

TCNA TEST REPORT NUMBER: TCNA-0498-22 **PAGE:** 1 OF 3

TEST REQUESTED BY: ARTO

TEST METHOD: ASTM C1026-13 (2018): “Standard Test Method for Measuring the Resistance of Ceramic and Glass Tile to Freeze-Thaw Cycling”

Informal Test Method Description: This test method describes the procedures and equipment required to test either glazed or unglazed ceramic or glass tiles for resistance to repeated cycles of freezing and thawing. Tile of any size or shape may be tested by this test method. A designated test load of tile specimens is saturated with water prior to being placed face-up in a metal water-filled container inside a freezer. The water level is adjusted such that the tile specimens are partially submerged. A thermocouple is inserted into the bottom of the metal container such that the water surrounding the thermocouple is the last location to freeze and thaw. Freezing is followed by a thawing cycle using water that flows over the test load. The number of freeze-thaw cycles is recorded and after 300 cycles, the test load is visually examined for damage and checked for total weight loss. This summary is provided for the reader’s convenience and is not a complete description of the method. See ASTM C1026 for all method details and information.

TEST SUBJECT MATERIAL: Identified by client as: “**Blond bisque - back side - mochi glaze 6x6”**
Approximate Size as Received: 6"x6"

TEST DATE: 7/28/2022 - 10/31/2022

TEST PROCEDURE NOTES:

- Sample Prep: Five (5) specimens were prepared and conditioned according to ASTM C1026, section 7.1.1.
- The specimens were then subjected to three hundred (300) cycles of freeze-thaw consisting of freezing the tiles in water to 27°F and then thawing the tiles in water to 40°F.
- Each tile is evaluated for damage after freeze/thaw cycling. ASTM C1026 states that a damaged tile is defined as one which shows evidence of cracking, disintegration, spalling, or total weight loss greater than 0.5%.

TEST RESULTS:

Specimen #	Initial Dry Wt. (g)	Final Dry Wt. (g)	Observations After 300 Cycles	Total Wt. Loss (%)
1	105.87	105.87	No visible damage	0%
2	104.52	104.51	No visible damage	0.01%
3	102.98	102.97	No visible damage	0.01%
4	105.43	105.42	No visible damage	0.01%
5	104.22	104.21	No visible damage	0.01%

COMMENTS: None

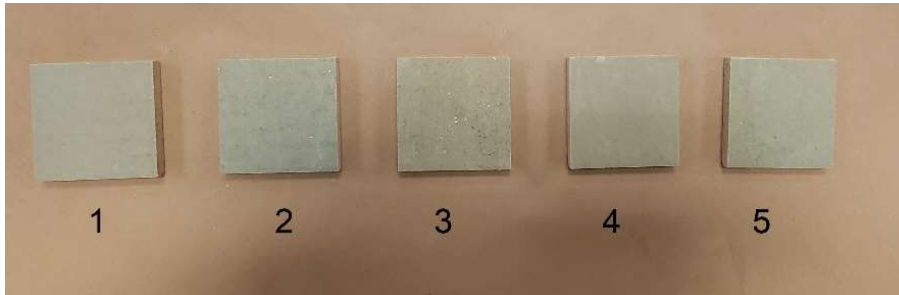


TCNA TEST REPORT NUMBER:

TCNA-0498-22

PAGE: 2 OF 3

IMAGE OF PRODUCT TESTED:



DISCLAIMER AND LIMITATION OF LIABILITY

This report is provided for the sole use of the client and no one else. It is intended for professional use by a knowledgeable professional. If published by the client, it must be published in full, including this disclaimer and limitation of liability.

This report is not an endorsement, recommendation, approval, certification, or criticism by TCNA of any particular product or its application. TCNA recommends that anyone considering the use or installation of a particular product consult with the manufacturer or an industry professional for advice specific to the person's needs and consider any applicable laws, statutes, codes, or regulations relevant to the particular product. TCNA does not know all the different manners and applications in which a client's particular product might be used, and, therefore, it disclaims any and all duty to provide warnings or to further investigate the suitability of the use of a particular product in a particular situation.

Unless otherwise expressly stated, TCNA tested the specific test subject material provided by the client and identified in the lab report, as indicated by the client. TCNA does not independently verify the information provided by the client, and it makes no representation that similar results would be achieved with other, untested materials, even if such other materials purportedly have the same product name, are purportedly of the same or similar type of tile or product made by the client, or are purportedly from the same batch of tile or product. Nor does TCNA state that the date in this report is representative of production occurring at the same time or at any other time. Only the manufacturer may make that claim, based on sampling and quality control parameters beyond the knowledge and control of TCNA. TCNA does not provide any supervision, review, management, or quality control of any manufacturer's production.





TCNA TEST REPORT NUMBER:

TCNA-0498-22

PAGE: 3 OF 3

TCNA makes no representation that the client's products are uniform or identical to the test subject material, that the test subject material is suitable for any particular use, application, or installation, or that it will exhibit the same properties when installed or used in a particular manner. The data provided in this report results from standardized laboratory testing performed under laboratory conditions. As such it does not represent all conditions under which the products may be used or subjected. For testing on actual materials being used or considered for a job site, contact TCNA for sampling provisions and possible testing.

This report is intended solely to provide the results of the test procedure stated above as performed on the test subject material provided by the client, and may not be relied on for any other purpose. TCNA MAKES NO OTHER REPRESENTATIONS OR WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED. ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXPRESSLY DISCLAIMED. IN THE EVENT OF A DISPUTE CONCERNING THIS REPORT, THE EXCLUSIVE REMEDY FOR CLIENT SHALL BE FOR TCNA TO REPEAT THE TEST REQUESTED, BUT IN NO EVENT SHALL TCNA BE LIABLE FOR AN AMOUNT GREATER THAN THE AMOUNT IT RECEIVED FROM CLIENT FOR THE TEST. UNDER NO CIRCUMSTANCES WILL TCNA BE LIABLE TO CLIENT FOR ANY OTHER DAMAGES (NOR SHALL IT BE LIABLE TO ANY OTHER PERSON OR BUSINESS ENTITY FOR ANY DAMAGES), INCLUDING WITHOUT LIMITATION ANY AND ALL DIRECT, INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES, RESULTING, IN WHOLE OR IN PART, FROM ANY USE OF, REFERENCE TO, OR RELIANCE UPON THE REPORT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. TCNA DISCLAIMS ALL LIABILITY TO ANY THIRD PARTY CONCERNING THIS REPORT. THE FOREGOING LIMITATION OF LIABILITY IS A FUNDAMENTAL ELEMENT OF TCNA'S AGREEMENT TO CONDUCT AND PROVIDE THE REPORT.

11/1/2022

Damon McDowell
Laboratory Supervisor

