

TILE INSTITUTE of AMERICA

1262 Bouquet Circle, Thousand Oaks, California 91362 Telephone: (805) 371-TILE (8453) Facsimile: (805) 371-8455

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 1/4". 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.

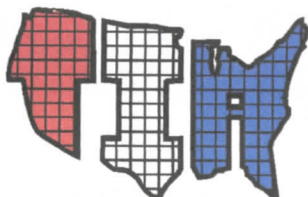
| Specimens | Substance | Temperature, °F (°C) | Time, hours | Results |
|-----------|-------------------------|----------------------|-------------|--------------|
| 1. | 10% Hydrochloric Acid | 75±5 (24 ± 3) | 24 | Not affected |
| 1. | 10% Potassium Hydroxide | 75±5 (24 ± 3) | 24 | Not affected |
| 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, CTC, CSI, TTA.
President/CEO of TILE INSTITUTE of AMERICA

Date: June 8, 2016



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brian@msagallery.com

Tile: **Aqua Series, multi-colored "AQ-1203 Obsidian Blend"**, "glass body", fiber-mesh back mounted.
Nominal size: 1" x 2" x 1/4". 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)

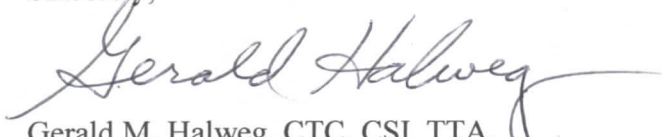
Standard Test Method for Bond Strength of Ceramic Tile. This method provides the means for establishing whether or not this tile can be bonded with adequate strength to Portland cement, which may appear in tile specifications. Tile bond adhesion strength is the force in pounds-force (or Newton's), as 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 M. Halweg, CTC, CSI, TTA.
President/CEO of TILE INSTITUTE of AMERICA

Date: June 15, 2016