TILE INSTITUTE of AMERICA

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TIA's Client: 20160415

AquaBella/Main Street Art, Inc.
Mr. Brian L. Streadbeck
450 South Alpine Highway
Alpine, Utah 84004

Telephone: (714) 264-8269 Facsimile: (714) 685-0465
brian@msagallery.com

Tile: **Aqua Series**, multi-colored "**AQ-1203 Obsidian Blend**" glass body, mesh back mounted.
Nominal size: 1" x 2" x ¼". Tile made in China.

Conditions: New tiles sent to TILE INSTITUTE of AMERICA from client above and selected at random.

Resistance of Tile to Chemical Substances (ASTM C650)

Procedure: This test method covers a procedure for determining whether, and to what degree, tiles are affected by prolonged exposure to chemical substances. The temperature was controlled at 75±5 ° F (24±3 ° C) with an exposure time of 24 hours.

Specimens	Substance	Temperature, °F (°C)	Time, hours	Results
1.	10% Hydrochloric Acid	75±5 (24 ± 3)	24	Not affected
1.	10% Potassium Hydroxide	75±5 (24 ± 3)	24	Not affected
2.	10% Hydrochloric Acid	75±5 (24 ± 3)	24	Not affected
2.	10% Potassium Hydroxide	75±5 (24 ± 3)	24	Not affected
3.	10% Hydrochloric Acid	75±5 (24 ± 3)	24	Not affected
3.	10% Potassium Hydroxide	75±5 (24 ± 3)	24	Not affected
4.	10% Hydrochloric Acid	75±5 (24 ± 3)	24	Not affected
4.	10% Potassium Hydroxide	75±5 (24 ± 3)	24	Not affected
5.	10% Hydrochloric Acid	75±5 (24 ± 3)	24	Not affected
5.	10% Potassium Hydroxide	75±5 (24 ± 3)	24	Not affected
6.	10% Hydrochloric Acid	75±5 (24 ± 3)	24	Not affected
6.	10% Potassium Hydroxide	75±5 (24 ± 3)	24	Not affected
7.	10% Hydrochloric Acid	75±5 (24 ± 3)	24	Not affected
7.	10% Potassium Hydroxide	75±5 (24 ± 3)	24	Not affected
8.	10% Hydrochloric Acid	75±5 (24 ± 3)	24	Not affected
8.	10% Potassium Hydroxide	75±5 (24 ± 3)	24	Not affected
9.	10% Hydrochloric Acid	75±5 (24 ± 3)	24	Not affected
9.	10% Potassium Hydroxide	75±5 (24 ± 3)	24	Not affected
10.	10% Hydrochloric Acid	75±5 (24 ± 3)	24	Not affected
10.	10% Potassium Hydroxide	75±5 (24 ± 3)	24	Not affected
11.	10% Hydrochloric Acid	75±5 (24 ± 3)	24	Not affected
11.	10% Potassium Hydroxide	75±5 (24 ± 3)	24	Not affected
12.	10% Hydrochloric Acid	75±5 (24 ± 3)	24	Not affected
12.	10% Potassium Hydroxide	75±5 (24 ± 3)	24	Not affected

Test Results: **Pass**

Sincerely,

Gerald M. Halweg

Gerald M. Halweg, CTC, CSI, TTA.
President/CEO of TILE INSTITUTE of AMERICA

Date: June 8, 2016

TILE INSTITUTE of AMERICA

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Alpine, Utah 84004

Telephone: (714) 264-8269 Facsimile: (714) 685-0465
brian@msagallery.com

Tile: **Aqua Series, multi-colored "AQ-1203 Obsidian Blend", "glass body"**, fiber-mesh back mounted. Nominal size: 1" x 2" x ¼". Tile made in China.

Conditions: New tiles sent to TILE INSTITUTE of AMERICA in sealed manufacturer's boxes from client above and selected at random.

The tiles were bonded between concrete units and bonding mortar with latex-modified thin set mortar.
Specification: ASTM C 482

Report of Test

ADHESION BOND SHEAR STRENGTH (*ASTM C 482)

Standard Test Method for Bond Strength of Ceramic Tile. This method provides the means for establishing whether or not this tile can be bonded with adequate strength to Portland cement, which may appear in tile specifications. Tile bond adhesion strength is the force in pounds-force (or Newton's), as read from the pressure gauge, necessary to cause the tile's bond to shear. The load was applied at the rate of 1000 lbf/min. The tile samples were placed on a test fixture as per specifications. * Modified by using a bond coat as identified versus pure cement.

Sample #	Days Cured	Bonding Material	Sq. Inches	Load Pound	PSI	Failure %
1	28 Dry	Latex-modified thin set mortar	36	1872	52	T/m-100%
2	28 Dry	Latex-modified thin set mortar	36	1836	51	T/m-100%
3	28 Dry	Latex-modified thin set mortar	36	1944	54	T/m-100%
4	28 Dry	Latex-modified thin set mortar	36	2088	58	T/m-100%
5	28 Dry	Latex-modified thin set mortar	36	1908	53	T/m-100%
Average				1929.6	53.6	PASS

Requirements: ANSI A 137.1 (General) Bond Strength. When tested as described in ASTM C 482, the average bond strength shall be 50 pounds per square inch or greater.

Test Results: **Pass**

Sincerely,

Gerald Halweg

Gerald M. Halweg, CTC, CSI, TTA.
President/CEO of TILE INSTITUTE of AMERICA

Date: June 15, 2016