



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-07-195

November 16, 2007

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

Subject: TCR KYL 50B 19-3/4" x 19-3/4" Field Tile Kyle - Beige Ceramic Tiles (Made in China)
Specification: ASTM C 1028-06
Source: Submitted to Smith-Emery Laboratories by Client October 10, 2007.
Date Tested: October 12, 2007

STATIC COEFFICIENT OF FRICTION (ASTM C 1028-06)

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:

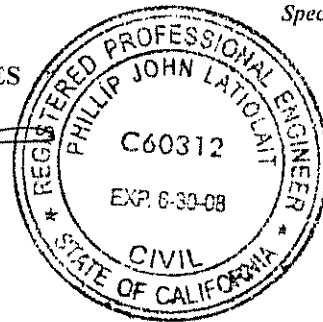
Test Condition	Tile No.	N	E	S	W	Average	Individual	S.C.O.F
							Coefficient of Friction (fc)	After Neolite Correction Factor
Dry Neolite	1	46	45	47	46	46 08	(0 90)	0.87
	2	45	46	46	46			
	3	46	46	47	47			
Wet Neolite	1	34	36	35	35	35 08	(0 68)	0.66
	2	35	34	35	34			
	3	36	36	35	36			

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

Dry Neolite	1	45	45	46	45	45 08	(0 88)	0.85
	2	44	45	45	44			
	3	45	46	46	45			
Wet Neolite	1	34	36	34	35	34 75	(0 68)	0.66
	2	34	34	33	35			
	3	36	36	35	35			

Respectfully Submitted,
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P. John Latiolait
Registered Civil Engineer No C60312
Registration Expires: 06-30-08



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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Subject: **TCR KYL 50B 19-3/4" x 19-3/4" Field Tile "Kyle Beige" Ceramic Tiles (Made in China)**
Specification : ASTM C 373
Source : Submitted to Smith-Emery Laboratories by Client October 10, 2007.
Date Tested: October 16, 2007

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.

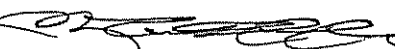
Sample No.	Dry Wt. (grams)	Wet Wt. (grams)	Percent Water Absorption	Average
1	361.7	363.6	0.52%	
2	381.0	383.9	0.77%	
3	358.9	360.7	0.49%	<u>0.55%</u>
4	378.3	380.1	0.48%	
5	361.8	363.6	0.48%	

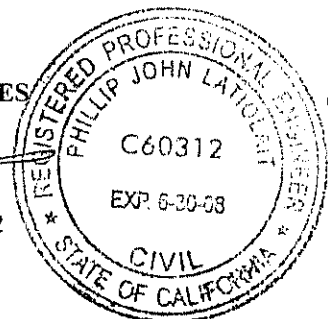
Requirements : ANSI A 137.1 (General) - When tested as described in ASTM C 373, the tile in the sample shall be impervious for porcelain paver tile and shall be impervious, vitreous or semi-vitreous for natural clay paver tile.

- 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 Vitreous Tile Requirement.

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SUBJECT: **TCR KYL 50B 19-3/4" x 19-3/4" Field Tile "Kyle Beige" Ceramic Tiles (Made in China)**
Specification: **MOHS Hardness Test (MOHS Scale)**
Source: Submitted to Smith-Emery Laboratories by Client October 10, 2007.
Date Tested: October 12, 2007

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.

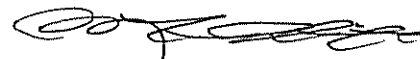
AREA	SAMPLE NUMBER	MOHS SCALE	MINERAL EQUIVALENT
Top Surface Only	1	7.5	Quartz / Topaz
	2	7.5	Quartz / Topaz
	3	7.5	Quartz / Topaz
	4	7.5	Quartz / Topaz
	5	7.5	Quartz / Topaz

MOHS Table

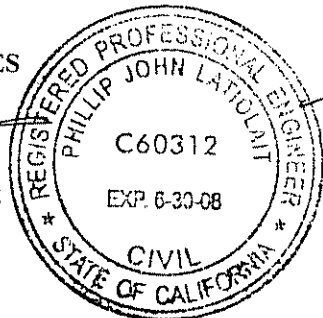
Mohs #	Mineral	Mohs #	Mineral
1.0	Talc	6.0	Microcline
2.0	Selenite	7.0	Quartz
3.0	Calcite	8.0	Topaz
4.0	Fluorite	9.0	Corundum
5.0	Apatite	10.0	Diamond

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

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Subject: **TCR KYL 50B 19-3/4" x 19-3/4" x 5/16" Thick Field Tile Kyle - Beige Ceramic Tiles (Made in China)**
Specification: ASTM C 648
Source: Submitted to Smith-Emery Laboratories by Client October 10, 2007.
Date Tested: October 11, 2007

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.	446
2.	467
3.	498
4.	530
5.	504
6.	439
7.	456
8.	472
9.	420
10.	428

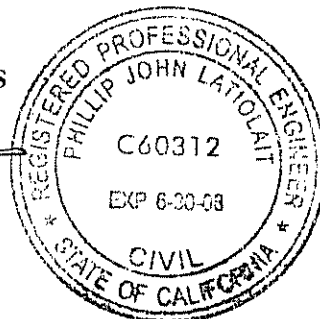
Average: 466

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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Subject: **TCR KYL 50B 19-3/4" x 19-3/4" Field Tile "Kyle Beige" Ceramic Tiles (Made in China)**
Specification : ASTM C-650 (Qualitative Observation Only)
Source : Submitted to Smith-Emery Laboratories by Client October 10, 2007.
Date Tested: October 16, 2007

Report of Tests

CHEMICAL RESISTANCE OF CERAMIC TILE (ASTM C 650)

Exposure time : 24 hours

Room temperature : 75.5 °F

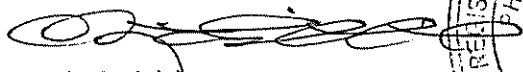
<u>Tile Number</u>	<u>Acid 10% HCL</u>	<u>Alkali 10% KOH</u>
1.	Unaffected	Unaffected
2.	Unaffected	Unaffected
3.	Unaffected	Unaffected
4.	Unaffected	Unaffected
5.	Unaffected	Unaffected
6.	Unaffected	Unaffected

Requirements : No Requirement

Remarks : Sample Tested Shows no Physical Damage After Test

Respectfully Submitted,

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

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Subject: TCR KYL 50B 19-3/4" x 19-3/4" Field Tile "Kyle Beige" Ceramic Tiles (Made in China)
Specification: CTI Stain Test (CTI-T-72)
Source : Submitted to Smith-Emery Laboratories by Client October 10, 2007.
Date Tested: October 16, 2007

Report of Tests

CERAMIC TILE INSTITUTE STAIN TEST (CTI-T-72)


Procedure

The following stain materials (common household products) were applied to the surface of the tile, with one area covered and a second area uncovered. The stain materials was in contact with the tile surface for 24 hours, then cleaned using Ajax Industrial Cleanser, 3M nylon scrubber and water. Test results are as follows:

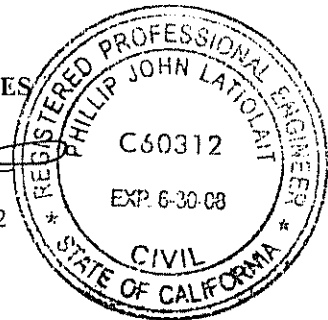
Staining Materials	Exposed Time (Hours)	OBSERVATIONS	
		Uncovered	Covered
Coca Cola	24	No Stain	No Stain
Lemon Juice	24	No Stain	No Stain
Mustard	24	No Stain	No Stain
Bacon Grease	24	No Stain	No Stain
Catsup	24	No Stain	No Stain
Wesson Oil	24	No Stain	No Stain

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- No Established Criteria For Acceptable Limits.

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