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

GB/T 3810.6-2016

Replacing GB/T 3810.6-2006

**Test methods of ceramic tiles -- Part 6: Determination of
resistance to deep abrasion for unglazed tiles**

陶瓷砖试验方法 第6部分：无釉砖耐磨深度的测定

(English Translation)

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Foreword

GB/T 3810 "ceramic tile test method" is divided into 16 parts.

- Part 1. Sampling and receiving conditions;
- Part 2. Inspection of dimensions and surface quality;
- Part 3. Determination of water absorption, apparent porosity, apparent relative density and bulk density;
- Part 4. Determination of fracture modulus and failure strength;
- Part 5. Determining the impact resistance of a brick with a recovery factor;
- Part 6. Determination of wear depth of unglazed tiles;
- Part 7. Determination of abrasion resistance of glazed tiles;
- Part 8. Determination of linear thermal expansion;
- Part 9. Determination of thermal shock resistance;
- Part 10. Determination of wet expansion;
- Part 11. Determination of glaze resistance of glazed tiles;
- Part 12. Determination of frost resistance;
- Part 13. Determination of resistance to chemical corrosion;
- Part 14. Determination of resistance to contamination;
- Part 15. Determination of lead and cadmium elution of glazed tiles;

- Part 16. Determination of small chromatic aberration.

This part is part 6 of GB/T 3810.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part of the replacement GB/T 3810.6-2006 "ceramic tile test method Part 6. no glaze brick wear depth determination." this part of the main changes compared with GB/T 3810.6-2006 as follows.

--- modified the reference file (see Chapter 2, Chapter 2 of the 2006 edition);

--- modified abrasive requirements (see 4.3, version 4.3);

--- The corresponding values of chord length and volume are modified (see Table 1, version 1.26).

This part uses the translation method equivalent to ISO 10545-6:2010 "Ceramic tiles Part 6. Determination of wear-resistant depth of glazed tiles" (English Version).

In this part of the normative reference to the international documents have a consistent correspondence between the following documents.

GB/T 2481.1-1998 Determination and characterization of abrasive particle size composition for consolidation abrasives - Part 1. Coarse abrasive grains F4 ~ F220 (equivISO 8486-1:1996) this section makes the following editorial changes.

--- Standard name changed to "Ceramic tile test method Part 6. Determination of wear depth of glazed tiles".

This section is proposed by the China Building Materials Federation.

This part of the National Building Sanitary Ceramics Standardization Technical Committee (SAC/TC249) centralized.

This part of the drafting unit. Xianyang Ceramic Research and Design Institute, Hangzhou Nobel Group Co., Ltd., Guangdong Mona Lisa New Materials Group Limited, Guangdong Xinghui Ceramics Group Co., Ltd., Guangdong Dongpeng Holding Co., Ltd., Ministry of Industry and Information Technology Building Sanitary Ceramics and Wei Bath product quality control technology evaluation laboratory.

1 Scope

This part of GB/T 3810 specifies the test method for deep wear of glazed tiles for all kinds of flooring.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article. For undated references, the latest edition (including all modifications) applies to this document.

ISO 630-1 structural steel - Part 1. General technical delivery conditions for hot rolled products (Structural steels-Plates, wide flats, bars, sections and profiles) ISO 8486-1 Determination and marking of abrasive grain size composition for consolidated abrasives - Part 1. Coarse abrasive grains F4 to F220 (Bonded abrasives-Determination and designation of grain size distribution-Part 1. Macrogrits F4 to F220)

3 Principle

In the case of specified conditions and abrasive in the case of friction by the wheel in the brick rotation of the front of the grinding pit, measured by the length of the measured pit the abrasion resistance of glazed tiles.

4 Equipment

4.1

wear test machine (see Figure 1).

It consists of a friction wheel, a hopper with an abrasive feed device, a sample holder and a counterweight. Friction wheel is Made of ISO 630-1 steel, the diameter is $200\text{mm} \pm 0.2\text{mm}$, the edge thickness is $10\text{mm} \pm 0.1\text{mm}$, the speed is 75r/min.

The specimen is subjected to the reverse pressure of the friction wheel and is passed through the corundum adjustment test machine. Pressure adjustment with F80 (ISO 8486-1) corundum After the abrasive 150 turns, a grinding pit with a chord length of $24\text{mm} \pm 0.5\text{mm}$ is produced. Quartz glass as a basic standard can also be used float glass or Other applicable materials.

When the friction wheel wears to 0.5% of the original diameter, the grinding wheel must be replaced.

4.2

Measuring tool with measuring accuracy of 0.1mm.

4.3

abrasive.

Conforms to F80 as specified in ISO 8486-1. Grinding materials that produce the same result can also be used.

5.1 Sample type

Using the whole brick or the appropriate size of the sample to do the test. If it is a small sample, try to stick a small sample with a binder in a piece Larger template on.

5.2 Preparation of the sample

Use a clean, dry sample.