

# SHINING DATASHEET

FICHA TECNICA · FICHE TECHNIQUE

## SHINING

**Series:** Shining available in 40 different colors.

**Format:** 3/4" x 3/4" (2 x 2 cm).

**Sheet size:** 12 7/16" x 12 7/16" (31.6 x 31.6 cm).

**Joint:** 2/48" (1 mm).

**Weight per sheet:** 1.58 lbs.

**Shining:** colored glass mosaic with iridescent effect, achieved using a particular spray during the cooling off cycle.

**Manufacturing Technology:** Fusion.

**Applications:** wall and floor, residential and commercial\*, swimming pools and Spas.

*\*using mosaic on a commercial floor is not a problem if the installation is done properly, the sub-floor is leveled and you use epoxy adhesive and grout or with a polyurethane adhesive if there are movements in the subfloor.*

### ASTM C 484/99 Resistance to Thermal Shock

Test performed with immersion: 5.

Number of test specimens with visible defects: 0.

### ASTM C 373/88 (99) Apparent Porosity, Water Absorption, Apparent Specific Gravity and Bulk Density

Apparent porosity: 0.20%.

Water Absorption: 0.08%.

Apparent Specific Gravity g/cm<sup>3</sup>: 2.37.

Bulk Density g/cm<sup>3</sup>: 2,36.

### ASTM C 499/78 (99) Standard Method for Facial Dimensions and Thickness of Flat, Rectangular Ceramic Wall and Floor Tile

Length & Width, actual size: 2 x 2 cm.

Average size on 20 samples submitted: 19.98 mm.

Thickness, nominal 4 mm.

Average on 20 samples submitted: 3.91 mm.

### ASTM C 502 - 93A Standard Method for Wedging of Flat, Rectangular Ceramic Wall & Floor Tile

Average on 20 samples submitted: 0.0%.

### ASTM C 1028 - 96 Friction coefficient

Three samples were considered. Both dry and wet conditions were used. Calibration was performed based on a 4 pulls test on standard tile, as prescribed in the norm.

Samples were subjected to the pull test in the renovated conditions (cleaned samples).

Four pulls perpendicular to the previous were performed on each sample. An actual normal load of 233 N was used for all the pulls.

Friction coefficient in dry conditions: 0.71.

Friction coefficient in wet conditions: 0.61.



# PRODUCT TESTING SERVICE

100 Clemson Research Blvd. • Anderson, SC 29625 • Tel (864) 646-TILE • Fax (864) 646-2821

TCNA TEST REPORT NUMBER: TCNA-424-12

PAGE: 1 OF 1

**TEST REQUESTED BY:**

E-Stone  
Attn: Livio Magni  
8041 Haywood Taylor Blvd.  
Sebring, FL 33870

**TEST SUBJECT MATERIAL:**

Identified by client as: **Shining 760**

**TEST DATE:**

8/21/12-9/18/12

**TEST PROCEDURE:**

**ANSI A137.2 Section 7.7: "Test Method for Evaluating - Shear Bond Strength of Glass Tile"**

-Eight specimens were adhered to 2 x 7 x 15-1/2-inch concrete blocks according to A137.2 section 7.7.

-TCNA thin-set testing mortar was used to bond the tiles to the block. Mapei Kerapoxy was used to grout the tiles.

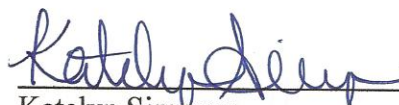
-Four shear specimens were allowed to cure for 28 days at room temperature and four shear specimens were allowed to cure for 21 days at room temperature and were then submerged in water for 7 days.

-All specimens were loaded in shear at a rate of 200 psi/min.

**TEST RESULTS:**

	28 day dry shear strength (psi)	Failure Mode	21 day dry, 7 day submerged shear strength (psi)	Failure Mode
Specimen 1	123 psi	Cohesive within thin-set	103 psi	Cohesive within thin-set
Specimen 2	127 psi	" " "	84 psi	" " "
Specimen 3	150 psi	" " "	35 psi	Tile Failure
Specimen 4	154 psi	" " "	42 psi	Tile Failure
Average	138 psi		66 psi	

[The ANSI A137.2 Specification for Glass Tile states that the average shear bond strength shall be 150 psi or greater after 28 day dry curing and 100 psi or greater after 21 day dry and 7 day submerged curing.]



Katelyn Simpson  
Laboratory Manager

9/25/12  
Date

Testing Services: [testing@tileusa.com](mailto:testing@tileusa.com) • Literature Orders: [literature@tileusa.com](mailto:literature@tileusa.com) • Web Site: [www.tileusa.com](http://www.tileusa.com)

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8/27/12-8/28/12

**TEST PROCEDURE:**

**ANSI A137.2 Section 7.9: "Test Method for Determining Thermal Shock Resistance of Glass Tile"**

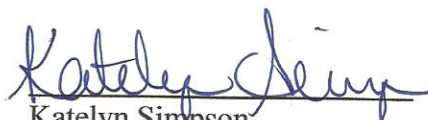
-Five whole tiles were subjected to ten cycles of thermal shock per section 8.2 (immersion test) of ASTM C484 except the high end temperature was set to 160±9°F per ANSI A137.2 section 7.9.

-The tiles were inspected for failure using a solution of methylene blue prior to cycle one and immediately following cycle ten.

**TEST RESULTS:**

	Observations
Specimen 1	None
Specimen 2	None
Specimen 3	None
Specimen 4	None
Specimen 5	None

[The ANSI A137.2 Specification for Glass Tile states: "the tile shall show no evidence of degradation, chipping, or cracking."]

  
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**TEST DATE:**

9/4/12

**TEST PROCEDURE:**

**ANSI A137.2 Section 7.8: "Test Method for Determining Compressive Strength of Miniature Mosaic Glass Tile"**

- Ten whole glass tiles were tested.
- The tiles were loaded at a rate of 3000 PSI per minute.
- Testing was performed on an Instron Universal Tester, model #3385-H


**TEST RESULTS:**

The average compressive strength of ten (10) tiles was:  
**74 lbf.**

The individual results of compressive strength are as follows:

Specimen 1: **66 lbf**  
Specimen 2: **71 lbf**  
Specimen 3: **65 lbf**  
Specimen 4: **76 lbf**  
Specimen 5: **78 lbf**  
Specimen 6: **67 lbf**  
Specimen 7: **75 lbf**  
Specimen 8: **66 lbf**  
Specimen 9: **96 lbf**  
Specimen 10: **80 lbf**

[The ANSI A137.2 Specification for Glass Tile states that the average compressive strength shall be **2500 PSI** or greater for fused, low temperature, or cast mosaic glass tile.]

  
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Laboratory Manager

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9/20/12

**TEST PROCEDURE:**


**ANSI A137.2 Section 7.6: "Test Method for Mounting Variations"**

- Two sheets were evaluated according to section 7.6 of ANSI A137.2.
- The sheets of miniature mosaic glass tile had 364 grout joints.
- For standard cast miniature mosaic glass tile the allowable deviation from nominal joint size stated in ANSI A137.2 is "as reported". The nominal joint size for this material is 1.0 mm.

**TEST RESULTS:**

	# of Grout Joints Outside of Compliance
Sheet 1	All grout joints were within $\pm 0.50$ mm from nominal
Sheet 2	All grout joints were within $\pm 0.50$ mm from nominal

Note: There are no specific requirements in ANSI A137.2 for mounting variation of standard miniature mosaic tiles. For more details regarding the allowable deviation from nominal joint size see Tables 5, 6, and 7 of ANSI A137.2.

  
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