



MEMO

Date: 8/14/09

To: ICC-ES
5360 Workman Mill Road
Whittier, CA 90601

Reference: ICC-ES Report to be evaluated

Subject: Addition of three new products (NobleSeal CIS, NobleSeal SIS, and Noble Deck)

This memo is on behalf of Noble Company with regards to the addition of NobleSeal CIS, NobleSeal SIS, and Noble Deck. Per the manufacturer the three new additions are manufactured at the same location and with the same raw materials as Noble TS, which is under review for an ICC-ES report. Confirmation testing was performed using section M-4.1 (Micro-Organism Resistance), M-4.3 (Breaking Strength), M-4.4 (Dimensional Stability), M-4.5 (Waterproofness), and M-5.4 (7-Day Water Immersion Shear Test). These tests were selected for a baseline comparison with results from the original testing on the Noble TS product.

	NobleSeal TS (original)	NobleSeal CIS	NobleSeal SIS	Noble Deck
M-4.1 (Micro-Organism)	No Growth	No Growth	No Growth	No Growth
M-4.3 (Breaking Strength)	1175 psi	1243	796	1076
M-4.4 (Dimensional Stability)	158°F - 0.005%	158°F - 0.000%	158°F - 0.452%	158°F - 0.000%
	158°F - 0.006%	158°F - 0.000%	158°F - 0.060%	158°F - 0.000%
	-15°F - 0.001%	-15°F - 0.000%	-15°F - 0.000%	-15°F - 0.000%
	-15°F - 0.000%	-15°F - 0.000%	-15°F - 0.000%	-15°F - 0.000%
M-4.5 (Waterproofness)	No Leakage	No Leakage	No Leakage	No Leakage
M-5.4 (7-Day Water Immersion Shear Test)	84.7 psi	81.0 psi	79.3 psi	87.7 psi

Section M-4.2 was not conducted due to the material has the same surface used on the top and bottom and if any variations were present the variance would be represented through the testing of section M-5.4. Furthermore the remain shear strength section were not conducted due to the cumulative data collected by SGS affirms section 5.4 (7 Day Water Immersion Shear Strength) is the utmost distressing criterion of section 5.

With these evaluations it is the conclusion of SGS there is no difference between NobleSeal TS, NobleSeal CIS, and Noble Deck. Also the minor differences between NobleSeal SIS and the materials listed above does not affect the compliance to ANSI A118.10-09. Please let me know if you have any questions or comments.

Best Regards,

S. Scott Parkhurst
Tulsa Technical Manager
SGS US Testing Company
Tulsa, Oklahoma

TEST REPORT



CLIENT: Noble Co.
7300 Enterprise Drive
Spring Lake, MI
United States 49456

Attention: Jim Wadaga

Test Report No: 654:024011 Date: August 14, 2009

SUBJECT: Evaluation of material to ANSI A118.10-1999, Sections M-4.1, M-4.3, and M-5.4 only.
REFERENCE: Letter
SAMPLE ID: Three (3) rolls identified by client as "NobleSeal SIS, NobleSeal CIS, and Noble Deck" were received in good condition on 6/23/09.
PROCEDURE: The test sample was evaluated in accordance with ANSI A118.10-1999 sections M-4.1, M-4.3, M-4.4, M-4.5 and M-5.4 "Standard Specification for Load Bearing, Bonded, Waterproof Membrane for Thin-Set Ceramic Tile and Dimension Stone Installation". No revisions to this report will be allowed after 90 days of the report date.
RESULTS: See test data and results on the following page.
TEST DATE: 6/29/09 – 8/13/09
CONCLUSION: The submitted materials do comply with the requirements of sections M-4.1, M-4.3, M-4.4, M-4.5, and M-5.4 of ANSI A118.10 "Standard Specification for Load Bearing, Bonded, Waterproof Membrane for Thin-Set Ceramic Tile and Dimension Stone Installation".
CERTIFICATION: The tests reported here were conducted under the continuous, direct supervision of SGS U. S. Testing Company Inc., Tulsa, OK.

SIGNED FOR AND ON BEHALF OF
SGS U.S. TESTING COMPANY INC.


Robert Ross
Materials Dept. Technician


S. Scott Parkhurst
Materials Dept. Manager

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Test Procedure and Results

M-4.1 Fungus and Micro-Organism Resistance

Pass

Samples were prepared as required per section M-4.1, which stipulates the following method: 39 grams of Agar were dissolved in 1 liter of heated water. The agar medium and two 1 inch square pieces of tile were autoclaved at 15psi for 15 minutes. A section of the sample was applied to the tile and placed in a Petri dish. The agar medium was then introduced to the petri dish. The entire surface was then inoculated with Aspergillus Niger.

A control specimen of tile only was prepared in the method stated as above and was inoculated with Aspergillus Niger.

All samples and the control specimen were placed in a temperature and humidity controlled incubator for 14 days. During the 14 day period the temperature and humidity were monitored and maintained at 82.4 to 86°F and 85-96% relative humidity.

Following the 14 days, the samples were removed and evaluated for fungus and micro-organism growth. SGS has devised a system of rating the growth as listed below:

Observation	Rating
No Traces of Growth	0
Traces of Growth (less than 10%)	1
Light Growth (10 to 30%)	2
Medium Growth (30 to 60%)	3
Heavy Growth (60% to complete coverage)	4

Any rating above 0 does not meet the requirement of ANSI A118.10-1999, Section M-4.1 which specifies "The membrane shall not support mold growth." Ratings 1 through 4 are considered for informational purposes to provide the client with a conclusion as to the pervasiveness of growth, should growth be evident during the evaluation.

Results for the evaluation of fungus and micro-organism growth are listed in tables 1, 2, and 3 of this report.

Table 1- CIS M-4.1 Evaluation Results

Sample ID:	NobleSeal CIS		
Test Start Date:	7/22/09	Test End Date:	8/05/09
Total Incubation Period:	14 Days		
Specimen ID	Rating		
1	0		
2	0		
Control	4		



Table 2- SIS M-4.1 Evaluation Results

Sample ID: NobleSeal SIS	
Test Start Date: 7/22/09	Test End Date: 8/05/09
Total Incubation Period: 14 Days	
Specimen ID	Rating
1	0
2	0
Control	4

Table 3- Deck M-4.1 Evaluation Results

Sample ID: Noble Deck	
Test Start Date: 7/22/09	Test End Date: 8/05/09
Total Incubation Period: 14 Days	
Specimen ID	Rating
1	0
2	0
Control	4

M-4.3 Breaking Strength (ASTM D 751-06)

Pass

All samples were tested at an SGS approved network laboratory. The specimens were tested to ASTM D751-06 Method B, as is stated in ANSI A118.10 Section M-4.3. All testing was performed in the conditions as specified in Section M-3.2.

Results of the Breaking Strength testing are reported in tables 4, 5, and 6 of this report.

Table 4

Sample ID: NobleSeal CIS				
Specimen	Width, in.	Max. Load, psi	Load at break, psi	Requirement
1	1.000	1164.0	828.0	170psi minimum
2	1.000	1105.7	732.9	
3	1.000	1474.3	926.9	
4	1.000	1146.3	875.1	
5	1.000	1325.7	780.6	
Average	-	1243.2	828.7	

Table 5

Sample ID:		NobleSeal SIS		
Specimen	Width, in.	Max. Load, psi	Load at break, psi	Requirement
1	1.000	640.9	640.9	170psi minimum
2	1.000	791.9	601.7	
3	1.000	836.4	192.4	
4	1.000	882.4	352.2	
5	1.000	830.7	365.0	
Average	-	796.4	430.4	

* Specimen traveled to 16 inches

Table 6

Sample ID:		Noble Deck		
Specimen	Width, in.	Max. Load, psi	Load at break, psi	Requirement
1	1.000	1037.6	600.0	170psi minimum
2	1.000	1169.0	704.8	
3	1.000	1024.3	563.1	
4	1.000	1051.4	547.4	
5	1.000	1101.9	548.3	
Average	-	1076.9	592.7	

M-4.4 Dimensional Stability (ASTM D 1204-1994)

Pass

Sample ID: NobleSeal CIS

Conditioning: Specimens were conditioned at 71°F and 50% Relative Humidity for 48 hours.

<u>Sample</u>	<u>Temperature, °F</u>	<u>% Change</u>	<u>Requirement</u>
1	+158	0.0	0.7%, maximum
2	+158	0.0	0.7%, maximum
3	-15	0.0	0.7%, maximum
4	-15	0.0	0.7%, maximum

Sample ID: NobleSeal SIS

Conditioning: Specimens were conditioned at 71°F and 50% Relative Humidity for 48 hours.

<u>Sample</u>	<u>Temperature, °F</u>	<u>% Change</u>	<u>Requirement</u>
1	+158	0.452	0.7%, maximum
2	+158	0.060	0.7%, maximum
3	-15	0.0	0.7%, maximum
4	-15	0.0	0.7%, maximum



Sample ID: Noble Deck

Conditioning: Specimens were conditioned at 71°F and 50% Relative Humidity for 48 hours.

<u>Sample</u>	<u>Temperature, °F</u>	<u>% Change</u>	<u>Requirement</u>
1	+158	0.0	0.7%, maximum
2	+158	0.0	0.7%, maximum
3	-15	0.0	0.7%, maximum
4	-15	0.0	0.7%, maximum

4.5 Waterproofness (ASTM D 4068-99)

Pass

Sample ID: NobleSeal CIS

Test Pressure: 2 ft. water column

Test Time: 48 hours

Observation: No Leakage

Requirement: No Leakage

Sample ID: NobleSeal SIS

Test Pressure: 2 ft. water column

Test Time: 48 hours

Observation: No Leakage

Requirement: No Leakage

Sample ID: Noble Deck

Test Pressure: 2 ft. water column

Test Time: 48 hours

Observation: No Leakage

Requirement: No Leakage

M-5.4 7-Day Water Immersion Shear Strength (ASTM C482-02)

Pass

The samples were prepared in accordance with ANSI A118.10 Section M-5.2 and placed in a water bath for a period of 7 days. At the end of the 7 day period the samples were tested for shear strength in accordance with section M-5.3, which specifies the test method as in ASTM C482.

Results of the 7-Day Water Immersion Shear Strength testing are reported in tables 7, 8, and 9 of this report.

Table 7- Sample: NobleSeal CIS

Specimen	Width, in.	Length, in.	Ultimate Load, lbs	Bond Strength, psi
1	4.0545	4.0220	1442	88.4
2	4.0795	4.0300	1250	76.0
3	4.0345	4.0370	1378	84.6
4	4.0530	4.0265	1220	74.8
Average (Psi)	-	-	-	81.0
Average (MPa)	-	-	-	0.56

(50 psi, Min.)

MPa

Table 8- Sample: NobleSeal SIS

Specimen	Width, in.	Length, in.	Ultimate Load, lbs	Bond Strength, psi
1	4.0530	4.0185	1317	80.9
2	4.0450	4.0370	1235	75.6
3	4.0440	4.0385	1281	78.4
4	4.0305	4.0435	1343	82.4
Average (Psi)	-	-	-	79.3
Average (MPa)	-	-	-	0.55

(50 psi, Min.)

MPa

Table 9- Sample: Noble Deck

Specimen	Width, in.	Length, in.	Ultimate Load, lbs	Bond Strength, psi
1	4.0180	4.0240	1460	90.3
2	4.0415	3.9935	1428	88.5
3	4.0180	4.0225	1459	90.3
4	4.0165	4.0195	1323	81.9
Average (Psi)	-	-	-	87.7
Average (MPa)	-	-	-	0.60

(50 psi, Min.)

MPa

End of Report



SGS U.S. Testing Company Inc.

1341 North 108th East • Tulsa, OK 74116 • Tel. 918-437-8333 • Fax: 918-437-8487

CLIENT: The Noble Company
7300 Enterprise Drive
Spring Lake, MI 49456

Attn: Richard Maurer

Test Report No:	165865	Date:	September 21, 2001
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SUBJECT: Report of the evaluation of a Waterproof Membrane for Thin Set Ceramic Tile and Dimension Stone.

REFERENCE: Letter.

SAMPLE ID: Samples of "Nobleseal TS Membrane" was received from the client on 2/14/02. The samples were received in good condition.

PROCEDURE: The test sample was evaluated in accordance with ANSI A118.10-1999, "Standard Specification for Load Bearing, Bonded, Waterproof Membrane for Thin-Set Ceramic Tile and Dimension Stone Installation".

RESULTS: See test data and results on the following page.

TEST DATE: 2/20/02 - 9/2/02

CONCLUSION: The sample does comply with the requirements of ANSI A118.10-1999.

CERTIFICATION: The tests reported here were conducted under the continuous, direct supervision of SGS U. S. Testing Company Inc., Tulsa, OK.

**SIGNED FOR AND ON BEHALF OF
SGS U.S. TESTING COMPANY INC.**


Jeff Simmons
Dept. Manager/Product Evaluation

Dale E. Holloway
Tulsa Branch Director

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The Noble Company

TEST RESULTS:

4.1 Fungus and Micro-Organism Resistance

Pass

Test Period: 14 days
Fungus: Aspergillus Niger

Table with 2 columns: Samples, Observation. Rows 1-3 show 'No growth was observed on the test specimen'. Requirement: No Growth.

4.2 Seam Strength (ASTM D 751-2000)

Pass

Table with 4 columns: Sample, Width Size, in., Average Failure Load, lbf, Requirement, lbf/2 inch. Rows include NW100, Fabric to Fabric, and Base to Base.

4.3 Breaking Strength (ASTM D 751-2000)

Pass

Average Breaking Strength (Machine Direction): 1175 psi
Average Breaking Strength (Cross Machine Direction): 1175 psi
Requirement: 170 psi, minimum

4.4 Dimensional Stability (ASTM D 1204-1994)

Pass

Test Period:
Test Temperatures:
Conditioning: Specimens were conditioned at 71°F and 50% Relative Humidity for 48 hours.

Table with 4 columns: Sample, Temperature, °F, % Change, Requirement. Rows 1-4 show temperature changes and a 0.7% maximum requirement.



SGS U.S. Testing Company Inc.

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4.5 Waterproofness (ASTM D 4068-99) Pass

Test Pressure: 2 ft. water column
 Test Time: 48 hours

Neither any evidence of wetness on top of the specimens nor the formation of droplets was observed during the evaluation.

5.3 7-Day Shear Strength (ASTM C 482-1996) Pass

<u>Specimen</u>	<u>Width</u> (in)	<u>Length</u> (in)	<u>Ultimate</u> Load (lbs)	<u>Bond</u> Strength (Psi)
1	4.069	4.106	1824	109.2
2	4.153	4.043	1897	113.0
3	4.024	4.036	1766	108.7
4	4.077	4.024	1348	82.2
Average				103.3
Required				50, min.

5.4 7-Day Water Immersion Shear Strength (ASTM C 482-1996) Pass

<u>Specimen</u>	<u>Width</u> (in)	<u>Length</u> (in)	<u>Ultimate</u> Load (lbs)	<u>Bond</u> Strength (Psi)
1	3.985	4.053	1009	62.5
2	3.987	4.045	1673	103.7
3	4.009	4.026	1677	103.9
4	4.033	4.000	1109	68.7
Average	-	-	-	84.7
Required	-	-	-	50, min.



SGS U.S. Testing Company Inc.

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The Noble Company

5.5 4-Week Shear Strength (ASTM C 482-1996)

Pass

Specimen	Width	Length	Ultimate	Bond
	(in)	(in)	Load (lbs)	Strength (Psi)
1	3.975	4.051	1209	75.1
2	3.988	4.080	1831	112.5
3	4.009	4.036	1768	109.3
4	4.008	4.015	1798	104.3
Average	-	-	-	100.3
Required	-	-	-	50, min.

5.6 12-Week Shear Strength (ASTM C 482-1996)

Pass

Specimen	Width	Length	Ultimate	Bond
	(in)	(in)	Load (lbs)	Strength (Psi)
1	4.100	3.982	1856	113.7
2	4.085	4.049	1920	116.1
3	3.984	3.994	1435	90.2
4	4.030	4.015	1962	121.3
Average	-	-	-	110.3
Required	-	-	-	50, min.

