

ICS 25.220.40



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

GB/T 9799-2024

**Metallic and other inorganic coatings - Electroplated coatings
of zinc with supplementary treatments on iron or steel
(English Translation)**

Issued on: June 29, 2024

Implemented on: January 1, 2025

Issued by: State Administration for Market Regulation

Table of Contents

Foreword...	3
Introduction...	5
1 Scope...	6
2 Normative references...	6
3 Terms and definitions, abbreviations and symbols...	8
3.1 Terms and definitions...	8
3.2 Abbreviations...	8
3.3 Symbols...	8
4 Information that the buyer shall provide to the supplier...	8
4.1 Necessary information...	8
4.2 Additional information...	9
5 Marking...	9
5.1 General rules...	9
5.2 Marking rules...	10
5.3 Marking of base materials...	11
5.4 Marking of heat treatment requirements...	11
6 Requirements...	12
6.1 Appearance...	12
6.2 Thickness...	12
6.3 Trivalent chromium conversion coating and other post-treatment...	13

Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 Directives for standardization - Part 1.Rules for the structure and drafting of standardizing documents.

This document replaces GB/T 9799-2011 Metallic and other inorganic coatings - Electroplated coatings of zinc with supplementary treatments on iron or steel.

Compared with GB/T 9799-2011, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) Some abbreviations are deleted (see 2011 version 3.2);
- b) The thickness measurement method according to GB/T 6463 is added (see 6.2);
- c) The neutral salt spray corrosion resistance change table is modified (see 6.5; see 6.5 of the 2011 edition);
- d) The hydrogen embrittlement test related to GB/T 3098.17 is added (see 6.7);
- e) The post-processing code is changed (see Appendix A; see Appendix A of the

2011 edition).

This document is modified in relation to ISO 2081.2018 Metallic and other inorganic coatings - Electroplated coatings of zinc with supplementary treatments on iron or steel. The technical differences between this document and ISO 2081.2018 and their reasons are as follows.

-- The normative references GB/T 3138 replace ISO 2080 (see Chapter 3); GB/T

3098.17 replaces ISO 15330 (see 6.7); GB/T 5270 replaces ISO 2819 (see 6.4);

GB/T 6461 replaces ISO 10289 (see 6.5); GB/T 6462 replaces ISO 1463 (see

6.2); GB/T 9791 replaces ISO 3613 (see 6.4); GB/T 10125 replaced ISO 9227

(see 6.5.1); GB/T 12334 replaced ISO 2064 (see Chapter 3); GB/T 12609

replaced ISO 4519 (see Chapter 7); GB/T 19349 replaced ISO 9587 (see 6.6);

GB/T 19350 replaced ISO 9588 (see 6.7); GB/T 26107 replaced ISO 10587 (see

6.7), to adapt to Chinese technical conditions;

-- The requirements for trivalent chromium conversion coatings are changed (see 6.3) to adapt to Chinese technical conditions;

-- The requirements for degreasing before electroplating are changed (see 6.6) to adapt to Chinese technical conditions.

1 Scope

This document specifies the requirements for treated zinc electroplated coatings on steel, including the information to be provided by the purchaser to the supplier and the requirements for heat treatment before and after electroplating.

2 Normative references

The provisions of the following documents constitute the essential clauses of this document through normative references in this text. Among them, for referenced documents with dates, only the versions corresponding to the dates are applicable to this document; for referenced documents without dates, the latest versions (including all amendments) are applicable to this document.

GB/T 3138 Metallic and other inorganic coatings - Surface treatment, metallic and other inorganic coatings - Vocabulary (GB/T 3138-2015, ISO 2080.2008, IDT)

GB/T 3098.17 Mechanical properties of fasteners - Preloading test for the detection of hydrogen embrittlement - Parallel bearing surface method (GB/T 3098.17-2000, ISO 15330.1999, IDT)

3 Terms and definitions, abbreviations and symbols

The terms and definitions defined in GB/T 3138 and GB/T 12334 apply to this document.

The following symbols apply to this document.

4 Information that the buyer shall provide to the supplier

The purchaser shall provide the supplier with the following additional information.

- a) special requirements or restrictions on the pretreatment of the workpiece to be plated (see [10] and [11] in References);
- b) other requirements, such as areas for testing and rating of workpieces of special shapes.

5 Marking

The base material shall be indicated by its chemical symbol. If it is an alloy, the main component shall be indicated, for example.

Heat treatment requirements shall be marked as follows.

6 Requirements

The coating thickness indicated in the marking shall be the minimum local thickness.

Unless otherwise specified by the purchaser, the minimum local thickness shall be measured at any part of the main surface that can be contacted by a ball with a diameter of 20 mm (see 4.1 and 4.2).

After the neutral salt spray test, the samples shall be rated in accordance with the relevant provisions of GB/T 6461. The acceptable grade shall be specified by the purchaser.

7 Sampling

The number of samples specified in GB/T 12609 shall be randomly selected from the inspection batch. The workpieces in the inspection sample shall be judged whether they meet the requirements of this document, and the inspection batches shall be divided into qualified batches or unqualified batches according to the sampling procedure of GB/T 12609.

.....