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AMERICAN NATIONAL STANDARD SPECIFICATIONS FOR GLASS TILE

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American National Standard Specifications for Glass Tile

Secretariat
Tile Council of North America, Inc.

Approved
American National Standards Institute, Inc.

Abstract

This publication presents voluntary standard specifications for glass tile. It lists and defines various types, sizes, and physical properties for glass tile, including large format, mosaic, miniature mosaic, cast, fused, and low temperature-coated glass tile. This standard provides quality criteria for buyers, specifiers, installers, manufacturers, and the public in general. It is intended for reference or inclusion in the glass tile section of product specifications and contracts.

American National Standard

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NOTICE OF DISCLAIMER AND LIMITATION OF LIABILITY

Foreword

This voluntary standard lists and defines various types, sizes, and physical properties for glass tile. It is intended as a guide to aid the general public, manufacturers, distributors, specifiers, architects, tile contractors, and other businesses and professionals in the tile industry.

While the existence of the standard does not in any respect preclude anyone, including those who have accepted it, from manufacturing, marketing, purchasing or using products, processes or procedures not conforming to this standard, producers of glass tiles made in conformance with this standard are encouraged individually to indicate such conformance in advertising, promotion, and on tags and labels.

This standard was processed and approved for submittal to ANSI by the Accredited Standards Committee (ASC) on Ceramic Tile A108. Committee approval of a standard does not necessarily imply that all committee members voted for its approval. The A108 Committee had the following members at the time it approved this standard:

Committee Members

Organization Represented	Name of Representative
APA – The Engineered Wood Association	B.J. Yeh
ARCOM, Inc.	Eugene “Buz” Groshong
Artcraft Granite Marble and Tile	James Woelfel
Atlas Minerals and Chemicals	Steve Abernathy
Bonsal American	Tom Cassutt
Bostik, Inc.	Doug Katze
Ceramic Tile and Stone Association of Arizona	Sam Hibbs
Ceramic Tile and Stone Consultants	Donato Pompo
Ceramic Tile Distributors Association	Sam Widener
Ceramic Tile Education Foundation	Scott Carothers
Ceramic Tile Institute of America, Inc.	Gray Lafortune
Chicago Tile Institute	Scott Conwell
Construction Specifications Institute	Howard Pryor
Crossville, Inc.	Tim Bolby
Custom Building Products	Dave deBear
Dal-Tile International	James Neel
David Allen Company	Martin Howard
Detroit Ceramic Tile Contractors Association	Kurt Von Koss
Forensic Tile Consultants	Greg Mowat
Fortifiber Building Systems Group	Roger Barker
Glass Tile Consultants	Scott Fleming
Great Lakes Ceramic Tile Council	Gerald Chioini
Gypsum Association	Robert Wessel
Institute of Inspection, Cleaning, and Restoration Certification	Robert Daniels
Interceramic	Jose Luis Lopez
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Laticrete International, Inc.	Steve Fine
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Metropolitan Ceramics/Ironrock, Inc.	Roy Gorton, Jr.
Michael Byrne Associates	Michael Byrne
National Association of Home Builders	Gary Ehrlich

Committee Members continued

Organization Represented	Name of Representative
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Neuse Tile Service, Inc.	Nyle Wadford
Noble Company	Eric Edelmayer
NSF International	Mindy Costello
Oceanside Glasstile Company	Brian Fitzgerald
Portland Cement Association	Jamie Farny
Professional Consultants International, LLC	Richard Goldberg
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United Brotherhood of Carpenters	Greg Hefele
United States Gypsum Corporation	Steve Rausch
US TAG to ISO TC-189 WG3	Greg Schad
Wood Construction and Engineering Consultant	Frank Woeste

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Standards

The following standards are referred to in the body of this standard by ASTM or ISO designation only and by reference are incorporated in this American National Standard. Dates following the ASTM or ISO designation indicate the year of publication or latest revision. Dates in parentheses indicate the year in which the standard was reaffirmed. Current edition of these standards should be utilized at all times.

Standard Designation	Title
ASTM C90-11a	Standard Specification for Loadbearing Concrete Masonry Units
ASTM C372-94 (2007)	Standard Test Method for Linear Thermal Expansion of Porcelain Enamel and Glaze Frits and Fired Ceramic Whiteware Products by the Dilatometer Method
ASTM C373-88 (2006)	Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Whiteware Products
ASTM C424-93 (2006)	Standard Test Method for Crazing Resistance of Fired Glazed Whitewares by Autoclave Treatment
ASTM C482-02 (2009)	Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement Paste
ASTM C484-99 (2009)	Standard Test Method for Thermal Shock Resistance of Glazed Ceramic Tile
ASTM C485-09	Standard Test Method for Measuring Warpage of Ceramic Tile
ASTM C499-09	Standard Test Method for Facial Dimensions and Thickness of Flat, Rectangular Ceramic Wall and Floor Tile
ASTM C502-09	Standard Test Method for Wedging of Flat, Rectangular Ceramic Wall and Floor Tile
ASTM C609-07	Standard Test Method for Measurement of Light Reflectance Value and Small Color Differences Between Pieces of Ceramic Tile
ASTM C648-04 (2009)	Standard Test Method for Breaking Strength of Ceramic Tile
ASTM C650-04 (2009)	Standard Test Method for Resistance of Ceramic Tile to Chemical Substances
ASTM C1026-10	Standard Test Method for Measuring the Resistance of Ceramic Tile to Freeze-Thaw Cycling
ASTM C1027-09	Standard Test Method for Determining Visible Abrasion Resistance of Glazed Ceramic Tile
ASTM C1028-07	Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method
ASTM C1378-04 (2009)	Standard Test Method for Determination of Resistance to Staining
ISO 10545-4 (2004)	Ceramic tiles—Part 4: Determination of Modulus of Rupture and Breaking Strength

Glass Tile:
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For information about the sustainability of glass tiles, refer to the **Green Squared**[SM] — American National Standard Specifications for Sustainable Ceramic Tiles, Glass Tiles, and Tile Installation Materials (A138.1)

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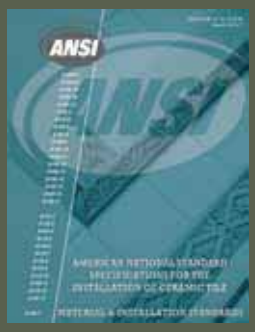
Table of Contents

Tables

Figures

For Information on How to Install Glass Tile — See ANSI Standards A108.14, .15, and .16

Collected in One Volume
All A108, A118, and A136.1 American National Standard Specifications for the Installation of Tile



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American National Standard Specifications for Glass Tile
ANSI A137.2—2012

1.0 Purpose

These specifications serve as a reference standard for buyers, specification writers, and installers of Standard Grade glass tile.

2.0 Scope

These Specifications describe manufacturing styles, body types, sizes, and physical properties for Standard Grade glass tile; the basis for acceptance and methods of testing before installation; the marking of packaging and certification of tile; and definition of terms employed in these specifications.

Note: At the current time[1], there are no glass-specific thin-set mortar standards for the installation of glass tiles. While many suitable mortars are available, as noted in ANSI A108.15 and ANSI A108.16, *"not all ANSI A118.4 latex modified thin-sets, whether spray dried polymer or two part bonding mortar systems, are suitable for installing glass tiles. It is the responsibility of the specification writer and the installer to confirm with the glass tile and setting material manufacturers the use of required setting materials, methods, and cure times."*

Note: In this Standard, American and SI measurement units are provided. The value not in parenthesis shall be considered the normative reference, and the value in parenthesis is included for informative reference only.

3.0 Definition of Terms

Blended Body Types: Sheets blended with varying glass tile body types or blended with other tiles such as ceramic, natural stone, porcelain, and metal tile. Only glass units within these sheets are subject to this specification.

Cast Glass Tile: Glass tile formed in a liquid state at 1600°F (871°C) or higher.

Ceramic Tile: A ceramic surfacing unit, usually relatively thin in relation to facial area, having either a glazed or unglazed face and fired above red heat in the course of manufacture to a temperature sufficiently high to produce specific physical properties and characteristics.

Low Temperature – Coated Glass Tile: Sheet glass altered between room temperature and 1022°F (550°C).

Fused Glass Tile: Sheet glass altered through heat between 1023°F (551°C) and 1599°F (870°C).

Glass Panels: Glass modules with both a facial surface area and backside surface area > 3721 cm^2 (576 in^2) [> 930 cm^2 (144 in^2) for cast glass] or containing any single edge exceeding 24 inches (61 cm) in length [12 inches (30.5 cm) for cast glass]. Units such as these are not subject to this specification.

Glass Tile: A tile having an overall non-crystalline microstructure with SiO_2 as the primary constituent and manufactured by one or more of three primary processes: cast, fused, or low temperature-coated.

Hybrid Ceramic Tile: A tile having a crystalline microstructure body and a non-crystalline microstructure glaze where the glaze layer ranges from 10% to 85% of the overall tile thickness. Units such as these are not subject to this specification.

Large Format Glass Tile: Glass tile with both a facial surface area and backside surface area > 57.76 cm^2 (8.95 in^2) and with either a facial surface area or backside surface area ≤ 3721 cm^2 (576 in^2) [≤ 930 cm^2 (144 in^2) for cast glass] and such that the longest side is not greater than 4.25 times the shortest side.

Miniature Mosaic Glass Tile: Glass tile with either a facial surface area or backside surface area ≤ 4.41 cm^2 (0.68 in^2) and such that the longest side is not greater than 4.25 times the shortest side.

[1]Updates on available standards since the last revision to this standard are available from the Committee Secretary at www.tileusa.com.