



PRODUCT TESTING SERVICE

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

May 10, 2013

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

Dear Mr. Huang,

Tile Council of North America has tested the samples you submitted. Test report TCNA-208-13 is enclosed. If you have any questions or concerns, please contact us.

Best Regards,

TILE COUNCIL OF NORTH AMERICA, INC.

Dr. Jyothi Rangineni
Research Scientist
Enclosures



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TCNA TEST REPORT NUMBER:

TCNA-208-13

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TEST REQUESTED BY:

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

TEST SUBJECT MATERIAL:

Identified by client as: "Metropolis Line"

TEST DATE:

5/9/2013

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> |
|---------------|--------------------|-----------------------|
| <u>Tile 1</u> | | |
| Dry | 0.76 | 0.77 |
| Wet | 0.61 | 0.60 |
| <u>Tile 2</u> | | |
| Dry | 0.77 | 0.76 |
| Wet | 0.61 | 0.61 |
| <u>Tile 3</u> | | |
| Dry | 0.77 | 0.77 |
| Wet | 0.61 | 0.61 |

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

| | <u>As Received</u> | <u>After Cleaning</u> |
|-----|--------------------|-----------------------|
| Dry | 0.77 | 0.77 |
| Wet | 0.61 | 0.61 |

5/10/2013

Dr. Jyothi Rangineni
Research Scientist

Testing Services: testing@tileusa.com □ Literature Orders: literature@tileusa.com □ Web Site: www.tileusa.com

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