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**Test Method of Fiber Content of Fiber
Reinforced Concrete and its Product**

纤维增强混凝土及其制品的纤维含量试验方法

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Foreword

This Standard was drafted as per the rules specified in GB/T 1.1-2009.

This Standard was proposed by China Building Material Federation.

This Standard shall be under the jurisdiction of National Technical Committee for Standardization of Cement Products (SAC/TC 197).

Drafting organizations of this Standard: Shenyang Municipal Group Corporation Ltd.; Chongqing Communications Construction (Group) Co., Ltd.; and Liaoning Province Product Quality Supervision and Inspection Institute.

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Test Method of Fiber Content of Fiber Reinforced Concrete and its Product

1 Scope

This Standard specifies the test equipment, specimen, fresh specimen test, hardened steel fiber specimen test, result calculation, etc. for test method of fiber content of fiber reinforced cement and its products.

This Standard is applicable to the fresh mixing and hardened steel fiber concrete and its products, fresh mixing polypropylene fiber concrete and its products, fresh mixed steel fiber and polypropylene fiber concrete and its products.

2 Normative References

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this document.

FZ/T 50031 Test Method for Moisture Content and Saturated Water Absorption of Carbon Fiber

3 Test Equipment

3.1 Balance

The maximum weighing range shall be greater than 1000g, accurate to 0.01g.

3.2 Drying box

The temperature range is 0°C~200°C.

3.3 Container

The Plastic container with diameter greater than 300mm, and height greater than 300mm.

3.4 Test sieve

5.2.10 Calculate the original fiber mass in the specimen according to 5.2.8 and 5.2.9.

5.3 Test method for mixed steel fiber and polypropylene fiber

5.3.1 Use steel ruler to measure the test mold; calculate its volume.

5.3.2 Pour all specimens into a plastic container; add water to disperse; stir manually to separate the specimens.

5.3.3 Tilt the plastic container; place the 0.30mm and 0.15mm test sieves under the running water; rinse the specimen continuously by water till the water in the container is clear.

5.3.4 Use clean water to rinse the polypropylene fiber on the 0.30mm test sieve till there is no turbid liquid flows out.

5.3.5 Rinse the residue on the 0.15mm test sieve into an empty plastic container; add water to 1/2 container depth to stir; separate the fiber from other materials; stand for 2h.

5.3.6 Rinse the polypropylene fiber on the 0.30mm test sieve into an empty plastic container; add water to 1/2 container depth and stir; separate the fiber from other materials; stand for 2h.

5.3.7 Use 0.08mm test sieve to filter the fiber floating in the above two containers; then place it into a jar.

5.3.8 Take out fiber; dry to the constant weight at the temperature of $80^{\circ}\text{C}\pm 5^{\circ}\text{C}$; the drying time shall be no less than 1h; cool off to the room temperature till the difference between two consecutive weighting is $<0.02\text{g}$, accurate to 0.01g .

5.3.9 Determine the moisture content of the unused fiber in the same batch as the specimen according to FZ/T 50031.

5.3.10 Use a magnet to absorb the steel fiber on the 0.30mm and 0.15mm test sieves in 5.3.3; dry to constant weight at the temperature of $105^{\circ}\text{C}\pm 5^{\circ}\text{C}$; the drying time shall be no less than 1h; cool off to the room temperature, then weigh it till the difference between two consecutive weighing is $<0.1\text{g}$, accurate to 0.01g .

5.3.11 Calculate the mass of polypropylene fibers in the specimen according to 5.3.8 and 5.3.9.

5.3.12 Calculate the mass of steel fiber according to 5.3.10.

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