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

GB/T 32982-2026

Replacing GB/T 32982-2016

Fired decorative bricks

烧结装饰砖

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 32982-2016 "Sintered Decorative Bricks". Compared with GB/T 32982-2016, the main differences are in structural adjustments and editorial changes. Aside from the modifications, the main technical changes are as follows:

a) The definition of sintered decorative bricks has been changed (see 3.1, 2016 version 3.1);

b) The classification has been adjusted, compressive strength grades have been added, and the specifications and markings have been changed (see Chapter 4, Chapter 4 of the 2016 edition);

- c) The appearance quality metrics have been changed (see 5.1, 5.2 in the 2016 version);
- d) The specification for dimensional tolerances has been changed (see 5.2, 5.1 in the 2016 edition);
- e) Added compressive strength grades (see 5.3.1, 2016 version 5.3.1);
- f) The flexural strength specification has been changed (see 5.3.2, 2016 version 5.3.2);
- g) The indicators for lime bursting have been changed (see 5.5, 2016 edition of 5.5);
- h) The antifreeze performance index has been changed (see 5.6.2, 2016 version 5.6.2);
- i) The limits for leached hazardous metal elements, test methods, and judgment rules have been added (see 5.9, 6.8, and 7.4.1.9);
- j) The experimental conditions were increased (see 6.1);

4.1 Classification

4.1.1 According to their use, they are divided into sintered decorative bricks for masonry (code CZ) and sintered decorative bricks for façade (code BX).

4.1.2 According to the production process, decorative bricks are divided into reducing atmosphere sintered decorative bricks (code HY) and oxidizing atmosphere sintered decorative bricks (code YH).

4.1.3 According to the surface decorative layer, they are divided into glazed sintered decorative tiles (code YY) and unglazed sintered decorative tiles (code WY).

4.2 Level Sintered decorative bricks for masonry are classified into six strength grades according to compressive strength. MU10, MU15, MU20, MU25, MU30, and MU35.

4.3 Specifications and Dimensions Sintered decorative bricks are commonly shaped like rectangular hexahedrons, and their basic dimensions are shown in Table

1. Other specifications and dimensions can be determined through negotiation between the supplier and the buyer.

4.4 Marking Sintered decorative bricks are marked according to type, strength grade (average flexural strength) and standard number.

5 Technical Requirements

5.1 Appearance Quality The appearance quality shall conform to the requirements of Table 2.

5.2 Dimensional tolerances The permissible dimensional deviations shall conform to the

provisions of Table 3.

5.3 Strength

5.3.1 Compressive strength The strength grade of sintered decorative bricks for masonry is expressed by the average compressive strength and the standard value, and should conform to the provisions of Table 4.

5.3.2 Flexural strength The strength of sintered decorative bricks for finishing is expressed by the average flexural strength and the minimum flexural strength per brick. The average flexural strength is not less than 8 MPa. The minimum value for a single block is not less than 7 MPa.

5.4 Frosting Each brick should not exhibit moderate or higher efflorescence.

5.5 Lime Bursting Each brick should not have a cracked area with a maximum damage size greater than 2mm.

5.6 Weather resistance

5.6.1 Water absorption rate and saturation coefficient The water absorption rate and saturation coefficient should meet the requirements of Table 5.

5.6.2 Freeze resistance If the water absorption rate and saturation coefficient do not meet the requirements, a frost resistance test should be conducted. The frost resistance should conform to the specifications in Table 6.

5.7 Resistance to rapid cooling and heating Glazed sintered decorative bricks should not exhibit cracking, peeling, or extended cracks.

5.8 Limits on Radionuclides The limits for radionuclides shall comply with the provisions of GB 6566.

5.9 Limits for leachable hazardous metal elements The limits for leached hazardous metal elements shall comply with the provisions of GB 46040.

6 Test Methods

6.1 Test Conditions The standard test conditions are ambient temperature $(20\pm 5)^{\circ}\text{C}$ and relative humidity $(50\pm 15)\%$.

6.2 Appearance Quality Color difference, integrity, missing edges and corners, cracks, and protruding impurities of the decorative surface shall be in accordance with the provisions of GB/T 2542.

6.3 Dimensional tolerances

6.3.1 Dimensional Measurement The number of test samples was 20, and the method was

carried out according to GB/T 2542. For each dimension, any measurement less than 0.5 mm was rounded up to

0.5 mm. The dimension in each direction is represented by the arithmetic mean of two measurements.

6.3.2 Result Calculation

6.3.2.1 The average deviation of the samples is the difference between the arithmetic mean of 40 measured dimensions in the same direction of 20 samples and their nominal dimensions.

6.3.2.2 The sample range is the difference between the maximum and minimum measured values among 40 measured dimensions in the same direction in 20 samples.

6.4.1 Compressive strength

6.4.1.1 Ten test specimens were tested in accordance with GB/T 2542, and the results were rounded to

0.01 MPa.

6.4.1.2 The standard deviation of strength is calculated according to formula (1), and the result is rounded to

0.01 MPa.

6.4.2 Flexural strength

6.4.2.1 Ten test specimens were tested in accordance with GB/T 3810.4, and the results were rounded to

0.1 MPa.

6.4.2.2 The flexural strength of each specimen is calculated according to formula (3), and the arithmetic mean is calculated and the result is rounded to

0.1 MPa.

6.4.2.3 The test results are expressed as the arithmetic mean and minimum value of the flexural strength of the specimens.

6.5 Efflorescence, lime cracking, and weathering resistance Proceed according to the provisions of GB/T 2542.

6.6 Resistance to rapid temperature changes The test was conducted according to GB/T 3810.9. The samples were subjected to an immersion test, first kept in a drying oven at $(145 \pm 5)^\circ\text{C}$ for 45 minutes, then immediately... The sample was immersed in a water bath at