



# PRODUCT TESTING SERVICE

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

TCNA TEST REPORT NUMBER:

TCNA-463-14

PAGE: 1 OF 2

TEST REQUESTED BY: Arto Brick

TEST METHOD: ASTM C650-04 (2009): "Resistance of Ceramic Tile to Chemical Substances"

Informal Test Method Description: This test method covers a procedure for determining whether, and to what degree, ceramic tiles are affected by prolonged exposure to chemical substances that are commonly in the household or for cleaning purposes as well as other more severe conditions. This test method calls for one or more tests, each consisting of exposing flat pieces of ceramic tile to the action of a specific chemical substance for a definite period of time at a prescribed temperature.

This summary is provided for the reader's convenience and is not a complete description of the method. See ASTM C650 for all method details and information.

TEST SUBJECT MATERIAL: Identified by client as: "OCP – 4x4 Oleson Copper"  
Approximate Size as Received: 4"x4"

TEST DATE: 8/14/2014– 8/18/2014

**TEST PROCEDURE:**

- Sample prep: The tile was cut to 15 pieces of 2" x 2" tile.
- One (1) 2" x 2" glazed specimen was tested for each test solution.
- The specimens were exposed to the test solutions for 24 hrs at 74°F.

**TEST RESULTS:**

|  | Test Solution                         | Visual Test (Affected?) | Pencil Test (Affected?) |
|--|---------------------------------------|-------------------------|-------------------------|
| <i>Common Household and Cleaning Chemicals</i> | Acetic acid, 3% (v/v)                 | No                      | No                      |
|  | Acetic acid, 10% (v/v)                | No                      | No                      |
|  | Ammonium chloride, 100 g/L            | No                      | No                      |
|  | Citric acid solution, 30 g/L          | No                      | No                      |
|  | Citric acid solution, 100 g/L         | No                      | No                      |
|  | Lactic acid, 5% (v/v)                 | No                      | No                      |
|  | Phosphoric acid, 3% (v/v)             | No                      | No                      |
|  | Phosphoric acid, 10% (v/v)            | No                      | No                      |
|  | Sulfamic acid, 30 g/L                 | No                      | No                      |
|  | Sulfamic acid, 100 g/L                | No                      | No                      |
| <i>Swimming Pool Chemicals</i>                 | Sodium hypochlorite solution, 20 mg/L | No                      | No                      |
| <i>Acids and Bases</i>                         | Hydrochloric acid solution, 3% (v/v)  | No                      | No                      |
|  | Hydrochloric acid solution, 18% (v/v) | No                      | No                      |
|  | Potassium hydroxide, 30 g/L           | No                      | No                      |
|  | Potassium hydroxide, 100 g/L          | No                      | No                      |

Katelyn Simpson  
Laboratory Manager

8/19/2014



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COMMENTS: None

ANSI SPECIFICATIONS\*:

| ANSI standard      | Class   | Maximum number of affected samples |
|--------------------|---------|------------------------------------|
| ANSI A137.1/A137.2 | Class A | 0                                  |
| ANSI A137.1/A137.2 | Class B | 1                                  |
| ANSI A137.1/A137.2 | Class C | 2                                  |
| ANSI A137.1/A137.2 | Class D | 3                                  |
| ANSI A137.1/A137.2 | Class E | 4 or more                          |

\*For more detailed information, refer to ANSI A137.1 Specifications for Ceramic Tile or ANSI A137.2 Specifications for Glass Tile

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Laboratory Manager

8/19/2014

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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