

SMITH-EMERY LABORATORIES

An Independent Commercial Testing Laboratory, Established 1904

781 E. Washington Boulevard Los Angeles, California 90021 🔷 (213) 749-3411 🗣 Fax (213) 741-8626

Proj./Job No.: 37286-1 Lab No .:

T-08-205

October 6, 2008

Client:

TEY SHEN MAI

UNICORN TILE CORP

2020 ORANGETHORPE AVENUE

ANAHEIM, CA 92806

Subject:

12" x 12" 3/8" Thick Nano White Matte Finish. Unglazed Ceramic Tile.

Specification:

ASTM C 648

Source:

Submitted to Laboratory by Client on September 12, 2008.

Report of Test

BREAKING STRENGTH (ASTM C 648)

The tile samples were placed on a test fixture having three (3) supports located in a circle three and fifteen-thirty-secondths (3-15/32) inches in diameter with the load applied at the center as per specifications. Results are as follows:

Sample Number	Breaking Load (Lbs.)
1.	557
2.	603
<i>3</i> .	522
4.	620
$\overset{\text{\tiny 6.6}}{5}.$	585
6.	583
7.	533
8.	589
9.	598
10.	560
	Average: 575

Requirements: ANSI A 137.1 (General) Breaking Strength. When tested as described in ASTM C-648, the average breaking strength shall be 250 pounds or greater.

Respectfully Submitted,

SMITH - EMERY LABORATORIES

P. John Latiolait

Registered Civil Engineer No. C60312

Registration Expires: 06-30-10



- ☐ The materials tested comply with specifications.
- ☐ The materials tested did not comply with specifications.
- ☐ No established criteria for acceptable limits.

CC: UNICORN TILE CORP; SMITH-EMERY LABORATORIES



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<u>Sample Number</u>	<u>Breaking Load (Lbs.)</u>
1.	651
2.	602
<i>3</i> ,	763
4.	795
iik terresa mettida minotota orti-skaatiituseumeen een een eela tiitaa artiintiseeli meesta mihateen. 5 ,	ama ostrios livras itrasmostis sir otronisiras semestros bismostros <u>en principad</u> livrius imatematicima autoria. 1720
6.	784
7.	718
8.	624
9.	672
10.	656
	Average: 699

Requirements: ANSI A 137.1 (General) Breaking Strength. When tested as described in ASTM C-648, the average breaking strength shall be 250 pounds or greater.

Respectfully Submitted,

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Licensed by the State of California Board of Professional Engineers and Land Surveyors 26705 Loma Verde, Mission Viejo, CA 92691 Telephone/FAX: 949-582-0889

Flooring Test Results

Client: Unicorn Tile Corp.

Report date: March 24, 2009

Flooring: Nano Black Matte

Page 1 of 2

Sample no.: 0903-1813

Pieces tested: 3

Date tested: 3/19/09

Size: 12 inches x 12 inches

How and when sample obtained: Supplied by client 3/18/09

American Society for Testing and Materials method ASTM C 1028-07. This test does not evaluate hydroplaning potential.

Static coefficient of friction:

CLEANED WITH HILLYARD'S RENOVATOR

Dry

Wet

0.65

0.45

High coefficients of friction indicate potentially good traction. The Access Board of the U.S. Department of Justice, the Ceramic Tile Institute, and the City of Los Angeles, recommend a **minimum** static coefficient of friction, as assessed using this test method, of **0.60 for level floors** and **0.80 for ramps**. Slip resistance can be affected by maintenance-related items including floor coatings, buffing, and contamination.

Flooring: Nano Black Matte

Individual test values (for information only; required by ASTM and City of Los Angeles):

CLEANED WITH HILLYARD'S RENOVATOR

	<u>Dry</u>	<u>Wet</u>
1	0.68	0.49
2	0.64	0.46
3	0.64	0.48
4	0.68	0.45
5	0.61	0.43
6	0.65	0.46
7	0.65	0.44
8	0.64	0.45
9	0.63	0.44
10	0.67	0.43
11	0.66	0.44
12	0.65	0.45
Average	0.65	0.45

Respectfully submitted,

SOTTER ENGINEERING CORPORATION

J. George Sotter, P.E., Ph.D.

President, Sotter Engineering Corporation



TorTest™ Floor Friction Testing Service SOTTER ENGINEERING CORPORATION

Consultants

26705 Loma Verde, Mission Viejo, CA 92691 Telephone: 949-582-0889 FAX: 949-916-2193

Licensed by the State of California Board of Professional Engineers and Land Surveyors

Flooring Slip Resistance Test Results

Client: Unicorn Tile Corp

Report date: 9/20/05

EXP. 3/31/2010

Flooring: Nano Black Matte

Page 1 of 1

Sample no.: 0903-1813

Pieces tested: 3

Date tested: 3/24/09

Size: 12 inches x 12 inches

How and when sample obtained: Supplied by client 3/18/09

Ceramic Tile Institute of America pendulum test based on ASTM E 303

Pendulum Test Value, as received, with Four S rubber slider:

Dry: 68

Wet: 36

High Pendulum Test Values indicate potentially good traction. The Ceramic Tile Institute of America recommends a **minimum** pendulum test value of **35** for level floors when determined using a Four S (Standard Shoe Sole Simulating) rubber. Slip resistance can be affected by factors such as floor coatings, detergents, contamination, chemical treatments, and wear.

Respectfully submitted,

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Flooring Test Results

Client: Unicorn Tile Corp.

Report date: March 24, 2009

Flooring: Nano White Matte

Page 1 of 2

Sample no.: 0903-1814

Pieces tested: 3

Date tested: 3/19/09

Size: 12 inches x 12 inches

How and when sample obtained: Supplied by client 3/18/09

American Society for Testing and Materials method ASTM C 1028-07. This test does not evaluate hydroplaning potential.

Static coefficient of friction:

CLEANED WITH HILLYARD'S RENOVATOR

<u>Dry</u>

Wet

0.71

0.60

High coefficients of friction indicate potentially good traction. The Access Board of the U.S. Department of Justice, the Ceramic Tile Institute, and the City of Los Angeles, recommend a **minimum** static coefficient of friction, as assessed using this test method, of **0.60** for level floors and **0.80** for ramps. Slip resistance can be affected by maintenance-related items including floor coatings, buffing, and contamination.

Flooring: Nano White Matte

Individual test values (for information only; required by ASTM and City of Los Angeles):

CLEANED WITH HILLYARD'S RENOVATOR

	Dry	Wet
1	0.73	0.62
2	0.70	0.63
3	0.72	0.61
4	0.67	0.62
5	0.72	0.59
6	0.72	0.61
7	0.68	0.58
8	0.70	0.62
9	0.68	0.56
10	0.74	0.62
11	0.73	0.60
12	0.71	0.57
Average	0.71	0.60

Respectfully submitted,

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Flooring Test Results

Client: Unicorn Tile Corp.

Report date: March 24, 2009

Flooring: Nano White Polished

Page 1 of 2

Sample no.: 0903-1812

Pieces tested: 3

Date tested: 3/19/09

Size: 12 inches x 12 inches

How and when sample obtained: Supplied by client 3/18/09

American Society for Testing and Materials method ASTM C 1028-07. This test does not evaluate hydroplaning potential.

Static coefficient of friction:

CLEANED WITH HILLYARD'S RENOVATOR

Dry

Wet

1.08

0.37

High coefficients of friction indicate potentially good traction. The Access Board of the U.S. Department of Justice, the Ceramic Tile Institute, and the City of Los Angeles, recommend a **minimum** static coefficient of friction, as assessed using this test method, of **0.60** for level floors and **0.80** for ramps. Slip resistance can be affected by maintenance-related items including floor coatings, buffing, and contamination.

Flooring: Nano White Polished

Individual test values (for information only; required by ASTM and City of Los Angeles):

CLEANED WITH HILLYARD'S RENOVATOR

	Dry	_Wet_
1	1.01	0.35
2	1.08	0.40
3	1.11	0.39
4	1.02	0.40
5	1.03	0.44
6	1.15	0.39
7	1.08	0.46
8	1.06	0.36
9	1.04	0.31
10	1.17	0.32
11	1.10	0.35
12	1.10	0.34
Average	1.08	0.37

Respectfully submitted,

SOTTER ENGINEERING CORPORATION

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Flooring Test Results

Client: Unicorn Tile Corp.

Report date: March 19, 2009

Flooring: Nano Black Polished

Page 1 of 2

Sample no.: 0903-1811

Pieces tested: 3

Date tested: 3/19/09

Size: 12 inches x 12 inches

How and when sample obtained: Supplied by client 3/18/09

American Society for Testing and Materials method ASTM C 1028-07. This test does not evaluate hydroplaning potential.

Ctatia	coefficient	Λf	fria	tion.

CLEANED WITH HILLYARD'S RENOVATOR

Dry

Wet

0.69

0.52

High coefficients of friction indicate potentially good traction. The Access Board of the U.S. Department of Justice, the Ceramic Tile Institute, and the City of Los Angeles, recommend a **minimum** static coefficient of friction, as assessed using this test method, of **0.60** for level floors and **0.80** for ramps. Slip resistance can be affected by maintenance-related items including floor coatings, buffing, and contamination.

Flooring: Nano Black Polished

Individual test values (for information only; required by ASTM and City of Los Angeles):

CLEANED WITH HILLYARD'S RENOVATOR

	<u>Dry</u>	Wet
[0.65	0.66
2	0.80	0.56
3	0.71	0.56
4	0.60	0.64
5	0.66	0.56
6	0.68	0.52
7	0.69	0.43
8	0.61	0.52
9	0.72	0.46
10	0.75	0.42
11	0.68	0.46
12	0.65	0.42
Average	0.69	0.52

Respectfully submitted,

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Sample Number	<u> Breaking Load (Lbs.)</u>
1.	602
2.	575
3.	534
4.	529
$oldsymbol{5}_{oldsymbol{i}}$	570
6.	580
7.	551
8.	575
9.	563
10.	585
	Average: 566

Requirements: ANSI A 137.1 (General) Breaking Strength. When tested as described in ASTM C-648, the average breaking strength shall be 250 pounds or greater.

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88

Registered Civil Engineer No. C60312

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CRT LABORATORIES, INC. 1680 North Main Street, Orange, CA 92867

(714) 283-2032 • (800) 597-LABS (5227) • Fax (714) 283-1365 www.crtlabs.com • e-mail: crtlabs@pacbell.net

ASTM Physical & Mechanical • Chemical-Thermal Analysis • IAPMO Cell Class Geosynthetic Materials • Plumbing & Faucet Assemblies • Resin & Finished Product Testing

TEST REPORT

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LICIL		01	

FOR: Unicorn Tile Corporation 2020 E. Orangethorpe Avenue

Anaheim, CA 92806 Tel: (714) 728-1529 / Fax: (714) 525-1133

ATTN: Mr. Ashok Sheth

LWR NO.:	17683	1	DATE: July 28, 2008

TABLE 2 SCOPE: ASTM C 373-88 Water Absorption

	Samp	le: Nano Black Po	olished (4)
Specimen	Before	After	% Change
1	73.8331	73.8633	0.04
2	72.0088	72.0319	0.03
3	72.3319	72.3609	0.04
4	70.4671	70.4937	0.04
5	70.8019	70.8280	0.04
Average	71.8886	71.9156	+ 0.04

	San	ple: Travertino R	ustic (5)
Specimen	Before	After	% Change
1	54.5183	55.5792	1.95
2	54.1079	55.1735	1.97
3	53.7430	54.9222	2.19
4	53.8881	55.0172	2.10
5	55.9087	56.4025	0.88
Average	54.4332	55.4189	+ 1.82

Specimen	Sample: Mateo Rustic (6)		
	Before	After	% Change
1	58.9650	60.5760	2.73
2	57.6905	59.5855	3.28
3	58.5662	60.2652	2.90
4	57.5102	59.3212	3.15
5	57.5666	59.2716	2.96
Average	58.0597	59.8039	+ 3.01