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**BUILDING MATERIALS INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

JC/T 2219-2014

**Modified inorganic powder composite building decoration
material**

(English Translation)

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1 Scope

This Standard specifies the terms and definitions, classification and marking, requirements, test methods, inspection rules, as well as packaging, marking, transportation and storage of modified inorganic powder composite building decoration material.

This Standard applies to modified inorganic powder composite building decoration material for decoration and renovation of indoor and outdoor walls, floors and roofs of industrial and civil buildings.

2 Normative references

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

GB/T 1766, Paints and varnishes - Rating schemes of degradation of coats

GB/T 3810.7, Test methods of ceramic tiles - Part 7.Determination of resistance to surface abrasion for glazed tiles

GB/T 4085, Semirigid polyvinyl chloride floor tiles

GB/T 4100-2006, Ceramic tiles

GB 6566, Limits of radionuclides in building materials

GB/T 9780, Test method for dirt pickup resistance and stain removal of film of architectural coatings and paint

GB/T 9966.3, Test methods for natural stone - Part 3.Determination of water absorption, bulk density, true density and true porosity

GB/T 15036.2, Solid wood flooring - Part 2.Examination methods

GB/T 16259, Test method for in accelerated weathering building materials

GB/T 18586, Indoor decorating and refurbishing materials - Limit of harmful substances of polyvinyl chloride floor coverings

GB 50209, Code for acceptance of construction quality of building ground

GB 50210, Code for construction quality acceptance of building decoration

JG/T 25, Test method for temperature change resistance of architectural coatings

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

modified inorganic powder

A powder material obtained by pretreating, drying and grinding inorganic materials such as soil (e.g., construction waste soil, mountain soil, etc.), stone powder, slag, tailings powder, ceramic slag powder, quartz sand and fly ash, mixing them uniformly according to the specified proportions, and then modifying them with surface active agents.

3.2

modified inorganic powder composite building decoration material

A flexible, recyclable and renewable lightweight building decoration material with a thickness of 2 mm ~ 10 mm, which is made by using modified inorganic powder as the main raw material, adding polymer, and through forming, crosslinking, heating and compositing, and which can present various effects such as brick, wood, stone, leather, ceramic, woven fabric and relief.

4.1 Classification

The designation of modified inorganic powder composite building decoration material is MCM. The product classification and designations are shown in Table 1.

Table 1 - Classification and designations

4.2 Marking

The marking shall be made in the order of MCM product name, type and product standard number.

Example. Modified inorganic powder composite building decoration material of the concave-convex surface cut type for exterior wall decoration shall be marked as.

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5.1 Appearance quality

The appearance quality of the product shall comply with the requirements specified in Table 2.

Table 2 - Appearance quality

5.2 Dimensional deviation

The allowable dimensional deviations of the product shall comply with the provisions of Table 3.

Table 3 - Allowable dimensional deviations

5.3 Technical performance

The technical performance of the product shall comply with the provisions of Table 4.

6.1 Test environment

The test specimens shall be placed under the standard test conditions of an air temperature of $(23 \pm 2) ^\circ\text{C}$ and a relative humidity of $(50 \pm 10)\%$ for 24 h for conditioning, and the tests shall be conducted under these conditions.

6.2 Preparation of test specimens

The test specimens shall be taken from areas more than 10 mm from the edges of the product. The dimensions and quantity of test specimens shall comply with the provisions of Table 5. When the product size is smaller than the dimensions of test specimen specified in Table 5, the test shall be conducted according to the actual product size.

Table 5 - Dimensions and quantity of test specimens

6.3 Appearance quality

Take test specimens with an area of not less than 1 m² and not less than 20 pieces; lay them flat on a smooth and level base; visually inspect and record, under diffused daylight or fluorescent light, from a distance of 1 m and at an oblique angle, whether there are through cracks or holes, delamination, or obvious visible defects such as chipped edges, chipped corners, holes, blistering and color differences on the surfaces of the test specimens. Holes and color differences having decorative effects shall not be considered defects.

6.4.1 Measurement of length and width

Place the test specimens (in pieces) on a smooth and level horizontal surface for measurement. In the length and width directions, draw three parallel straight lines at positions 10 mm from the edge of the test specimen and at the center; use a steel ruler or steel tape measure with a minimum graduation of 1 mm to measure the length of each straight line. Calculate the average length or width of each test specimen separately, accurate to 1 mm.

6.4.2 Measurement of thickness

At the intersection points located 10 mm inward from the longitudinal and transverse edges of the test specimen, use a vernier caliper with a minimum graduation of 0.02 mm to measure the thickness at each point (four points). The arithmetic mean of the thicknesses at the four points shall be the thickness value. The result shall be accurate to 0.1 mm.

6.5 Water absorption

Carry out the test in accordance with the test method for water absorption specified in GB/T 9966.3, with an immersion time of 24 h.

6.6 Freeze-thaw resistance

Test for 15 cycles in accordance with the provisions of JG/T 25. Each cycle shall consist of immersion in water at $(23 \pm 2) ^\circ\text{C}$ for 18 h, freezing at $(-30 \pm 2) ^\circ\text{C}$ for 3 h, and heating in an oven at $(50 \pm 2) ^\circ\text{C}$ for 3 h. Observe whether abnormal phenomena such as powdering, cracking and peeling occur on the test specimens.

6.7 Heat resistance

Carry out the test in accordance with the test method for heating dimensional change rate specified in GB/T 4085. After heating is completed, visually inspect the surface condition.

6.8 Residual indentation

Carry out the test in accordance with the test method for residual indentation specified in GB/T 4085.

6.9 Resistance to artificial weathering

Carry out the test for resistance to artificial weathering in accordance with the provisions of GB/T 16259. The test conditions shall be as follows. The exposure equipment shall use a 340 nm xenon lamp, with an irradiance of 0.51 W/m^2 , a black panel temperature of $(65 \pm 3) ^\circ\text{C}$, a light exposure time of $(102 \pm 0.5) \text{ min}$, and a water spray time of $(18 \pm 0.5) \text{ min}$. The