



# 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

Project No.: 35562-1  
Lab No.: T-06-201

April 12, 2007

Client: GREG FILLO  
**BEDROSIAN'S TILE & MARBLE**  
1515 E. WINSTON ROAD  
ANAHEIM, CA 92805

Subject: 19 3/4" x 19 3/4" x 3/8" thick TCR TRA50B Travertino Beige  
Specification: ASTM C 373  
Source: Submitted to Smith-Emery Laboratories by Client on September 12, 2006

### Report of Test

#### Water Absorption Test (ASTM C 373)

Samples were dried to a constant weight in an oven at 150 °C, then cooled and weighed. Then were immersed in distilled water (boiling vigorously for 5 hours before cooling gradually to a total elapsed time of 29 hours). Samples were removed from water, wiped dry and immediately reweighed

Sample No.	Dry Wt. (grams)	Wet Wt. (grams)	Percent Water Absorption	Average
1	323.0	324.5	0.48%	
2	317.5	319.2	0.54%	
3	317.2	319.3	0.66%	<u>0.77%</u>
4	324.6	329.5	1.51%	
5	332.5	334.8	0.68%	


**Requirements:** ANSI A 137.1 (General) - When tested as described in ASTM C 373, the tile in the sample shall be impervious for porcelain paver tile and shall be impervious, vitreous or semi-vitreous for natural clay paver tile

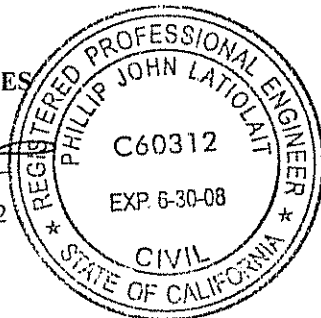
- Impervious Tile (0.5% or less Wtr Abs)
- Vitreous Tile (0.5%-3.0% Wtr Abs)
- Semi-Vitreous Tile (3.0%-7.0% Wtr Abs)
- Unglazed Quarry Tile (Max 5.0% Wtr Abs)

Remarks: Samples tested qualify for Vitreous Tile.

Respectfully Submitted,

SMITH - EMERY LABORATORIES

  
P. John Latolait  
Registered Civil Engineer No. C60312  
Registration Expires: 06-30-08



- Materials Tested Comply With Specifications.
- Materials Tested Did Not Comply With Specifications.
- No Established Criteria For Acceptable Limits.

ilm

CC: BEDROSIAN'S TILE & MARBLE, SMITH-EMERY LABORATORIES



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Subject: 19 3/4" x 19 3/4" x 3/8" thick TCR TRA50B Travertino Beige  
Specification: ASTM C 648  
Source: Submitted to Smith-Emery Laboratories by Client on September 12, 2006.

### Report of Test

#### BREAKING STRENGTH (ASTM C 648)

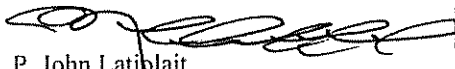
The tile samples were placed on a test fixture having three (3) supports located in a circle three and fifteen-thirty-secondths (3-15/32) inches in diameter with the load applied at the center as per specifications *Results are as follows*

<u>Sample Number</u>	<u>Breaking Load (Lbs.)</u>
1.	523
2.	557
3.	572
4.	541
5.	503
6.	619
7.	497
8.	601
9.	572
10.	645

Average: 563

**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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P. John Latilait  
Registered Civil Engineer No. C60312  
Registration Expires: 06-30-08



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

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1515 E. WINSTON ROAD  
ANAHEIM, CA 92805

SUBJECT: 19 3/4" x 19 3/4" x 3/8" thick TCR TRA50B Travertino Beige  
Specification : **MOHS Hardness Test (MOHS Scale)**  
Source : Submitted to Smith-Emery Laboratories by Client on September 12, 2006.  
Date Tested: 9/19/06

### Report of Tests

#### SCRATCH HARDNESS OF SURFACE (MOHS SCALE)

A sharp angular mineral starting with hardness one (1) on the MOHS Scale is drawn while applying a uniform pressure across the surface of the tile. The highest hardness number with which no scratches visible to the naked eye occur shall be taken as the result of the test.

AREA	SAMPLE NUMBER	MOHS SCALE	MINERAL EQUIVALENT
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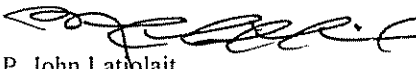
	1	6.5	Microcline / Quartz
	2	6.5	Microcline / Quartz
Top Surface Only	3	6.5	Microcline / Quartz
	4	7.0	Quartz
	5	7.0	Quartz

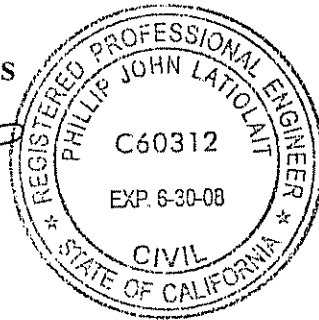
#### MOHS Table

Mohs #	Mineral	Mohs #	Mineral
1.0	Talc	6.0	Microcline
2.0	Selenite	7.0	Quartz
3.0	Calcite	8.0	Topaz
4.0	Fluorite	9.0	Corundum
5.0	Apatite	10.0	Diamond

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- Materials Tested Comply With Specifications.
- Materials Tested Did Not Comply With Specifications.
- No Established Criteria For Acceptable Limits.

rlm

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Subject: 19 3/4" x 19 3/4" x 3/8" thick TCR TRA50B Travertino Beige  
Specification : ASTM C-650 (Qualitative Observation Only)  
Source : Submitted to Smith-Emery Laboratories by Client on September 12, 2006.

### Report of Tests

#### CHEMICAL RESISTANCE OF CERAMIC TILE (ASTM C 650)

Exposure time : 24 hours

Room temperature : 75.5 °F

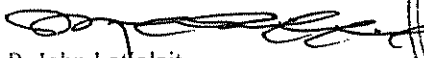
<u>Tile Number</u>	<u>Acid 10% HCL</u>	<u>Alkali 10% KOH</u>
1.	Unaffected	Unaffected
2.	Unaffected	Unaffected
3.	Unaffected	Unaffected
4.	Unaffected	Unaffected
5.	Unaffected	Unaffected
6	Unaffected	Unaffected

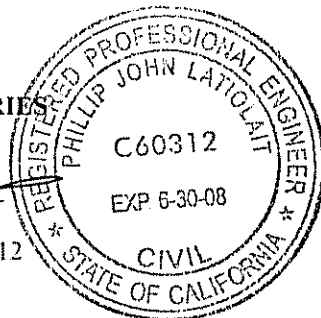
Requirements : No Requirement

Remarks : Sample tested shows no physical damage after test.

Respectfully Submitted,

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Registered Civil Engineer No. C60312  
Registration Expires: 06-30-08



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

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Subject: 19 3/4" x 19 3/4" x 3/8" thick TCR TRA50B Travertino Beige  
Specification: ASTM C 1028-96  
Source: Submitted to Smith-Emery Laboratories by Client on September 12, 2006.

### STATIC COEFFICIENT OF FRICTION (ASTM C 1028-96)

A block of wood with a 3" x 3" x 1/8" section of standard neolite sole liner attached, was placed on the surface to be tested. on top of this assembly, a 50 pound (22kg) weight was placed Using dynamometer the force in pounds required to cause the test assembly to slip parallel to the test surface was measured Four measurements were taken on each of three test surfaces, each measurement perpendicular to the previous one The twelve measurements were averaged to obtain the coefficient of friction for each test condition

#### A. As Received:

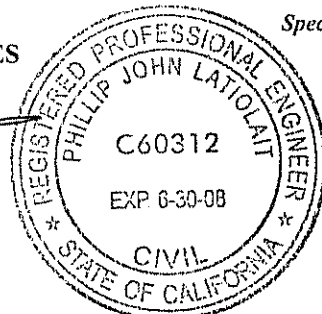
Test Condition	Tile No.	N	E	S	W	Average	Individual Static Coefficient of Friction (fc)	S.C.O.F
								After Neolite Correction Factor
Dry Neolite	1	45	46	46	45	45.42	(0.89)	0.70
	2	46	45	45	46			
	3	46	45	45	45			
Wet Neolite	1	30	30	29	29	29.33	(0.57)	0.52
	2	29	30	29	30			
	3	29	29	28	30			

#### B After Cleaning with Hillyards Renovator. (ASTM C 1028 Standard Cleaner)

Dry Neolite	1	45	46	45	45	45.42	(0.89)	0.70
	2	46	45	45	46			
	3	46	45	46	45			
Wet Neolite	1	28	29	29	29	28.58	(0.56)	0.51
	2	28	29	29	28			
	3	29	29	28	28			

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Specification: Department of Justice ADA Title III Regulation 28 CFR Part 36, Section A4.5.1; Recommends minimum of 0.60 SCOF for horizontal surfaces and 0.80 SCOF on ramps

- Materials Tested Comply With Specifications.
  - Horizontal;  Ramps or Incline
- Materials Tested Did Not Comply With Specifications.
  - No Established Criteria for Acceptable Limits.
  - For Information Only.

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