROOF MEMBRANES FOR THIN-SET CERAMIC TILE AND DIMENSION STONE INSTALLATION (A118.10)

| TEST/DESIGNATION | EVALUATION | ANSI SPECIFICATION |
|---|---|---|
| Mold Growth (4.1) | does not support mold growth | "Membrane shall not support mold growth" |
| Seam Strength (4.2) | 64 lbs | 16 lbs/2-inch width |
| Breaking Strength (4.3) Longitudinal | 1413 psi | 170 psi minimum |
| Breaking Strength (4.3) Transverse | 1521 psi | |
| Dimensional Stability (4.4) | | |
| Longitudinal (158°F) | 0.03% change after 6 hours | 0.7% max. length change |
| Longitudinal (-15°F) | -0.02% change after 6 hours | |
| Transverse (158°F) | 0.07% change after 6 hours | |
| Transverse (-15°F) | -0.05% change after 8 hours | |
| Waterproofness (4.5) | no moisture penetration | no moisture penetration after 48 hours |
| Shear Strength to Ceramic Tile and Cement Mortar* (5.0) | | |
| 7-day shear strength (5.3) | 171 PSI | greater than 50 PSI |
| 7-day water immersion shear strength (5.4) | 129 PSI | greater than 50 PSI |
| 4-week shear strength (5.5) | 119 PSI | greater than 50 PSI |
| 12-week shear strength (5.6) | 106 PSI | greater than 50 PSI |
| 100-day water immersion shear strength (5.7) | 123 PSI | greater than 50 PSI |

* Custom Versabond Fortified Thin-Set Mortar

Katelyn Simpson
Laboratory Manager

5/20/09
Date



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