



PRODUCT TESTING SERVICE

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

TCNA TEST REPORT NUMBER: TCNA-136-06

PAGE: 1 OF 1

TEST REQUESTED BY:

Mission Tile West
Attn: Georgia Bellum
853 Mission St.
South Pasadena, CA 91030

TEST SUBJECT MATERIAL:

Identified by client as: Terra Bella

TEST DATE:

6/16/06-6/17/06

TEST PROCEDURE:

ASTM C1028: "Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method"

- A Chatillon DFIS 100 digital force gauge was used to measure each pull in pounds-force.
- A 3 x 3 x 1/8 inch piece of Neolite was used as the sensor.
- Internal calibration used in lieu of dry calibration factor.


TEST RESULTS:

The average static coefficient of friction of four (4) pulls on each tile was as follows:

	<u>As Received</u>	<u>After Cleaning</u>
Tile 1: <u>Dry:</u>	<u>0.97</u>	<u>1.03</u>
<u>Wet:</u>	<u>0.92</u>	<u>0.93</u>
Tile 2: <u>Dry:</u>	<u>0.94</u>	<u>1.04</u>
<u>Wet:</u>	<u>0.94</u>	<u>0.97</u>
Tile 3: <u>Dry:</u>	<u>0.90</u>	<u>1.01</u>
<u>Wet:</u>	<u>0.89</u>	<u>0.96</u>

The average static coefficient of friction of twelve (12) pulls was as follows:

<u>Dry:</u>	<u>0.94</u>	<u>1.03</u>
<u>Wet:</u>	<u>0.91</u>	<u>0.95</u>


Virgil Irick
Director of Laboratory Services

1/24/07
Date



PRODUCT TESTING SERVICE

100 Clemson Research Blvd. Anderson, SC 29625 Tel (864) 646-TILE Fax (864) 646-2821
TCNA TEST REPORT NUMBER: TCNA-136-06 PAGE: 1 OF 1

TEST REQUESTED BY:

Mission Tile West
Attn: Georgia Bellum
853 Mission St.
South Pasadena, CA 91030

TEST SUBJECT MATERIAL:

Identified by client as: Terra Bella

TEST DATE:

6/21/06

TEST PROCEDURE:

ASTM C373: "Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Whiteware Products"
-Five specimens were tested.
-The specimens were subjected to a five-hour boil and 24 hour soak to room temperature.


TEST RESULTS:

The average water absorption of five (5) specimens was: 9.01%. This value classifies the subject material as non-vitreous (with a water absorption of more than 7.0 percent).

The individual results of water absorption were as follows:

Specimen 1: 6.85 %
Specimen 2: 8.85 %
Specimen 3: 6.97 %
Specimen 4: 11.50 %
Specimen 5: 10.87 %

[The ANSI A137.1 Specification for Paver Tile (Unglazed) states: "the tile in the sample shall be impervious for porcelain paver tile and shall not exceed 5.0 percent for natural clay paver tile."]



Virgil Rick

Director of Laboratory Services

1/4/07
Date



PRODUCT TESTING SERVICE

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

TCNA TEST REPORT NUMBER: TCNA-136-06

PAGE: 1 OF 1

TEST REQUESTED BY:

Mission Tile West
Attn: Georgia Bellum
853 Mission St.
South Pasadena, CA 91030

TEST SUBJECT MATERIAL:

Identified by client as: Terra Bella

TEST DATE:

6/29/06-7/24/06

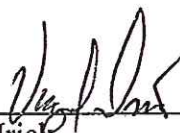
TEST PROCEDURE:

ASTM C1026: "Standard Test Method for Measuring the Resistance of Ceramic Tile to Freeze-Thaw Cycling"

- Ten specimens were tested.
- The specimens were subjected to fifteen cycles of freeze-thaw consisting of freezing the tiles at 0°F for eight hours then thawing the tiles in water at 74°F.

TEST RESULTS:

All ten (10) specimens showed no visible evidence of freeze-thaw damage after completing fifteen (15) cycles of freeze-thaw.



Virgil Irick
Director of Laboratory Services

1/4/07

Date



PRODUCT TESTING SERVICE

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

TCNA TEST REPORT NUMBER: TCNA-540-08

PAGE: 1 OF 1

TEST REQUESTED BY:

Mission Tile West
Attn: Melissa Sammartano
853 Mission St.
South Pasadena, CA 91030

TEST SUBJECT MATERIAL:

Identified by client as: Glazed Terra Bella

TEST DATE:

12/22/08

TEST PROCEDURE:

ASTM C1028: "Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method"

-A Chatillon DFIS 100 digital force gauge was used to measure each pull in pounds-force.

-A 3 x 3 x 1/8-inch piece of Neolite was used as the sensor.


TEST RESULTS:

The average static coefficient of friction of four (4) pulls on each tile was as follows:

	<u>As Received</u>	<u>After Cleaning</u>
Brown: <u>Dry:</u>	<u>0.82</u>	<u>0.86</u>
<u>Wet:</u>	<u>0.42</u>	<u>0.44</u>
Purple: <u>Dry:</u>	<u>0.84</u>	<u>0.88</u>
<u>Wet:</u>	<u>0.40</u>	<u>0.41</u>
Biege: <u>Dry:</u>	<u>0.75</u>	<u>0.79</u>
<u>Wet:</u>	<u>0.47</u>	<u>0.47</u>

The average static coefficient of friction of twelve (12) pulls was as follows:

<u>Dry:</u>	<u>0.81</u>	<u>0.84</u>
<u>Wet:</u>	<u>0.43</u>	<u>0.44</u>


Katelyn Simpson
Laboratory Manager

12/23/08
Date



PRODUCT TESTING SERVICE

100 Clemson Research Blvd. • Anderson, SC 29625 • Tel (864) 646-TILE • Fax (864) 646-2821
TCNA TEST REPORT NUMBER: TCNA-540-08 PAGE: 1 OF 1

TEST REQUESTED BY:

Mission Tile West
Attn: Melissa Sammartano
853 Mission St.
South Pasadena, CA 91030

TEST SUBJECT MATERIAL:

Identified by client as: Glazed Terra Bella

TEST DATE:

1/12/09-1/13/09

TEST PROCEDURE:


ASTM C1027: "Standard Test Method for Determining Visible Abrasion Resistance of Glazed Ceramic Tile"

- 4 x 4-inch specimens were cut from individual tiles.
- A Gabbrielli Abrasimeter W1 was used to abrade the tile.
- 10% Hydrochloric acid was used to remove any metal oxide staining.

TEST RESULTS:

There was an apparent visual difference in gloss or color after 150 revolutions when viewed in the viewing box by more than one technician. Thus, in accordance with the test procedure, the subject tile is given a Class 1 rating.

According to ANSI A137.1-2008, the maximum recommended use for class 1 tile is: "light residential".


Katelyn Simpson
Laboratory Manager

1/16/09
Date