



Standard Specification for Electrodeposited Coatings of Lead and Lead-Tin Alloys on Steel and Ferrous Alloys¹

This standard is issued under the fixed designation B200; 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 U.S. Department of Defense.

1. Scope

1.1 This specification covers the requirements for electrodeposited coatings of lead and lead-tin alloys on steel and ferrous alloys. The coatings of lead-tin alloys are those that range in tin content up to but not exceeding 15 mass %. The coatings ranging between 3 and 15 mass % in tin content are known also as “terne” metallic electrodeposits.

1.2 This specification does not apply to sheet, strip, or wire in the unfabricated form.

1.3 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.4 The following precautionary caveat pertains only to the test method portion, Section 11, 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
- B320 Practice for Preparation of Iron Castings for Electroplating
- B322 Guide for Cleaning Metals Prior to 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.

B339 Specification for Pig Tin

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

B504 Test Method for Measurement of Thickness of Metallic Coatings by the Coulometric Method

B507 Practice for Design of Articles to Be Electroplated on Racks

B567 Test Method for Measurement of Coating Thickness by the Beta Backscatter Method

B568 Test Method for Measurement of Coating Thickness by X-Ray Spectrometry

B571 Practice for Qualitative Adhesion Testing of Metallic Coatings

B602 Test Method for Attribute Sampling of Metallic and Inorganic Coatings

B697 Guide for Selection of Sampling Plans for Inspection of Electrodeposited Metallic and Inorganic Coatings

3. Terminology

3.1 *Definitions*—Definitions of the terms used in this specification are in accordance with Terminology B374.

4. Classification

4.1 The coating designation shall comprise the following:

4.1.1 The chemical symbol for the basis metal.

4.1.2 The chemical symbol for the undercoating of copper or nickel, if used.

4.1.3 The chemical symbol Pb representing lead or the symbol Pb Sn for the lead-tin alloy. When tin is present, the tin content of the coating will appear before the symbol Sn. For example, Pb 5 Sn refers to a coating having the minimum composition 5 mass % tin, remainder lead.

4.1.4 A number indicating the minimum thickness of the coating in micrometres (μm). This minimum thickness shall be 6, 12, 25, or 40 μm , and shall apply to all significant surfaces specified in 8.2.2 and 8.3.1.