



**PRODUCT PERFORMANCE TESTING LABORATORY**

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Nov 16, 2018

MS International, Inc.  
Attn: Morgan Huang  
2095 N. Batavia Street  
Orange, CA 92865  
USA

Dear Morgan Huang,

Tile Council of North America has tested the samples you submitted. Test report TCNA-1032-18 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



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**TCNA TEST REPORT NUMBER:** TCNA-1032-18 **PAGE:** 1 OF 3

**TEST REQUESTED BY:** MS International, Inc.

**TEST METHOD:** ASTM C1027-09 (2017): "Standard Test Method for Determining Visible Abrasion Resistance of Glazed Ceramic Tile"

Informal Test Method Description: This test method is designed to measure the resistance of tile surfaces to visible surface abrasion. Certain irregular surfaces may not be evaluated properly by this test method because of wear patterns. The abrasion resistance of tile surfaces is determined by rotation of an abrasive load on the surface and the assessment of the resultant wear by means of visual comparison of the abraded test specimens and non-abraded tiles.

This summary is provided for the reader's convenience and is not a complete description of the method. See ASTM C1027 for all method details and information.

**TEST SUBJECT MATERIAL:** Identified by client as: "**Antoni Collection**"  
Approximate Size as Received: 6" x 36"  
Product color: Not Provided

**TEST DATE:** 11/13/18- 11/14/18

**TEST PROCEDURE NOTES:**

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

**TEST RESULTS:**

There was apparent visual difference in gloss or color after **6000** revolutions when viewed in the viewing box by more than one technician. Thus, in accordance with the test procedure, the tile tested achieved a **Class 4** classification.

**COMMENTS:** None

**TCNA TEST REPORT NUMBER:** TCNA-1032-18 **PAGE: 2 OF 3**

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**ANSI SPECIFICATIONS\*:**

| ANSI standard      | Class   | Maximum Recommended Use               |
|--------------------|---------|---------------------------------------|
| ANSI A137.1/A137.2 | Class 0 | Not Recommended for Floors            |
| ANSI A137.1/A137.2 | Class 1 | Light Residential                     |
| ANSI A137.1/A137.2 | Class 2 | Residential                           |
| ANSI A137.1/A137.2 | Class 3 | Heavy Residential or Light Commercial |
| ANSI A137.1/A137.2 | Class 4 | Commercial                            |
| ANSI A137.1/A137.2 | Class 5 | Heavy Commercial                      |

*\*For more detailed information, refer to ANSI A137.1 Specifications for Ceramic Tile or ANSI A137.2 Specifications for Glass Tile*

**IMAGE OF PRODUCT TESTED:**





**TCNA TEST REPORT NUMBER:**

**TCNA-1032-18**

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11/16/2018

Katelyn Simpson  
Laboratory Manager