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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 24493-2026

Replacing GB/T 24493-2009

Decorative concrete bricks

装饰混凝土砖

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Table of Contents

5.1.1 Cement

5.1.1.1 General-purpose Portland cement shall comply with the provisions of GB 175.

5.1.1.2 White silicate cement shall conform to the requirements of GB/T 2015.

5.1.2 Fine aggregate

5.1.2.1 The sand shall conform to the requirements of GB/T 14684.

5.1.2.2 Recycled fine aggregate shall comply with the provisions of GB/T 25176.

5.1.2.3 Iron tailings shall comply with the provisions of GB/T 31288.

5.1.2.4 When using industrial tailings and solid waste as fine aggregates, they should meet the requirements of relevant national standards and specifications or pass verification tests.

Decorative concrete bricks can only be used after their performance has been tested and found to be qualified, and the limits of radioactive nuclides should comply with the provisions of GB 6566.

5.1.3 Coarse aggregate

5.1.3.1 Crushed stone and pebbles shall comply with the provisions of GB/T 14685.

5.1.3.2 Blast furnace heavy slag crushed stone shall comply with the provisions of YB/T 4178.

5.1.3.3 Recycled coarse aggregate shall comply with the provisions of GB/T 25177.

5.1.3.4 When using industrial tailings and solid waste as coarse aggregate, it should meet the requirements of relevant national standards and specifications or pass verification tests. Decorative concrete bricks can only be used after their performance has been tested and found to be qualified, and the limits of radioactive nuclides should comply with the provisions of GB 6566.

5.1.4 Lightweight aggregates Lightweight aggregates should comply with the requirements of GB/T 17431.1.

5.1.5 Colored Aggregates Natural or artificial colored aggregates may be used, and the decorative concrete should meet the requirements of relevant national standards and specifications or be produced through verification tests. Adobe bricks can only be used after their performance has been tested and found to be qualified, and the limits of radioactive nuclides should comply with the provisions of GB 6566.

5.1.6 Admixtures

5.1.6.1 Fly ash shall comply with the provisions of GB/T 1596.

5.1.6.2 Granulated blast furnace slag powder shall comply with the provisions of GB/T 18046.

5.1.6.3 Silica fume shall comply with the provisions of GB/T 27690.

5.1.6.4 Zeolite powder and metakaolin shall comply with the provisions of GB/T 18736.

5.1.6.5 When using other active mineral powders as admixtures, they should meet the requirements of relevant national standards and specifications or be produced through verification tests. Decorative concrete bricks can only be used after their performance has been tested and found to be qualified, and the limits of radioactive nuclides should comply with the provisions of GB 6566.

5.1.7 Admixtures

5.1.7.1 Concrete admixtures shall comply with the provisions of GB/T 8076.

5.1.7.2 The waterproofing agent shall comply with the provisions of JC/T 474.

5.1.8 Pigments It should comply with the provisions of JC/T 539.

5.1.9 Water It should comply with the provisions of JGJ63.

5.2 Other provisions

5.2.1 For decorative concrete bricks produced using a double-layer fabrication process, the minimum thickness of the finishing layer should not be less than 10mm.

5.2.2 When decorative concrete bricks for masonry contain holes, the minimum outer wall thickness shall not be less than 25 mm and the minimum rib thickness shall not be less than 15 mm.

6 Technical Requirements

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

6.4 Flexural strength The average flexural strength of decorative concrete bricks for cladding should not be less than

5.0 MPa, and the minimum flexural strength of a single brick should not be less than

4.2 MPa. 6.5% water absorption rate The water absorption rate should not exceed 11%.

6.6 Drying shrinkage value The drying shrinkage value should not exceed

0.45 mm/m.

6.7 Impermeability The impermeability should meet the requirements of Table 4.

6.8 Carbonization coefficient The carbonization coefficient should be no less than 0.85.

6.9 Softening coefficient The softening coefficient should be no less than 0.85.

6.10 Freeze resistance The frost resistance should meet the requirements of Table 5.

6.11 Limits on Radionuclides It should comply with the provisions of GB 6566.

7.1 Appearance Quality

7.1.1 Place the specimen on a hard, flat surface, with the decorative side facing upwards, forming a flat decorative area of not less than 1m^2, approximately square. On the surface, visually inspect the color and pattern under natural light conditions without direct sunlight.

7.1.2 Other items shall be carried out in accordance with the provisions of GB/T 4111.

7.2 Dimensional deviation, compressive strength, water absorption, drying shrinkage, carbonization coefficient, softening coefficient, and frost resistance Proceed according to

GB/T 4111.

7.3 Flexural strength Proceed as specified in Appendix A.

7.4 Impermeability

7.4.1 The impermeability test shall be conducted in accordance with the provisions of GB/T 4111.

7.4.2 When the width of the decorative surface of the decorative concrete brick is greater than 100mm, the decorative concrete brick shall be used directly as the sample, and an inner diameter of shall be used. A 100mm diamond drill bit was used to drill a specimen.

7.4.3 When the width of the decorative surface of a decorative concrete brick is less than 100mm, two or more decorative concrete bricks shall be bonded together as... The specimens were drilled using a diamond drill bit with an inner diameter of 100 mm. The specimen preparation method is as follows:

a) Place a decorative concrete brick on the specimen preparation platform, then lay a layer of waterproof mortar conforming to JC/T 984, and then... Two decorative concrete bricks are smoothly pressed into the waterproof mortar layer, ensuring the mortar layer is full. After leveling, remove any excess waterproof mortar. Scrape off the mortar along the edge of the brick, with a thickness not exceeding 2mm.

b) Let stand for 24h±5min, and continue to bond the decorative concrete bricks as specified in

a) until the width of the decorative surface of the sample is greater than 100mm. When bonding, the waterproof mortar should not contaminate the decorative surface.

c) The specimens were cured under the test conditions for 7 days ± 1 hour before use.

7.5 Limits on Radionuclides Proceed in accordance with GB 6566.

8.1.2 Type Testing Inspection items. All items required in Chapter

6.Type testing shall be conducted if any of the following conditions exist.

a) During the trial production and type approval of new products;

b) When raw materials, proportions, and production processes change after normal production has commenced;

c) During normal production, this should be carried out once a year;

d) When production resumes after a shutdown of more than 90 days;

e) When the factory inspection results differ significantly from the previous type inspection results.