



Standard Specification for Coatings of Cadmium-Zinc Mechanically Deposited¹

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1. Scope

1.1 *General*—This specification covers the requirements for a coating that is a mixture of cadmium and zinc deposited on metallic products by mechanical deposition. The coating is provided in four thickness classes (see [Table 1](#)) and several finish types (see [Table 2](#)).

1.2 *Toxicity*—**Warning:** Cadmium is toxic; therefore these coatings should not be used on articles that will contact food or beverages, or for dental and other equipment that may be inserted into the mouth. Also, the coatings should not be used on articles that will be heated to high temperatures, because cadmium will form toxic fumes. Similarly, if coated articles are welded, soldered, or otherwise heated during fabrication, adequate ventilation should be provided to exhaust toxic fumes.

1.3 *Similar Documents*—Other kinds of mechanically deposited coatings are covered by Specifications [B635](#), [B695](#), and [B696](#).

1.4 The following precautionary caveat pertains only to the test method portion, Section 9, of this specification. *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:²

- [B117](#) Practice for Operating Salt Spray (Fog) Apparatus
- [B183](#) Practice for Preparation of Low-Carbon Steel for Electroplating
- [B242](#) Guide for Preparation of High-Carbon Steel for Electroplating

¹ This specification is under the jurisdiction of ASTM Committee B08 on Metallic and Inorganic Coatings and is the direct responsibility of Subcommittee B08.06 on Soft Metals.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

- [B320](#) Practice for Preparation of Iron Castings for Electroplating
- [B322](#) Guide for Cleaning Metals Prior to Electroplating
- [B374](#) Terminology Relating to Electroplating
- [B487](#) Test Method for Measurement of Metal and Oxide Coating Thickness by Microscopical Examination of Cross Section
- [B499](#) Test Method for Measurement of Coating Thicknesses by the Magnetic Method: Nonmagnetic Coatings on Magnetic Basis Metals
- [B571](#) Practice for Qualitative Adhesion Testing of Metallic Coatings
- [B602](#) Test Method for Attribute Sampling of Metallic and Inorganic Coatings
- [B635](#) Specification for Coatings of Cadmium-Tin Mechanically Deposited
- [B695](#) Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel
- [B696](#) Specification for Coatings of Cadmium Mechanically Deposited
- [B697](#) Guide for Selection of Sampling Plans for Inspection of Electrodeposited Metallic and Inorganic Coatings
- [B762](#) Test Method of Variables Sampling of Metallic and Inorganic Coatings
- [E27](#) Method for Spectrographic Analysis of Zinc and Zinc Alloys by the Solution-Residue Technique³
- [E396](#) Test Methods for Chemical Analysis of Cadmium
- [E536](#) Test Methods for Chemical Analysis of Zinc and Zinc Alloys
- [F1470](#) Practice for Fastener Sampling for Specified Mechanical Properties and Performance Inspection

3. Terminology

3.1 *Definitions*—Some of the terms used in this are defined in Terminology [B374](#).

4. Classification

4.1 *Thickness Classes*—The coating is classified in four thickness classes, as defined in [Table 1](#).

4.2 *Coating Types*—The coating is classified by type, as defined in [Table 2](#).

³ Withdrawn.