

ICS 25.220.99

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

GB/T 33803-2025

Replacing GB/T 33803-2017

**Technical specification for the application of reinforced
concrete corrosion inhibitors**

钢筋混凝土阻锈剂耐蚀应用技术规范

Issued on: December 2, 2025

Implemented on: July 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document supersedes GB/T 33803-2017 "Technical Specification for Corrosion Resistance Application of Corrosion Inhibitors in Reinforced Concrete" and is consistent with GB/T 33803-2017. Aside from structural adjustments and editorial changes, the main technical changes are as follows:

- a) The term "organic steel reinforcement corrosion inhibitor" and its definition have been removed (see 3.4 in the.2017 edition);
- b) The content on organic steel rebar rust inhibitors in the "Product Categories" section has been removed (see Chapter 4 of the.2017 edition);
- c) Standards for saline soil and saline-alkali areas have been added (see 5.1);
- d) The "Corrosion Mechanism under Normal Environments" section of Table 1 for reinforced concrete structures has been revised (see Table 1,.2017 edition);
- e) The technical indicators for "solid content, moisture content, and density" in Table 2 have been changed (see Table 2,.2017 edition), and "total alkali content" has been added. The upper limit of the "chloride ion content" increased the drying time (see Table 2);
- f) Added "Brine Immersion Test" (see Tables 3 and 4), deleted "Dry and Wet Cold and Heat Cycling Test" from Tables 3 and 4, and deleted... Table 4 shows the potential requirements

for the salt water immersion test (see Tables 3 and 4 in the.2017 edition).

g) The requirements and testing methods for "corrosion resistance coefficient K" in Table 6 have been changed, and the "wet-dry-cold-heat cycle test" has been replaced with the "salt water immersion test". "Experiments" (see Table 5, Table 6 in the.2017 edition);

h) Tables 5 and 7 have been merged, "permeability height ratio" has replaced "impermeability", and the "slump retention value" requirement in Table 7 has been removed. (See Table 6, Tables 5 and 7 of the.2017 edition);

i) The "dry and wet thermal cycling test" in Table 8 (see Table 8 in the.2017 edition) has been removed, and on-site testing and evaluation index requirements have been added. The technical requirements for "salt water immersion test, concrete chloride ion migration coefficient ratio, and penetration depth" have been added (see Table 7);

j) The original regulations regarding the dosage of corrosion inhibitors for reinforcing steel bars have been deleted (see sections 8.1, 8.2, and 8.3 of the.2017 edition);

1 Scope

GB/T 33803-2025 is the Chinese national standard covering the corrosion inhibitor added to concrete or applied to its surface - the dosage against the chloride expected, the effect on setting and strength that has to be accepted with it, and the evidence that it actually delays the onset of corrosion. Issued on 2 December 2025, it has been in force since 1 July 2026, replacing GB/T 33803-2017.

This document specifies the product classification, basic requirements, environmental corrosion classification, technical requirements, and design and application of corrosion inhibitors for reinforced concrete. Application, acceptance and maintenance. This document applies to both new and repaired reinforced concrete works.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB 8076 Concrete Admixtures

GB/T 8077 Test Method for Homogeneity of Concrete Admixtures

GB 50021 Code for Geotechnical Investigation

GB/T 50046 Standard for Corrosion Protection Design of Industrial Buildings

GB/T 50082 Standard for Test Methods of Long-Term Performance and Durability of Concrete

GB/T 50476 Standard for Durability Design of Concrete Structures

GB/T 50942 Technical Specification for Construction in Saline Soil Areas JC/T 1011 Concrete Anti-corrosion and Insulation Agent JGJ

55 Specification for Mix Proportioning Design of Ordinary Concrete JGJ/T 192 Technical Specification for Application of Corrosion Inhibitors for Reinforcing Steel YB/T 4390-2013 Standard for Quality Inspection and Evaluation of Anti-corrosion Coating for Steel Structures of Industrial Buildings

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 It can be added to concrete (or mortar) or applied to the surface of concrete (or mortar) to directly act on the reinforcing steel in the concrete (or mortar). Used as an admixture that can prevent or delay the corrosion of steel bars.

3.2 An admixture that prevents or delays the corrosion of steel bars in concrete (or mortar).

Note. Based on their effects, rust inhibitors are classified into anodic rust inhibitors, which are mainly composed of inorganic salts, and composite rust inhibitors, which are mainly composed of organic compounds (alkanolamines or other types).

3.3 An admixture that prevents or delays the corrosion of steel bars in concrete (or mortar) and improves the resistance of concrete (or mortar) to sulfate attack.