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

JG/T 568-2019

**Aggregate for high performance concrete
(English Translation)**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard was proposed by the Standard Rating Institute of the Ministry of Housing and Urban-Rural Development of the People's Republic of China.

This standard is under the jurisdiction of the Technical Committee for Construction Engineering Quality Standardization of the Ministry of Housing and Urban-Rural Development of the People's Republic of China.

The organization responsible for drafting this standard. China Academy of Building Research Co., Ltd.

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Huzhou Xinkaiyuan Crushed Stone Co., Ltd., Chongqing Construction Engineering Seventh Construction Engineering Co., Ltd., Bijie Shuangshan Development Zone Panshi Building Material Co., Ltd., Shenzhen Bingcheng Building Material Technology Co., Ltd., Shandong Province Building Science Research Institute, Wuhan University of Technology, Guizhou Jinhai Panshi Industrial Co., Ltd., Tongji University.

1 Scope

This standard specifies the terms and symbols, classification and grades, requirements, test methods, and inspections of aggregates for high-performance concrete Rules, signs, storage and transportation, etc.

This standard applies to aggregates used in the preparation of high-performance concrete in construction projects, excluding special bones such as light aggregates and heavy aggregates.

material.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version is suitable Used in this document. For undated references, the latest version (including all amendments) applies to this document.

GB 175 General Portland Cement GB/T 601 Preparation of Standard Titration Solution for Chemical Reagents GB/T 602 Preparation of standard solutions for impurity determination in chemical reagents GB/T 2419 Method for measuring fluidity of cement mortar GB 6566 Radionuclide limits for building materials GB 8076 concrete admixture GB/T 14684 Sand for construction GB/T 14685 Pebble and gravel for construction GB/T 17671 Cement Mortar Strength Inspection Method (ISO Method) GB/T 50733 Technical code for preventing concrete alkali aggregate reaction JG/T 223 Polycarboxylic acid series high performance water reducer

3 Terms and symbols

The following terms and symbols apply to this document.

3.1.1 High performance concrete

Taking the specific requirements of concrete performance in construction engineering design and construction as the overall goal, selecting high-quality conventional raw materials, and reasonable Add admixtures and mineral admixtures, use a lower water-to-binder ratio and optimize the mix ratio, adopt green ready-mix production methods and strict the construction measures to make concrete with excellent mixture performance,

mechanical properties, long-term performance and durability.

3.1.2 Aggregate

Granular loose materials such as rock particles that play the role of skeleton, filling and stabilizing volume in concrete.

3.1.3 Coarse aggregate (stone)

Rock particles larger than 4.75mm in size, including pebbles and gravel.

3.1.4 Pebble

Rock particles with a particle size greater than 4.75mm formed by natural weathering, water flow handling, sorting, and accumulation.

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3.1.5 Crushed stone

Rocks, pebbles, mine tailings that have not been treated by chemical methods are removed, mechanically crushed, reshaped, sieved, and powdered Rock particles with a particle size greater than 4.75mm, which are made by control and other processes.

3.1.6 Elongated flaky particle

Pebble and crushed stone particles whose length is greater than 2.4 times the average particle size of the corresponding particle size of the particle are needle-shaped particles;

Those smaller than 0.4 times the average particle size are flaky particles.

3.1.7 Irregular particle in coarse aggregate

The smallest one-dimensional size of pebble and crushed stone particles is less than 0.5 times the average particle size of the corresponding particle size.

3.1.8 Fine aggregate (sand) fine aggregate

Rock particles with a particle size of less than 4.75mm, including natural sand and artificial sand.

3.1.9 Natural sand

Naturally formed, artificially mined and sieved rock particles with a particle size of less than 4.75mm, including river sand, lake sand, mountain Sand, desalinated sea sand, but does not include soft, weathered rock particles.

3.1.10 Artificial sand

Including machine-made sand and mixed sand.

3.1.11 Machine-made sand

Rocks, pebbles, and mine tailings that have not been treated by chemical methods are removed, mechanically crushed, reshaped, screened, and powder controlled Rock particles with a particle size of less than 4.75mm produced by other processes, but excluding soft and weathered rock particles.

3.1.12 Mixed sand

Sand made by mixing natural sand and machine-made sand in a certain proportion.

3.1.13 Flaky particle in artificial sand

The smallest one-dimensional size of artificial sand particles with a particle size of 1.18mm or more is smaller than the average particle size of the corresponding particle size of the particle 0.45 times the particles.

3.1.14 Sediment percentage

The content of particles smaller than 75 μ m in natural sand, pebbles and crushed stones.

3.1.15 Rock fines content

The artificial sand has a particle content of less than 75 μ m.

3.1.16 Methylene blue number of rock fines (MB value)

An index used to determine the adsorption performance of stone powder.

3.1.17 Fluidity ratio of rock fines

Under the condition of adding additives and 0.4 water-to-binder ratio, the fluidity ratio of the mortar mixed with stone powder to the standard cement mortar is used it is an index for judging the adsorption performance of stone powder to water reducing agent.

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3.1.18 Water requirement of artificial sand

The ratio of water consumption between artificial sand and Chinese ISO standard sand under the specified fluidity deviation of cement mortar, used for comprehensive judgment the index of artificial sand gradation, particle shape, water absorption and stone powder