



SMITH-EMERY LABORATORIES

An Independent Commercial Testing Laboratory

781 E. Washington Boulevard - 2nd Floor Los Angeles, California 90021 ♦ (213) 745-5333 ♦ Fax (213) 749-7232

Proj. No.: 36415-1
Lab No.: T-09-150

September 22, 2009
Page 1 of 2

Client : **STONE & PEWTER ACCENTS**
3555 LOMITA BLVD., UNIT H & J
TORRANCE, CA 90505
Attn : Neil Katz

Subject: **Sumi-E 1" x 1" Glass (Mosaic Tile) Transparent Glass w/ Multi-Color Blue/Green Striations**
Specification : ASTM C 1026 - 96
Source : Submitted to Laboratory by Client.

Report of Test

Measuring The Resistance of Ceramic Tile to Freeze - Thaw Cycling (ASTM C 1026 - 96)

Ten tile samples were placed in a vacuum chamber and subjected to a maximum vacuum pressure of 1 45 psi. (29 in Hg) for 20 minutes, then covered with water for additional 40 minutes under the same vacuum condition. After removal from the chamber, the samples were subjected to fifteen cycles of freezing to 0° F and thawing to 50° F to 60° F water. After each cycle the specimens were wiped surface dry and observed for surface flaws, then reimmersed in water until ready for the next freezing cycle. Every fifth cycle the tile were weighed and inked to enhance surface flaws.

A. Absorption

Tile No.	Dry Wt. (grams)	Wet Wt. (grams)	Percent Water Absorption After Vacuum
1.	27.82	27.83	0.036%
2.	28.25	28.25	0.000%
3.	27.03	27.04	0.037%
4.	28.09	28.09	0.000%
5.	29.08	29.09	0.034%
6.	27.96	27.96	0.000%
7.	28.90	28.90	0.000%
8.	29.46	29.46	0.000%
9.	29.18	29.18	0.000%
10.	28.67	28.67	0.000%

B. Freeze - Thaw Cycling

Cycle No.	OBSERVATIONS									
	Tile 1	Tile 2	Tile 3	Tile 4	Tile 5	Tile 6	Tile 7	Tile 8	Tile 9	Tile 10
1.	U	U	U	U	U	U	U	U	U	U
2.	U	U	U	U	U	U	U	U	U	U
3.	U	U	U	U	U	U	U	U	U	U
4.	U	U	U	U	U	U	U	U	U	U
5.	U	U	U	U	U	U	U	U	U	U
Wet Wt.	27.83	28.25	27.04	28.09	29.09	27.96	28.9	29.46	29.18	28.67
% Abs.	0.036%	0.000%	0.037%	0.000%	0.034%	0.000%	0.000%	0.000%	0.000%	0.000%



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B. Freeze - Thaw Cycling cont'd.

Cycle No.	OBSERVATIONS									
	Tile 1	Tile 2	Tile 3	Tile 4	Tile 5	Tile 6	Tile 7	Tile 8	Tile 9	Tile 10
6.	U	U	U	U	U	U	U	U	U	U
7.	U	U	U	U	U	U	U	U	U	U
8.	U	U	U	U	U	U	U	U	U	U
9.	U	U	U	U	U	U	U	U	U	U
10.	U	U	U	U	U	U	U	U	U	U
Wet Wt.	27.83	28.25	27.04	28.09	29.09	27.96	28.9	29.46	29.18	28.67
% Abs.	0.036%	0.000%	0.037%	0.000%	0.034%	0.000%	0.000%	0.000%	0.000%	0.000%

Cycle No.	OBSERVATIONS									
	Tile 1	Tile 2	Tile 3	Tile 4	Tile 5	Tile 6	Tile 7	Tile 8	Tile 9	Tile 10
11.	U	U	U	U	U	U	U	U	U	U
12.	U	U	U	U	U	U	U	U	U	U
13.	U	U	U	U	U	U	U	U	U	U
14.	U	U	U	U	U	U	U	U	U	U
15.	U	U	U	U	U	U	U	U	U	U
Wet Wt.	27.83	28.25	27.04	28.09	29.09	27.96	28.9	29.46	29.18	28.67
% Abs.	0.036%	0.000%	0.037%	0.000%	0.034%	0.000%	0.000%	0.000%	0.000%	0.000%

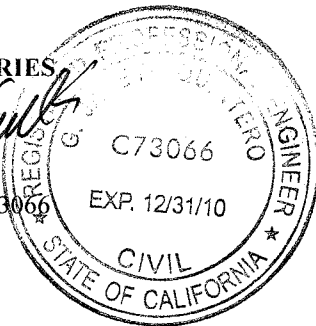
Legend : (U) Unaffected - No crazing, chipping spalling, body checks or cracks.
(A) Affected - (a) Crazing, (b) Chipping, (c) Spalling, (d) Body Checks, (e) Cracks.

Remarks: Tested samples shows no evidence of deterioration after 15 cycles of freezing and thawing

Respectfully Submitted,

SMITH - EMERY LABORATORIES

G. Janeth Quintero
Registered Civil Engineer No.: C 73066
Registration Expires : 12-31-10



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

rc



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Attn: Neil Katz

Subject: **Sumi-E 1" x 1" Glass (Mosaic Tile) Transparent Glass w/ Multi-Color Blue/Green Striations**
Specification: ASTM C 484 Thermal Shock
Source: Submitted to Laboratory by Client.

Report of Test

THERMAL SHOCK RESISTANCE OF GLAZED CERAMIC TILE (ASTM C 484)

Procedure.

Three (3) samples were placed in an oven maintained at 293°F (+/-9°F) supported with the glazed surface exposed to the oven atmosphere. After 30 minutes each tile was removed and placed face side up on a sheet of aluminum 15" x 15" x 11" gauge supported at four corners approximately 2" in height. After 15 minutes later the tile samples were inspected. The undamaged samples were returned to the oven and this procedure repeated 5 times.

<i>Cycle Number</i>	<i>Tile 1</i>	<i>Tile 2</i>	<i>Tile 3</i>
1.	Passed	Passed	Passed
2.	Passed	Passed	Passed
3.	Passed	Passed	Passed
4.	Passed	Passed	Passed
5.	Passed	Passed	Passed

Passed = No evidence of disintegration

Requirement: The body shall show no evidence of disintegration

Respectfully Submitted,
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G. Janeth Quintero
Registered Civil Engineer No.: C 73066
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Subject: **Sumi-E 1" x 1" Glass (Mosaic Tile) Transparent Glass w/ Multi-Color Blue/Green Striations**
Specification: ASTM C 648 (Modified)
Source: Submitted to Laboratory by Client.

Report of Test

BREAKING STRENGTH (ASTM C 648 - *Modified)

The tile samples were placed on a test fixture having three (3) supports located in a circle *Thirty-Seventh and Sixty-Fourths (37/64) 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.	308
2.	404
3.	208
4.	483
5.	212
6.	225
7.	391
8.	400
9.	571
10.	421

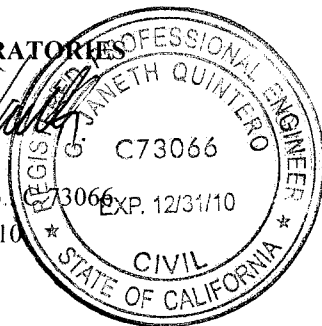
Average: 362

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

G. Janeth Quintero
Registered Civil Engineer No. C73066
Registration Expires : 12-31-10



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

10