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

GB/T 28294-2024

Replacing GB/T 28294-2012

Iron and steel slag composite materials

钢铁渣复合料

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. This document replaces GB/T 28294-2012 "Steel slag composites". Compared with GB/T 28294-2012, except for structural adjustments and editorial In addition to the modifications, the main technical changes are as follows:

- a) The scope of application has been changed to "applicable to composite materials with steel slag as the main raw material" (see Chapter 1, Chapter 1 of the.2012 edition);
- b) Added the term and definition of "iron slag composite material" (see 3.1);
- c) Added the term and definition of "iron slag composite cementitious material" (see 3.3);
- d) The provisions on components and materials have been changed (see 4.1, 4.2, 4.1, 4.2 of the.2012 edition);
- e) The provisions on strength grade and code have been changed (see Chapter 5, Chapter 5 of the.2012 edition);
- f) The provisions and test methods for magnesium oxide content and alkalinity have been deleted (see 7.1.1 of the.2012 edition);
- g) The particle size distribution has been changed (see 6.1.1, 6.1.2 of the.2012 edition);
- h) The provisions on fineness have been changed (see 6.1.2.5, 6.2.5 of the.2012 edition);

1 Scope

GB/T 28294-2024 is the Chinese standard for iron and steel slag composite materials: the

blends of ground blast furnace slag, steel slag and other metallurgical by-products used as a supplementary cementitious material in concrete. Blending is what makes steel slag usable, because steel slag alone is troublesome, its free lime causes expansion and its reactivity is low, while blast furnace slag is well behaved but in shorter supply; a specified composite gives the concrete producer a material that behaves predictably. The standard sets the classification and grades of the composite, the requirements on the constituent materials and their proportions, the technical requirements covering fineness, density, moisture, loss on ignition, sulfur trioxide, chloride, free calcium oxide and the soundness that follows from it, the activity index at seven and twenty-eight days, and the flowability ratio, together with the test methods, the inspection rules and the marking, packaging, transport and storage. The 2024 edition replaces GB/T 28294-2012. For a steelworks selling slag, a grinding plant or a concrete producer in China, this is the acceptance text.

This document specifies the components and materials, strength grades and codes, technical requirements, test methods, inspection rules, packaging, Labelling, transportation and storage. This document is applicable to composite materials with steel slag as the main raw material, including steel slag composite cementitious materials for engineering construction and road concrete. Steel slag composite material for soil and ordinary mortar.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 176 Chemical analysis methods for cement

GB/T 203 Granulated blast furnace slag for cement

GB/T 208 Cement density determination method

GB/T 750 Test method for the stability of cement autoclave

GB/T 1345 Cement fineness test method - Sieve analysis method

GB/T 1346 Test methods for water consumption, setting time and stability of cement of standard consistency

GB/T 2419 Determination of fluidity of cement mortar

GB 5085.3 Identification Standard for Hazardous Wastes - Identification of Leaching Toxicity

GB/T 5483 Natural gypsum

GB 6566 Limits of radionuclides in building materials

GB/T 6682 Specifications and test methods for water used in analytical laboratories

GB/T 8074 Determination of specific surface area of cement - Blaine method

GB/T 9774 Cement packaging bags

GB/T 12573 Cement sampling method

3 Terms and definitions

The following terms and definitions apply to this document.