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**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB/T 3810.13-2026**

Replacing GB/T 3810.13-2016

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**Test methods of ceramic tiles - Part 13: Determination of  
chemical resistance**

陶瓷砖试验方法 第13部分：耐化学腐蚀性的测定

**(English Translation)**

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## Foreword

This document conforms to GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting is scheduled.

This document is Part 13 of GB/T 3810 "Test Methods for Ceramic Tiles". GB/T 3810 has already published the following parts.

--Part 1: Sampling and Acceptance Conditions;

--Part 2: Inspection of dimensions and surface quality;

--Part 3: Determination of water absorption, apparent porosity, apparent relative density and bulk density;

- Part 5: Determining the impact resistance of bricks using the coefficient of restitution;
- Part 6: Determination of the wear resistance depth of unglazed tiles;
- Part 7: Determination of the abrasion resistance of glazed tile surfaces;
- Part 8: Determination of linear thermal expansion;
- Part 9: Determination of thermal shock resistance;
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- Part 16: Determination of small color differences;
- Part 18: Measurement of Light Reflectance (LRV);
- Part 20: Determination of deflection in the calculation of the radius of curvature of ceramic tiles.

This document supersedes GB/T 3810.13-2016 "Test Methods for Ceramic Tiles - Part 13: Determination of Chemical Resistance", and is consistent with...

Compared to GB/T 3810.13-2016, apart from structural adjustments and editorial changes, the main technical changes are as follows.

- a) The requirement for "number of specimens" has been changed (see 7.1, 6.1 in the 2016 edition).
- b) The requirements for "sample size" have been changed (see 7.2, 6.2 in the 2016 edition).
- c) The requirements for the testing procedures for "unglazed tiles" and "glazed tiles" have been changed (see 8.1, Chapter 7 of the 2016 edition).

This document is equivalent to ISO 10545-13:2016 "Ceramic tiles - Part 13: Determination of chemical resistance".

The following minimal editorial changes have been made to this document.

- To harmonize with existing standards, the standard title has been changed to "Test Methods for Ceramic Tiles - Part 13: Determination of Chemical Resistance";
- The total number of test samples (ceramic tiles) in Table 1 of ISO 10545-13:2016 was

incorrectly recorded; this document has corrected it.

--To ensure the integrity of the standard structure, examples of test solution preparation have been added (see Table 2 in 8.1 for description).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Building Materials Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Building and Sanitary Ceramics (SAC/TC 249).

## Introduction

Chemical resistance of ceramic tiles is an important indicator for evaluating the chemical properties and durability of ceramic tiles, and its standardization has attracted widespread attention both domestically and internationally.

This has attracted widespread attention. In this regard, the ISO 10545 series of standards developed by the International Organization for Standardization (ISO) are standards for test methods of ceramic tiles, and my country has already...

Domestic adaptation work was carried out for this series of standards, and the corresponding national standard GB/T 3810 "Test Methods for Ceramic Tiles" was established.

This document is Part 13 of GB/T 3810 "Test Methods for Ceramic Tiles", which aims to determine the chemical corrosion resistance index of ceramic tiles.

GB/T 3810 "Test Methods for Ceramic Tiles" consists of 18 parts.

--Part 1: Sampling and Acceptance Conditions. The aim is to establish a sampling inspection system for ceramic tiles.

--Part 2: Inspection of Dimensions and Surface Quality. The aim is to establish methods for inspecting the dimensions and surface quality of ceramic tiles in order to evaluate...

Product appearance quality.

--Part 3: Determination of water absorption, apparent porosity, apparent relative density, and bulk density. The aim is to establish indicators such as water absorption rate for ceramic tiles.

The standard testing method facilitates the classification of ceramic tiles.

--Part 4: Determination of modulus of rupture and breaking strength. The aim is to establish methods for testing the mechanical properties of ceramic tiles to evaluate their strength.

Mechanical properties of ceramic tiles.

--Part 5: Determining the Impact Resistance of Bricks Using the Coefficient of Restitution. The aim is to establish a method for testing the mechanical properties of ceramic tiles to evaluate...

The resistance of ceramic tiles to damage.

--Part 6: Determination of Abrasion Depth of Unglazed Tiles. The aim is to establish a method for testing the abrasion depth of unglazed tiles to evaluate their performance.

The ability to resist wear and tear.

--Part 7: Determination of Abrasion Resistance of Glazed Tile Surfaces. The aim is to establish a testing method for the abrasion resistance of glazed tile surfaces to evaluate their performance.

Glazed tiles' ability to resist wear.

--Part 8: Determination of Linear Thermal Expansion. The aim is to establish a method for testing the linear thermal expansion coefficient of ceramic tiles in order to evaluate ceramic tiles.

High-temperature stability of bricks.

--Part 9: Determination of Thermal Shock Resistance. The aim is to establish a testing method for the thermal shock resistance of ceramic tiles to evaluate their ability to withstand thermal shock.

Resistance to damage under rapid temperature changes.

ability.

--Part 11: Determination of Glaze Cracking Resistance of Glazed Tiles. The aim is to establish a testing method for the glaze cracking resistance of ceramic tiles in order to evaluate the performance of ceramic tiles.

Durability.

--Part 12: Determination of frost resistance. The aim is to establish a method for testing the frost resistance of ceramic tiles to evaluate their low-temperature stability.

Qualitative analysis.

--Part 13: Determination of Chemical Resistance. The aim is to establish a testing method for the chemical resistance of ceramic tiles in order to evaluate the performance of ceramic tiles.

The brick's resistance to chemical corrosion.

--Part 14: Determination of Stain Resistance. The aim is to establish a testing method for the stain resistance of ceramic tiles in order to evaluate their resistance to staining.