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

JC/T 985-2005

**Cementitious self-leveling floor mortar
(English Translation)**

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1 Scope

This standard specifies the scope, terms and definitions, classification and marking, requirements, test methods, inspection rules, product marks, packaging, transportation, storage of cementitious self-leveling floor mortar.

This standard applies to cementitious self-leveling floor mortar.

The products, which are included in this standard, shall NEITHER cause harmful effects on human body, organisms, environment, NOR involve safety and environmental protection issues related to use. It shall comply with the relevant standards and codes of China.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Standard; however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB/T 1768 Method of test for abrasion resistance of paint films

GB 3186 Paints varnishes and raw materials for paints and varnishes - Sampling

GB/T 17671 Test method of cement mortar strength (ISO method) (idt ISO 679.1989)

JC/T 547-2005 Adhesives for ceramic wall and floor tiles

JC/T 681 Mixer for mixing mortars

JGJ 70 Standard for test method of basic properties of construction mortar

3 Terms and definitions

The following terms and definitions apply to this standard.

Cementitious self-leveling floor mortar

It is a floor material, which is composed of cement-based cementitious materials, fine aggregates, fillers, additives, has fluidity after mixing with water (or emulsion) OR can be self-leveling with a little auxiliary paving.

4.1 Classification

4.1.1

Cementitious self-leveling floor mortar (codenamed CSLM) is divided into the following, based on the composition.

Single-component (code S). It is a single-component product, which is prepared by the manufacturer, through mixing raw materials, including cement-based cementitious materials, fine aggregates, fillers, and other powder additives. When using, add water according to the manufacturer's instructions. Stir well before use.

Two-component (code D). It is a two-component product, which is prepared by the manufacturer, through mixing raw materials, including cement-based cementitious materials, fine aggregates, fillers, other additives, polymer emulsions. When using, follow the instruction for use of the manufacturer, to mix the two components uniformly.

4.1.2

Cementitious self-leveling floor mortar is divided into C16, C20, C25, C30, C35,

C40 according to its compressive strength grade; OR it is divided into F4, F6, F7, F10 according to its flexural strength grade.

4.2 Marking

Products are marked in the following order. product name, component, strength grade, standard number.

For example, the cementitious self-leveling floor mortar, which has a one-component compressive strength grade of C30 and a flexural strength grade of F6, is marked as.

CSLM S C30 F6 JC/T 985-2005

5.1 Appearance

The appearance of the one-component product shall be uniform and free from agglomeration.

The liquid material component of the two-component product shall be in a uniform state after stirring; the powder material component shall be uniform without agglomeration.

5.2 Physical and mechanical properties

Note 1: Thickness. 5 mm.

Note 2: Hole size. 50 mm x 50 mm.

Figure 1 -- Forming frame for tensile bond strength

6.4.6 Pull connector

A square steel plate, which has a size of $(50\text{ mm} \pm 1\text{ mm}) \times (50\text{ mm} \pm 1\text{ mm})$ and sufficient strength, a minimum thickness of 10 mm, as well as parts connected to the test instrument.

6.4.7 Abrasion testing machine

Taber type or equivalent abrasion testing machine; the rotation speed of working bench is $60\text{ r/min} \pm 2\text{ r/min}$.

6.4.8 Mold testing of abrasion test pieces

Test mold for abrasion. A metal or plastic mold, which has a minimum inner diameter of 105 mm and a height of 5 mm.

6.4.9 Abrasive cloth

Brown corundum P60 dry abrasive cloth or self-adhesive abrasive cloth of the same particle size.

6.4.10 Shrinkage meter

Vertical mortar shrinkage tester, which meets the requirements of JGJ 70; the standard rod length is $176\text{ mm} \pm 1\text{ mm}$; the measurement accuracy is 0.01 mm.

Planetary cement mortar mixer meets the requirements of standard JC/T 681.

6.4.11 Test mold of dimensional change rate and shrinkage head

Test mold of dimensional change rate. A metal or plastic mold, which has an internal size of 10 mm x 40 mm x 160 mm; a hole with a diameter of 6.5 mm is opened in the center of the two end faces of the test mold.

Shrinkage head. It is made of brass or stainless steel, in line with the requirements of standard JGJ 70.

6.4.12 Drop hammer device

It consists of a steel base with a horizontal adjustment knob, a vertical steel frame with an electromagnet suspended, a conduit, and a metal drop hammer of $1\text{ kg} \pm 0.015\text{ kg}$.

The hammer head is as shown in Figure 2.

Figure 3 -- Schematic diagram of forming of tensile bond strength test piece

6.8.3 Bond strength is calculated, according to formula (1).

Where.

P - Tensile bond strength, in megapascals (MPa);

F - Maximum failure load, in Newton (N).

S - Bonding area, in square millimeters (2500 mm^2).

The calculation of test results is accurate to 0.1 MPa,

6.8.4 Evaluation of test results

Calculate the average value of 10 data. Discard the data, which is beyond the range of $\pm 20\%$ of the average value. If there are still 5 or more data retained, calculate a new average value. If the retained data is less than 5, re-test. If it is interfacial failure -- between the high-strength binder and the pull connector, it shall be re-determined.

6.9.1 Principle

Referring to GB 1768, when the surface of the product is rubbed against the grinding wheel to the specified number of revolutions, measure the amount of wear on the surface of the product.

6.9.2 Preparation of test piece

Prepare the specimen, according to 6.5. Pour the specimen into the wear-resistant test mold, without requiring vibration. Remove it out of mold after 24 h. Continue to stand in the standard state for 27 d, before measurement.

6.9.3 Fabrication of grinding wheel

- a) Cut the brown corundum P60 dry abrasive cloth to the thickness of the rubber wheel.
- b) Stick the cut abrasive cloth on the rubber wheel, using the polyvinyl acetate emulsion, to prevent the glue from polluting the sand grains. If it is a self-adhesive abrasive cloth, stick it