



Designation: B 633 – 98

Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel¹

This standard is issued under the fixed designation B 633; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers requirements for electrodeposited zinc coatings applied to iron or steel articles to protect them from corrosion. It does not cover electrodeposited zinc-coated steel wire or sheets (see Specification A 591/A 591M for sheets).

1.2 The coatings are provided in four standard thickness classes (4.1), in the as-plated condition or with one of three types of supplementary finish (4.2).

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

- A 591/A591M Specification for Steel Sheet, Electrolytic Zinc-Coated, for Light Coating Mass Applications²
- B 117 Practice for Operating Salt Spray (Fog) Apparatus³
- B 183 Practice for Preparation of Low-Carbon Steel for Electroplating⁴
- B 201 Practice for Testing Chromate Coatings on Zinc and Cadmium Surfaces⁴
- B 242 Practice for Preparation of High-Carbon Steel for Electroplating⁴
- B 254 Practice for Preparation of and Electroplating on Stainless Steel⁴
- B 320 Practice for Preparation of Iron Castings for Electroplating⁴
- B 322 Practice for Cleaning Metals Prior to Electroplating⁴
- B 374 Terminology Relating to Electroplating⁴
- B 487 Test Method for Measurement of Metal and Oxide Coating Thicknesses by Microscopical Examination of a Cross Section⁴
- B 499 Test Method for Measurement of Coating Thick-

nesses by the Magnetic Method: Nonmagnetic Coatings on Magnetic Basis Metals⁴

B 504 Test Method for Measurement of Thickness of Metallic Coatings by the Coulometric Method⁴

B 567 Test Method for Measurement of Coating Thickness by the Beta Backscatter Method⁴

B 568 Test Method for Measurement of Coating Thickness by X-Ray Spectrometry⁴

B 571 Test Methods for Adhesion of Metallic Coatings⁴

B 602 Test Method for Attribute Sampling of Metallic and Inorganic Coatings⁴

B 697 Guide for Selection of Sampling Plans for Inspection of Electrodeposited Metallic and Inorganic Coatings⁴

B 762 Method of Variables Sampling of Metallic and Inorganic Coatings⁴

D 2092 Guide for Treatment of Zinc-Coated (Galvanized) Steel Surfaces for Painting⁵

F 1740 Guide for Inspection of Nylon, Polyester, or Nylon/Polyester Blend, or Both Kernmantle Rope⁶

2.2 Military Standard:

MIL-STD-1312 Fastener Tests, Methods (Test 12)⁷

3. Terminology

3.1 *Definitions*—Definitions of the terms used in this specification are in accordance with Terminology B 374.

4. Classification

4.1 *Thickness*—The coating shall be provided in the four thickness classes defined in Table 1.

4.2 *Finish*—The coating shall have one of the finish types defined as follows:

Type	Description
I	As-plated without supplementary treatment
II	With colored chromate conversion coatings
III	With colorless chromate conversion coatings
IV	With phosphate conversion coatings

5. Ordering Information

5.1 When ordering the electroplating of articles, the purchaser shall state the designation number, the date of issue, the

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² Annual Book of ASTM Standards, Vol 01.06.

³ Annual Book of ASTM Standards, Vol 03.02.

⁴ Annual Book of ASTM Standards, Vol 02.05.

⁵ Annual Book of ASTM Standards, Vol 06.02.

⁶ Annual Book of ASTM Standards, Vol 13.01.

⁷ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.