



Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium¹

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

1. Scope

1.1 This specification covers requirements for several types and grades of electrodeposited copper plus nickel plus chromium or nickel plus chromium coatings on steel, nickel plus chromium coatings on copper and copper alloys, nickel plus chromium coatings on Type 300 and 400 series stainless steel and copper plus nickel plus chromium coatings on aluminum and its alloys and zinc alloys for applications where both appearance and protection of the basis metal against corrosion are important. Five grades of coatings are provided to correspond with the service conditions under which each is expected to provide satisfactory performance: namely, extended very severe, very severe, severe, moderate, and mild. Definitions and typical examples of these service conditions are provided in Appendix X1.

1.2 This specification does not cover the requirements for the plating on plastics, see Specification B 604.

1.3 The following hazards caveat pertains only to the test methods portions, Appendix X2, Appendix X3, Appendix X4, and Appendix X5 of this specification: *This standard does not purport to address all of 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:

- B 183 Practice for Preparation of Low-Carbon Steel for Electroplating²
- B 242 Guide for Preparation of High-Carbon Steel for Electroplating²
- B 252 Guide for Preparation of Zinc Alloy Die Castings for Electroplating and Conversion Coatings²

- B 253 Guide for Preparation of Aluminum Alloys for Electroplating²
- B 254 Practice for Preparation of and Electroplating on Stainless Steel²
- B 281 Practice for Preparation of Copper and Copper Base Alloys for Electroplating and Conversion Coatings²
- B 320 Practice for Preparation of Iron Castings for Electroplating²
- B 368 Method for Copper-Accelerated Acetic Acid-Salt Spray (Fog) Testing (CASS Test)²
- B 380 Test Method of Corrosion Testing of Decorative Electrodeposited Coatings by the Corrodokote Procedure²
- B 487 Test Method for Measurement of Metal and Oxide Coating Thickness by Microscopical Examination of a Cross Section²
- B 489 Practice for Bend Test for Ductility of Electrodeposited and Autocatalytically Deposited Metal Coatings of Metal²
- B 490 Practice for Micrometer Bend Test for Ductility of Electrodeposits²
- B 499 Test Method for Measurement of Coating Thicknesses by the Magnetic Method: Nonmagnetic Coatings on Magnetic Basis Metals²
- B 504 Test Method for Measurement of Thickness of Metallic Coatings by the Coulometric Method²
- B 530 Test Method for Measurement of Coating Thicknesses by the Magnetic Method: Electrodeposited Nickel Coatings on Magnetic and Nonmagnetic Substrates²
- B 537 Practice for Rating of Electroplated Panels Subjected to Atmospheric Exposure²
- B 568 Test Method for Measurement of Coating Thickness by X-Ray Spectrometry²
- B 571 Practice for Qualitative Adhesion Testing of Metallic Coatings²
- B 602 Test Method for Attribute Sampling of Metallic and Inorganic Coatings²
- B 604 Specification for Decorative Electroplated Coatings of Copper Plus Nickel Plus Chromium on Plastics²
- B 659 Guide for Measuring Thickness of Metallic and Inorganic Coatings²

¹ This specification is under the jurisdiction of ASTM Committee B08 on Metallic and Inorganic Coatings and is the direct responsibility of Subcommittee B08.08.03 on Decorative Coatings.

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² Annual Book of ASTM Standards, Vol 02.05.