



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/Job No.: 37139-1
Laboratory No.: T-10-075

June 2, 2010
Invoice No. 960 106896 01

Client : GREG FILLO
BEDROSIANS
1515 E. WINSTON ROAD
ANAHEIM, CA 92805-6445

Subject: TCR FAN 50B 20" x 20" Field Tile Fantasia Beige Ceramic Tiles, Made in China.
Specification: ASTM C 1028-07
Source: Delivered to Smith-Emery Laboratories by Client via Con-Way on May 21, 2010.

STATIC COEFFICIENT OF FRICTION (ASTM C 1028-07)

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	S.C.O.F
							Static Coefficient of Friction (fc)	After Neolite Correction Factor
Dry Neolite	1	46	47	46	46	46.25	(0.90)	0.87
	2	47	46	46	46			
	3	46	46	47	46			
Wet Neolite	1	35	36	35	36	35.25	(0.69)	0.62
	2	35	35	36	35			
	3	35	34	36	35			

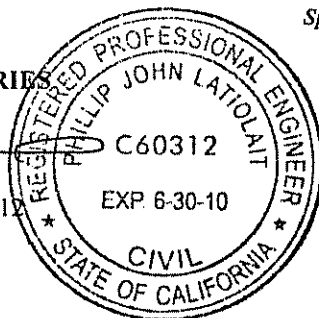
B. After Cleaning with Hilliards Renovator. (ASTM C 1028 Standard Cleaner)

Dry Neolite	1	46	47	45	46	46.08	(0.90)	0.87
	2	45	46	47	46			
	3	46	46	47	46			
Wet Neolite	1	35	36	35	35	35.17	(0.69)	0.62
	2	35	35	36	35			
	3	34	36	35	35			

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

Respectfully Submitted,
SMITH - EMERY LABORATORIES

P. John Latiolait
Registered Civil Engineer No. C60312
Registration Expires: 06-30-10



- 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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Subject: TCR FAN 50B 20" x 20" Field Tile Fantasia Beige Ceramic Tiles, Made in China.
Specification: ASTM C 373
Source: Delivered to Smith-Emery Laboratories by Client via Con-Way on May 21, 2010

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	308.9	309.5	0.19%	
2	316.1	316.7	0.18%	
3	318.0	318.5	0.15%	<u>0.18%</u>
4	310.5	311.1	0.20%	
5	314.8	315.4	0.18%	


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 comply with the Impervious Tile Requirement.

Respectfully Submitted,

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- Materials Tested Did Not Comply With Specifications.
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Subject: TCR FAN 50B 20" x 20" Field Tile Fantasia Beige Ceramic Tiles, Made in China.
Specification: ASTM C 648
Source: Delivered to Smith-Emery Laboratories by Client via Con-Way on May 21, 2010.

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:*

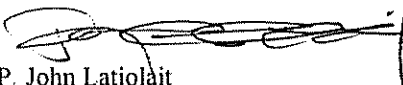
<u>Sample Number</u>	<u>Breaking Load (Lbs.)</u>
1.	421
2.	458
3.	448
4.	487
5.	452
6.	471
7.	476
8.	425
9.	514
10.	513

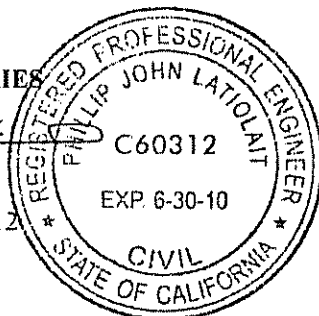
Average: 467

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

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ANAHEIM, CA 92805-6445

SUBJECT: TCR FAN 50B 20" x 20" Field Tile Fantasia Beige Ceramic Tiles, Made in China.
Specification : MOHS Hardness Test (MOHS Scale)
Source : Delivered to Smith-Emery Laboratories by Client via Con-Way on May 21, 2010.
Date Tested: 5/26/10

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
Top Surface Only	1	5.0	Apatite
	2	5.0	Apatite
	3	5.0	Apatite
	4	5.0	Apatite
	5	5.0	Apatite

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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Subject: TCR FAN 50B 20" x 20" Field Tile Fantasia Beige Ceramic Tiles, Made in China.
Specification : ASTM C-650 (Qualitative Observation Only)
Source : Delivered to Smith-Emery Laboratories by Client via Con-Way on May 21, 2010.

Report of Tests

CHEMICAL RESISTANCE OF CERAMIC TILE (ASTM C 650)

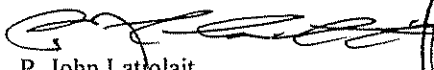
Exposure time : 24 hours

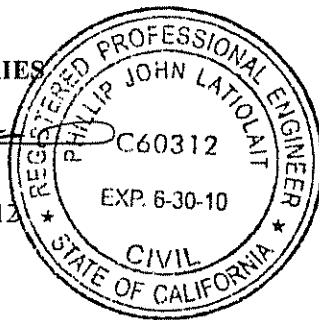
Room temperature : 75.5 °F

<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

Respectfully Submitted,

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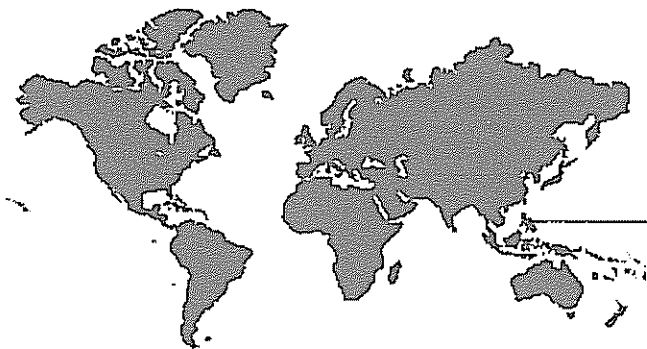

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- The materials tested did not comply with specifications.
- No established criteria for acceptable limits.



TEI-TestingSM SERVICES

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|||||
BEDROSIANS TILE AND MARBLE
1515 EAST WINSTON ROAD
ANAHEIM CA 92805-6445
USA

Analysis No. TS-S&T 01020
Report Date 18 June 2010
Date Sampled 20 May 2010
Where Quarried/Fabricator Unknown
Where Sampled Anaheim, CA USA
Sample Received 24 May 2010
Sampled By Client

This is to attest that we have examined: Manufactured Material identified: Porcelain Tile TCR FAN50B TILECREST FANTASIA BEIGE 20 X 20

When examined to the applicable requirements of:

ASTM C1027-09 "Standard Test Method for Determining Visible Abrasion Resistance of Glazed Ceramic Tile"

The above identified material had the following values:

Visible Abrasion Resistance Class IV

The attached Report of Test is an integral portion of this summation certificate.

END OF ANALYSIS


Merrill Gee P.E. – Engineer in Charge

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