



**PRODUCT PERFORMANCE TESTING LABORATORY**

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September 17, 2019

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-0790-19 is enclosed. If you have any questions or concerns, please contact us.

Best Regards,

TILE COUNCIL OF NORTH AMERICA, INC.

Damon McDowell  
Laboratory Team Leader  
Enclosures



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**TCNA TEST REPORT NUMBER:** TCNA-0790-19 **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: "Caldera Blanca Tile"  
Approximate Size as Received: 8" x 23"  
Product color: Not provided

**TEST DATE:** 9/9/19 - 9/10/19

**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 12000 revolutions when viewed in the viewing box by more than one technician.

**COMMENTS:** None

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**ANSI SPECIFICATIONS:** None

**IMAGE OF PRODUCT TESTED:**





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**TCNA TEST REPORT NUMBER:**

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**DISCLAIMER AND LIMITATION OF LIABILITY**

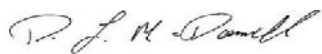
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9/17/2019

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